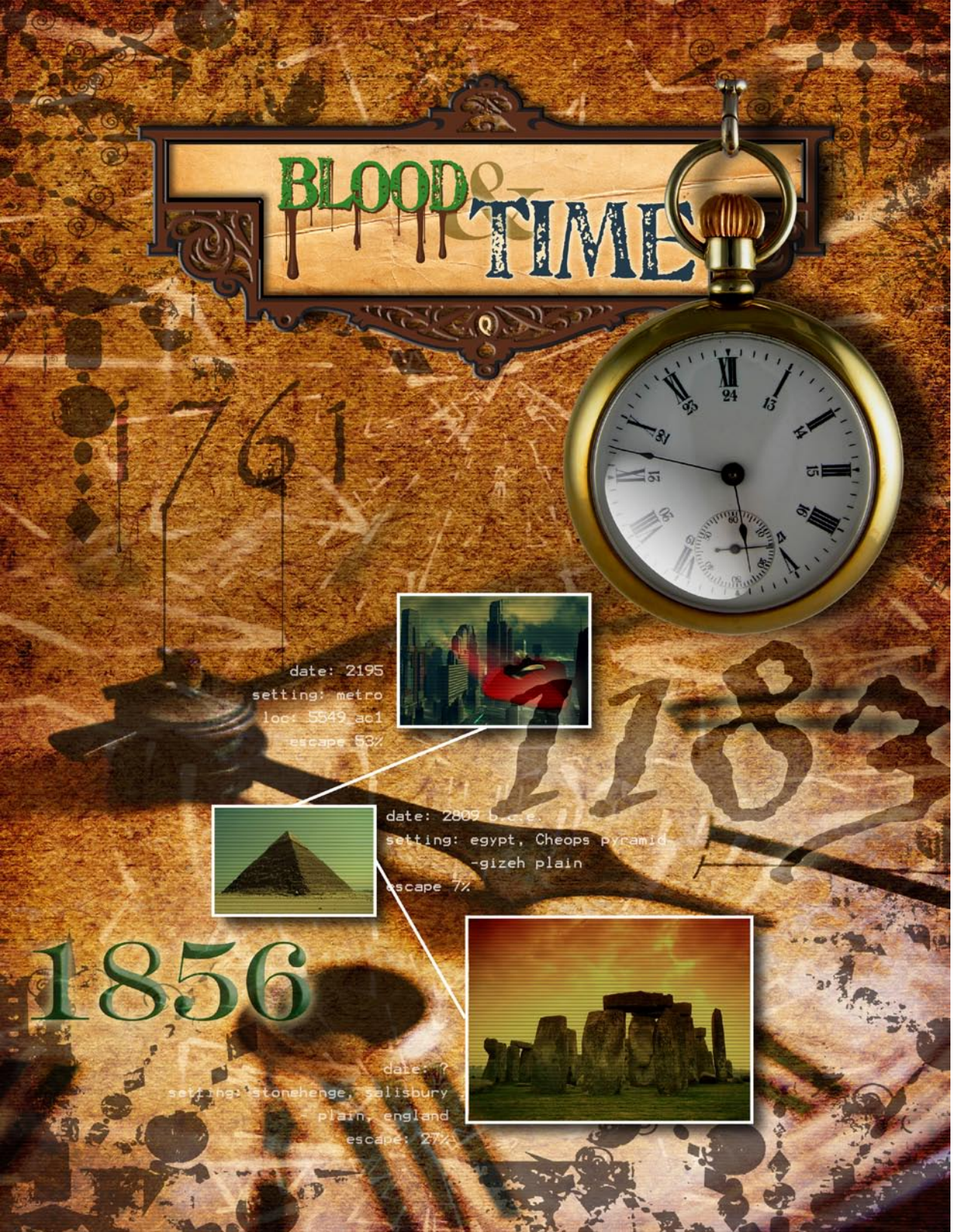

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Requires the use of the d20 Modern Roleplaying Game, published by Wizards of the Coast, Inc.

Introduction

Welcome to a project near and dear to my heart: Blood and Time, adventures through time and history. Blood and Time lays all of human history at your fingertips, giving you the tools you need to send your players on adventures anywhere, or any *when*. It includes a detailed timeline of the world from its formation through the year 1900 as well as full weapon and armor tables for the PLs not covered in the Modern or Future core rules (PL 0-4). Finally it includes a brief campaign model to get you started.

The timeline is the result of about 400 hours of research. Although an enormous undertaking, I have always had an idea for a time travel book in my head and was determined to *do it right*. I consulted websites, read books, heck I even *listened* to books while in the shower. As the research sparked my own campaign ideas, I included numerous adventure hooks in with the timeline to give you some pointers on who might want to change what and why.

The timeline gets progressively more complex as it moves forward in time, prompting a cut-off at the year 1900. RPGObjects will do a series of books detailing each 10 year period in the 20th century as time goes forward. In fact the first of these, *Timeline: Roaring 20's* is already out.

There is also a section on temporal mechanics which will give you the nuts and bolts information you need to set up how time travel works in your campaign. Different options on how easy, accurate and safe time travel is, along with how hard it is to actually *change* that pesky timeline are presented, with discussions on what these choices mean to your campaign. What you will *not* find in this section is any specifics on how things should work. This is mostly a "feel" thing and I figured if you have decided to run a time travel game, you probably already have an idea if it is going to be powered by black magic or advanced technology.

In the equipment section you're going to find information on the weapons and armor that aren't covered in the modern or future core rules. This will let you arm opponents from the distant past, or give you the stats on the weapons the PCs will be using if your time travel method of choice forces travelers to meet the past on its own terms.

We also give you some of the usual: advanced classes and feats. Not a lot, but we hope just enough.

-Chuck

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Guns of the South by Harry Turtledove

Film

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Terminator trilogy directed by James Cameron
Planet of the Apes (1968) directed by Franklin J. Schaffner
Time after Time directed by Nicholas Meyer
Star Trek IV: The Voyage Home directed by Leonard Nimoy
Star Trek: First Contact directed by Jonathan Frakes
Groundhog Day directed by Harold Ramis

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Star Trek: Episode 55 "Assignment: Earth" written by Gene Roddenberry and Art Wallace

Chapter I: Time Travel Characters

The following occupations and classes are suitable for characters specifically trained to travel through time (or manipulate it, in the case of an anomaly). Characters with this specialized training typically belong to a time travel organization or have grown up in a society where time travel is commonplace.

Classes

Anomaly

The anomaly is a creature that exists outside of time. Through some quirk in his genetic makeup, he can sense the true nature of time and eventually learn to control it. The anomaly has no ability to travel through time in the traditional sense (barring technology or magic)—he is simply able to ignore the rules of time. An example from modern-day earth would be an Australian shaman who can travel through "dream time."

Requirements

To qualify to become an anomaly, a character must meet the following criteria. (The quickest path into this class is through the Dedicated Hero basic class.)

Base Attack Bonus: +2
Skills: Spot 6 ranks
Feats: Alertness

Class Information

The following information pertains to the anomaly advanced class.

Hit Die: 1d8

Action Points: 6 + one-half character level, rounded down, every time the character gains a new level in this class.

Class Skills: The anomaly's class skills (and the ability for each skill) are: Balance (Dex), Escape Artist (Dex), Intimidate (Cha), Knowledge (arcane lore, current events, history, physical sciences, streetwise, technology) (Int), Listen (Wis), Navigate (Int), Pilot (Dex), Sense Motive (Wis), Spot (Wis) and Survival (Wis).

Skill points at each level: 5 + Int modifier.

Class Features

The following features pertain to the anomaly advanced class.

Time Sense: The anomaly has an innate sense of the order and rules of time, even if he comes from a primitive society without a developed system of time measurement. He always knows the proper time and can tell what year it is, even if he has been moved through time, by instinctively judging his temporal position. The anomaly can also make a Spot skill check (DC 20) to sense any changes to the timestream. This ability can detect the presence of time travelers (even if they are just passively observing) and other anomalies.

If an anomaly is using his abilities, or if

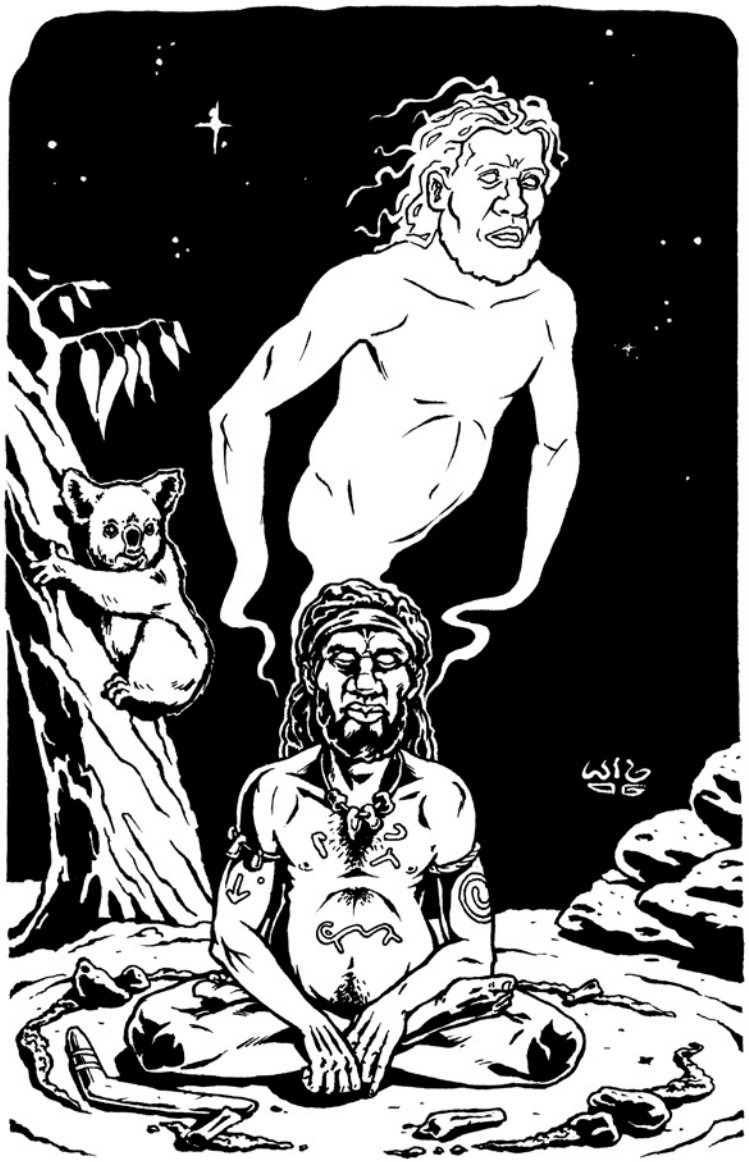


TABLE 1-1: THE ANOMALY

Level	Base Attack Bonus	Fort Save	Ref Save	Will Save	Special	Defense Bonus	Reputation Bonus
1st	+0	+1	+1	+1	Time Sense	+0	+1
2nd	+1	+2	+2	+2	Fast Forward	+1	+1
3rd	+1	+2	+2	+2	Bonus Feat	+1	+1
4th	+2	+2	+2	+2	Rewind	+1	+2
5th	+2	+3	+3	+3	Out of Time	+2	+2
6th	+3	+3	+3	+3	Bonus Feat	+2	+2
7th	+3	+4	+4	+4	Fast Forward 2/day	+2	+3
8th	+4	+4	+4	+4	Rewind 2/day; Time Tracker	+3	+3
9th	+4	+4	+4	+4	Bonus Feat	+3	+3
10th	+5	+5	+5	+5	Time Fission	+3	+4

a time traveler is altering the natural flow of the time stream by changing events from their proper course, the Spot check to use this ability is easier (the DC is reduced to 15).

Lastly, this ability allows the anomaly to determine whether or not he has been transported to another dimension—the flow of time in other dimensions will feel subtly alien to him.

Fast Forward: By altering his perceptions of time, the anomaly can cause events around him to transpire more slowly, allowing him ample time to react. To the outside observer, it appears that the anomaly is extremely fast.

This ability allows the anomaly to add his level in this class as a Dodge bonus to his Defense for one round, or to gain a bonus on a single Reflex saving throw equal to his level in this class. It may be used once per day at 2nd level, increasing to twice per day 7th level.

Bonus Feats: At 3rd, 6th and 9th levels the anomaly gains a bonus feat from the following list: Armor Proficiency (light), Attentive, Blind-Fighting, Combat Expertise, Combat Reflexes, Dead Aim, Dodge, Far Shot, Focused, Guide, Improved Initiative, Iron Will, Lightning Reflexes, Mobility and Track. The anomaly must meet the prerequisite for any feat selected with this ability.

Rewind: Through an unknown process, the anomaly learns how to alter his personal fate as it unfolds in time. This allows him to re-roll any attack roll, skill check or saving throw once per day. The anomaly cannot try to further cheat fate by spending an action point or using another ability (such as Fast Forward) to alter this second roll. This ability may be used once per day at 4th level, increasing to twice per day at 8th level.

Out of Time: At 5th level the anomaly can relocate himself from one place in a continuum to another, seeming to teleport. He can transport himself up to 10 ft. per level in this class. This ability requires the character to spend an action point.

Time Tracker: At 8th level the anomaly can make a Survival skill check to trace a target's movement through the timestream, provided he has the Track feat. The DC of the Survival check is 10 plus 5 per 100 years of "distance" between the anomaly and his target. Any time the anomaly moves closer to a target he is tracking, he can attempt a Survival skill check (DC 20) to realize that he is gaining ground.

Time Fission: At 10th level the anomaly can create a duplicate of himself. This duplicate has all of the anomaly's abilities except Time Fission, and persists for one round per anomaly level. This ability requires the character to spend an action point.

Temporal Historian

The temporal historian serves as the brains of a time traveling unit, providing those who seek to change time (or who seek to prevent such a change) with detailed knowledge of what *did* happen. Without this information, time travelers are groping in the dark

Chrononaut

The chrononaut is a time explorer who wanders the timestream in search of adventure, plunder or conquest. Regardless of his motives for traveling through time, the character has been specially trained to operate in times far different from his own.

Prerequisite: Age 17+

Skills: Choose two of the following as permanent class skills: Bluff, Computer Use, Diplomacy, Disguise, Drive, Forgery, Gather Information, Handle Animal, Investigate, Knowledge (arcane lore, civics, history, physical sciences, tactics, technology), Navigate, Pilot, Read/Write Language, Research, Ride, Speak Language, Survival.

Bonus Feat: Choose one of the following: Ancient Technology, Modern Technology or Futuristic Technology.

and risk triggering unintended changes to the timeline. The temporal historian also serves as an expert on the science and cultures of the past, allowing travelers to make the most out of what technology and resources exist in the periods they visit.

Requirements

To qualify to become a temporal historian, a character must meet the following criteria. (The quickest path into this class is through the Smart Hero basic class.)

Skills: Knowledge (physical sciences) 6 ranks, Knowledge (history) 6 ranks, Knowledge (technology) 6 ranks

Feats: Two of the following: Ancient Technology, Modern Technology or Futuristic Technology.

Class Information

The following information pertains to the temporal historian advanced class.

Hit Die: 1d6

Action Points: 6 + one-half character level, rounded down, every time the character gains a new level in this class.

Class Skills: The temporal historian's class skills (and the ability for each skill) are: Bluff (Cha), Computer Use (Int), Craft (chemical, electronic, mechanical, pharmaceutical, structural) (Int), Decipher Script, Disable Device (Int), Forgery (Int), Intimidate (Cha), Investigate (Int), Knowledge (all) (Int), Repair (Int), Research (Int) and Treat Injury (Wis).

Skill points at each level: 9 + Int modifier.

Class Features

All of the following are features of the temporal historian advanced class.

Superstition: As a cover for his activities, the temporal historian often plays on the superstitions of primitive societies in past time periods. This sometimes enables him to escape potentially dangerous situations, and can also ensure that the accounts of witnesses who saw something they shouldn't have sound to others like the ravings of madmen.

On a successful Bluff check (DC 20), the temporal historian can render one target per class level shaken for 1-4 rounds. The target must belong to a pre-modern culture (PLs 1-3). This ability also negates any potential interference from a target witnessing advanced technology (including the arrival of the time travelers).

At 5th level the temporal historian can play on the superstitions of modern people in addition to those of the ancient world, achieving the same effect described above but against targets belonging to modern cultures. Instead of passing himself off as a wizard and his technology as magic, the temporal historian might instead appear as a government agent or a "man in black" with alien technology.

Detailed Files: The temporal historian is possessed of an encyclopedic knowledge of one Progress Level, knowing its important people and events as well as (if not better than) someone who grew up in that time period. He knows the date of any historically significant event.

The character does not need to make a check to recall information about important dates and people. Extremely rare and esoteric details, such as a very minor battle or someone not commonly believed to have historical importance, can be recalled with a successful Knowledge (history) check (DC 15).

TABLE 1-2: THE TEMPORAL HISTORIAN

Level	Base Attack Bonus	Fort Save	Ref Save	Will Save	Special	Defense Bonus	Reputation Bonus
1st	+0	+0	+0	+2	Superstition (Ancient)	+0	+1
2nd	+1	+0	+0	+3	Detailed Files (one PL)	+1	+1
3rd	+1	+1	+1	+3	Bonus Feat; Scientific Expert (one time period)	+1	+1
4th	+2	+1	+1	+4	Detailed Files (one time period)	+1	+2
5th	+2	+1	+1	+4	Superstition (Modern)	+2	+2
6th	+3	+2	+2	+5	Bonus Feat; Scientific Expert (second time period)	+2	+2
7th	+3	+2	+2	+5	Achilles Heel; Detailed Files (second time period)	+2	+3
8th	+4	+2	+2	+6	Scientific Expert (all time periods)	+3	+3
9th	+4	+3	+3	+6	Bonus Feat	+3	+3
10th	+5	+3	+3	+7	Detailed Files (all time periods)	+3	+4

At 4th level, the temporal historian is an expert on an entire time period (ancient, modern or futuristic).

At 7th level, the temporal historian becomes an expert in a second time period.

At 10th level, the temporal historian becomes an expert in all time periods.

Bonus Feats: At 3rd, 6th and 9th levels the temporal historian gains a bonus feat from the following list: Ancient Technology, Ancient Technology Expert, Armor Proficiency (light, medium), Builder, Cautious, Combat Expertise, Defensive Martial Arts, Educated, Futuristic Technology, Futuristic Technology Expert, Gearhead, Improved Disarm, Improved Trip, Medical Expert, Modern Technology, Modern Technology Expert, Studious and Surgery. The temporal historian must meet the prerequisite for any feat selected with this ability.

Scientific Expert: In addition to his knowledge of history, the temporal historian has practical experience with the technologies of the past, allowing him to avoid the skill penalties associated with dealing with ancient technologies and equipment.

At 3rd level, the temporal historian can ignore the skill penalty for one time period (ancient, modern or futuristic). This only applies to the skill penalty, not to the attack penalty for using weapons from that Progress Level.

At 6th level, the temporal historian may apply this ability to a second time period.

At 8th level, the temporal historian may apply this ability to all time periods.

Achilles Heel: Different types of armor have weaknesses that can be exploited by the student of history. The temporal historian can treat any melee attack as a touch attack if he succeeds at a Knowledge (technology) skill check with a DC of 20.

This ability requires the temporal historian to spend an action point.

Time Enforcer

The time enforcer is a soldier who travels the timestream. Whether he seeks conquest, a change in the timeline, or the preservation of "proper" history depends on his ideology.

Requirements

To qualify to become a time enforcer, a character must meet the following criteria. (The quickest path into this class is through the Strong Hero basic class.)

Base Attack Bonus: +3

Skills: Knowledge (tactics) 3 ranks

Feats: Two of the following: Ancient Technology, Modern Technology or Futuristic Technology.

Class Information

The following information pertains to the time enforcer advanced class.

Hit Die: 1d10

Action Points: 6 + one-half character level, rounded down, every time the character gains a new level in this class.

TABLE 1-3: THE TIME ENFORCER

Level	Base Attack Bonus	Fort Save	Ref Save	Will Save	Special	Defense Bonus	Reputation Bonus
1st	+0	+1	+1	+0	Weapon Focus	+1	+0
2nd	+1	+2	+2	+0	Weapon Specialization	+1	+0
3rd	+2	+2	+2	+1	Bonus Feat	+2	+1
4th	+3	+2	+2	+1	Temporal Tactical Expert (one time period)	+2	+1
5th	+3	+3	+3	+1	Weapon Focus (one PL)	+3	+1
6th	+4	+3	+3	+2	Bonus Feat	+3	+2
7th	+5	+4	+4	+2	Temporal Tactical Expert (all time periods)	+4	+2
8th	+6	+4	+4	+2	Weapon Specialization (one PL)	+4	+2
9th	+6	+4	+4	+3	Bonus Feat; Weapon Focus (one time period)	+5	+3
10th	+7	+5	+5	+3	Weapon Specialization (one time period)	+5	+3

Class Skills: The time enforcer's class skills (and the ability for each skill) are: Climb (Str), Craft (structural), Demolitions (Int), Drive (Dex), Gamble (Wis), Intimidate (Cha), Jump (Str), Knowledge (arcane lore, history, popular culture, tactics and technology) (Int), Navigate (Int), Repair (Int), Ride (Dex), Survival (Wis) and Swim (Str).

Skill points at each level: 5 + Int modifier.

Class Features

All of the following are features of the time enforcer advanced class.

Weapon Focus: At 1st level the time enforcer gains the Weapon Focus feat for a weapon of his choice with which he is proficient.

At 5th level the time enforcer gains the effects of this feat with all weapons of one Progress Level.

At 9th level the time enforcer gains the effects of this feat for all weapons of one time period (ancient, modern or futuristic).

Weapon Specialization: At 2nd level, the time enforcer gains a +2 damage bonus with the weapon for which he chose his Weapon Focus at 1st level.

At 8th level, the time enforcer gains the benefit of this class ability with all weapons of one Progress Level (the PL he selected at 4th level with the Tactical Expert ability).

At 10th level, the time enforcer gains the benefit of this class ability with all weapons of one time period (ancient, modern or futuristic). This must be the time period he chose for his Weapon Focus at 9th level.

Bonus Feats: At 3rd, 6th and 9th levels the time enforcer gains a bonus feat from the following list: Ancient Technology, Ancient Technology Expert, Animal Affinity, Armor Proficiency (light, medium and heavy), Cleave, Combat Martial Arts, Drive-by Attack, Futuristic Technology, Futuristic Technology Expert, Modern Technology, Modern Technology Expert, Point Blank Shot, Power Attack and Renown. The time enforcer must meet the prerequisite for any feat selected with this ability.

Temporal Tactical Expert: At 4th level, the time enforcer is an expert in the tactics and warfare of one time period (ancient, modern or futuristic). This grants him a bonus to all relevant Knowledge (tactics) skill checks equal to his Reputation bonus. He can also grant forces he is advising a bonus to initiative equal to his Reputation bonus by spending an action point whenever combat is engaged (when initiative is rolled).

At 7th level, the time enforcer is an expert in the tactics of all time periods (ancient, modern and futuristic) and gains the benefits listed above wherever he goes.

Progress Levels

A Progress Level (PL) is an indication of the state of technology that exists in a particular society or civilization (which, in a science fiction setting, may be located on a planet other than Earth). This state of technological development generally pervades all aspects of a culture, particularly at higher levels (PL 5 and beyond) when long-range communication is virtually instantaneous. Even at lower levels, it's unlikely—but not impossible—for a group of humans (or other sentient beings) to be at one Progress Level in some respects and at another one in other respects.

Progress Level may vary wildly from place to place on the same world or even the same continent.

PL 0: Stone Age

The major achievements of a Stone Age society are the use of fire, the domestication of animals, and the invention of agriculture. An individual living in a Stone Age society is primitive, but he isn't necessarily gullible, stupid, or easily frightened by advanced technology. Common weapons in a PL 0 civilization include the club, the dagger, the spear, and the bow. Armor made from hide or leather is possible, as are wicker shields. Communication beyond the local tribe or settlement doesn't exist. Travel is accomplished by foot or by simple rafts or canoes. Simple pottery, stoneworking, and woodworking are possible.

PL 1: Bronze/Iron Age

Early human civilizations began to work metal toward the end of the Stone Age. The malleability of copper led to its becoming the first metal to be "tamed." Adding tin to copper created a much stronger alloy: bronze. This advance allowed for the crafting of tools and weapons of great durability. In turn, those improved tools made possible the working of iron, which soon replaced bronze as the metal of choice for tools and weapons.

In a Bronze/Iron Age society, advances in pottery, construction, and agriculture allow for the concentration of populations into larger and larger groups, with a corresponding upswing in the accumulation and sharing of knowledge. The rise of nations, city-states, and empires begins in the Bronze Age. Organized efforts to improve communications allow regional societies to exist. Galleys and small sailing vessels are capable of relatively long voyages, and some cultures may build extensive road or canal networks to link distant places. Improvements in agricultural efficiency permit the rise of artisans, craftsmen, professional soldiers, and other occupations that are not directly concerned with gathering food.

The sword replaces the club and the dagger as the preferred weapon of infantry. Chariots briefly dominate warfare before cavalry (aided by the introduction of the stirrup) renders chariots obsolete. The first true military forces or tactical systems appear. Armor can now be made from sewn plates or scales, metal links, or even forged breastplates, and a variety of metal melee weapons dominate the battlefield.

PL 2: Middle Ages

Maturing civilizations experience a period of turmoil and adjustment at this Progress Level. Developments continue in architecture, commerce, metallurgy, and mathematics. Wider dissemination of information becomes possible thanks to more advanced printing techniques. Sea communications dominate in the later part of this stage of development, and sturdy seafaring carracks and galleons open the door to the next Progress Level.

As populations increase and knowledge of agriculture evolves, an increasing percentage of the population relocates into growing cities and towns. Toward the end of this Progress Level, the feudal system, in which a small class of nobles ruled a large population of agricultural workers, begins to collapse. Specialized crafts develop, universities appear, and the middle class is born. The first corporations emerge in the form of trade guilds. The evolution of strong systems of trade and finance tends to distribute a society's wealth more evenly among its members, diluting the power of the nobility.

Tools of warfare undergo a significant revolution. Sophisticated chain and plate armors protect warriors from harm, and elaborate fortifications become something of an art form. Toward the end of the Middle Ages, the introduction of simple gunpowder weapons signals the imminent end of knights, heavy armor, and organized armies of swordsmen.

PL 3: Age Of Reason

The Age of Reason is an era in human history when the development of ideas and systems of thought takes precedence over technological invention. The scientific method improves humankind's understanding of the world. Experimentation becomes the means by which the physical properties of nature are systematically examined. The study of the various scientific disciplines—chemistry, electromagnetism, medicine, biology, and astronomy—flourishes. Instruments such as microscopes and telescopes enable scientists to greatly extend the range of their observations and discoveries. The new reliance on science generates waves on all levels of society. Superstition falls away, and exploration of the world reaches its apex.

Society begins to experiment with new forms of organization, such as democracy. Corporations and economic alliances continue to evolve. Economically, this Progress Level is a transition from the cottage industries of the Middle Ages to industrialization.

The cannon becomes the dominant factor in naval warfare, while massed musket fire and horse-pulled field pieces rule the battlefield. Even the reliable bow vanishes, replaced by the flintlock. Light melee weapons remain common.

PL 4: Industrial Age

In the fourth Progress Level, the theoretical knowledge of the previous era matures into widespread practical application. The harnessing of hydraulic, steam, and electric power creates an explosion of commerce and industry. Developments such as the telegraph, the telephone, and the radio make true global communication possible. Breakthroughs in manufacturing techniques allow the construction of heavy ironclad vessels, rail transportation, and architecture of previously unimaginable size. Pioneers venture high into the atmosphere and descend into the sea's depths.

Urbanization is complete as individuals gather in smaller environments where they can more easily exchange goods and information. Corporations expand in power, many establishing themselves throughout the explored world. Governments are based on political and economic factors.

The means of war change swiftly through the period. Aircraft and submersibles join the list of military assets. Reliable and accurate rifles, pistols, and machine guns become common. Mechanized war machines herald the first great change in the art of battle since the end of the knight.

PL 5: Information Age

The Industrial Age relied on chemical power, but in the Information Age, computer technology and electronics rule supreme. Satellite information systems and the Internet connect the globe digitally. This Progress Level also sees the introduction of fission power and weapons reducing the importance of fossil fuels. The automobile replaces the locomotive as the common form of travel. The first steps toward space travel involve massive chemical rockets, unmanned probes and satellites, and short-term manned missions.

The technology of the era allows greater citizen participation in government. The emergence of international alliances begins to dissolve borders between nations. Corporations gather power and begin to threaten government authority. Technology has a greater effect on individual lifestyles than on society as a whole. Most weapons at this time are refined versions of Industrial Age equipment. Rifles, machine guns, and heavy howitzers are still used by the world's soldiers. Computerized targeting systems and guided weapons make warfare much more precise and efficient. Strategic weapons, tested but never used, exhibit the species' power to exterminate itself in minutes.

Humanity experienced its Information Age as anxious years full of minor crises. The tension gradually alleviates through the age, and as the era ends new superpowers form.

PL 6: Fusion Age

The development of fusion power provides an efficient, nonexpendable energy source that almost obliterates the need for chemical fuel sources. Advanced space exploration and colonization become possible. Computers become even more accessible, reliable, and powerful, leading to the development of virtual systems and widespread access to the global Internet.

Slowly, society experiences another revolution as individual nations are replaced by world powers. Megacorporations number among these new superpowers as the line between the national citizen and corporate employee is rendered indistinct. Armed with the means to eradicate the entire species, the world powers keep conflicts to the level of skirmishing and posturing, and integration of the Information Age's improvements proceed peacefully.

Scientific advanced in genetic engineering lead to artificial evolution and the first government- and corporate-sanctioned attempts to genetically manipulate human beings. Early results are encouraging, with the manifestation of positive and negative mutations in the species toward the end of the age. Scientists also perfect cloning technology, and the first human clones are created.

In the later years of this age, the first crude applications of gravity induction technology appear, in the form of civilian and military vehicles that can move through the air without using physical propulsion or consumption of fuel.

Chemical-powered explosives and firearms remain the weapons of choice; fusion technology can't be effectively miniaturized for personal combat. Nevertheless, advanced chemistry and superconducting technology change the materials and capabilities of many weapons. True spaceships become possible, propelled by powerful fusion drives, but still require a reaction mass to traverse space.

The age sees the tenuous settlement of other planets and asteroids within the same star system.

PL 7: Gravity Age

As this Progress Level opens, the invention of two key technologies herald humanity's climb to the stars. The gravity induction reactor systematically replaces fusion power as an even more efficient source of energy that can be miniaturized with great ease. With the use of the mass reactor, world powers explore, divide, and colonize the entirety of the local star system. For the most part, life on the home planet is unchanged.

The second advance of the era brings perhaps the greatest upheaval in the history of human civilization. The introduction and integration of gravity induction technology leads to the creation of the induction engine, which allows starships to bridge the gap between the stars. Political and economic reorganization occurs as the species spreads far from home.

Projectile firearms are in their last days, as crude energy weapons become available. Powered armor is available to warriors of this age. Personal (melee) weapons enjoy a resurgence, due in large part to a shift in military tactics—armed conflict between individuals seldom occurs on an army scale, but more frequently involves engagements of small units in conditions when ranged weapons are not necessarily effective.

Computer technology links every society, settlement, and outpost of a star system in a single information net, creating an unparalleled and expedient exchange of knowledge and data for business, entertainment, and research.

PL 8: Energy Age

The continuing miniaturization of induction engine technology allows power plants the size of marbles to harness the basic forces of creation. Powerful personal force screens and energy weapons dominate the battlefield, as projectile weapons finally disappear after ruling the battlefield for a thousand years. Miniaturized sensors, shields, and engines allow mass production of small, practical starfighters. At the other end of the spectrum, advanced construction techniques allow humans to build enormous, self-sustaining cities in space.

PL 9: Time Age

During experiments into exotic forms of energy near the end of PL 8, scientists discover the companion to the graviton (the quantum particle controlling gravity): the chronoton. Chronotons appear to have been generated during the Big Bang and experiments into their manipulation lead to an understanding of the true nature of time and how to move backwards through the time stream.

Native Progress Levels

You know what they say: "Everyone comes from somewhere." Or was that "wherever you go, there you are?" Anyway, what this means for characters in a time travel campaign is that they have a *native time period*, expressed through the mechanic of the Progress Level.

At character creation, each character should select his native Progress Level—the PL where he was educated or spent his formative years. This provides the character with the Technology feat for that PL.

For example, a GM begins a new time travel campaign using the Time Enforcers campaign model detailed in this book. This campaign model allows PCs to be from any era they choose. One player decides that his character will be a soldier of the Roman Empire, a late PL 1 society. This means the character receives the Ancient Technology feat.

Another player decides that his character is from the late 20th century, a PL 5 society. This means the character receives the Modern Technology feat.

Technology Feats

Ancient Technology (PL 0-3)

You are generally conversant with the technology of the ancient world (from the Stone Age through the Age of Reason). With this feat you might *look* like an uncivilized barbarian to a native of the time period, but you won't stand out enough to seem alien or threatening. You also have a passing familiarity with the technology and social conventions of the ancient period.

Effect: Your attack penalty is reduced to -2 when using weapons from this time period and your skill penalty is reduced to -4 when interacting with this relevant time period.

Normal: A character normally suffers a -4 attack penalty when handling unfamiliar weapons and a skill check penalty of -8 when interacting with this time period.

Ancient Technology Expert (PL 0-3)

You are an expert in the technology and culture of the ancient world. With this feat, you can appear as a perfectly civilized member of ancient society in every way, allowing you to pass without the slightest notice. You possess a deep familiarity with the technology and social conventions of the ancient period.

Prerequisite: Ancient Technology

Effect: You suffer no penalty to attack rolls when using weapons from this time period and you suffer no skill penalty when interacting with this time period.

Technology Feats and Modern Weapons and Vehicles

Blood and Time handles technology a little differently than do most Modern d20 games, but the two approaches are compatible. Modern d20 breaks weapons down into Archaic Weapons (covered by a feat) and Personal Firearms (also covered by a feat). This is rounded out with the Exotic Weapon Proficiencies.

To represent the training and practical experience of time travelers, *Blood and Time* breaks human progress down into three general periods (ancient, modern and futuristic), each of which has two feats to represent one's level of expertise with the time period.

Possessing one of the technology feats grants you basic familiarity with the weapons, vehicles, history and social conventions of the period in question—you might look like a barbarian, but at least you won't totally stand out in a crowd. This gives you a limited attack penalty (-2) and the ability to use your skills there with a modest penalty (-4).

Thus a character in a normal campaign might take Archaic Weapons Proficiency and then perhaps look at a Surface Vehicle Operation feat. For the time traveler, Ancient Technology would be a better choice, since it allows him to use PL 0-3 weapons (although with a slight penalty compared to the character with Archaic Weapon Proficiency), and even provides some basic familiarity with vehicles, local lore and social conventions (reducing the skill penalties the character would suffer).

You are fluent and can read and write two languages from this time period. You can understand (or make yourself understood in) other languages of this period on a successful Intelligence check (DC 20). Characters with the Linguist talent are able to speak fluently in all the languages of this time period.

Modern Technology (PL 4-6)

You are generally conversant with the technology of the modern world (from the Industrial Age through the Fusion Age).

Effect: Your attack penalty is reduced to -2 when using weapons from this time period and your skill penalty is reduced to -4 when interacting with the relevant time period.

Normal: A character normally suffers a -4 attack penalty when handling unfamiliar weapons and a skill check penalty of -8 when interacting with this time period.

Modern Technology Expert (PL 4-6)

You are an expert in the technology and culture of the modern world. With this feat, you can appear as a perfectly civilized member of modern society in every way, allowing you to pass without the slightest notice. You possess a deep familiarity with the technology and social conventions of the modern period.

Prerequisite: Modern Technology

Effect: You suffer no penalty to attack rolls when using weapons from this time period and you suffer no skill penalty when interacting with this time period.

You are fluent and can read and write two languages from this time period. You can understand (or make yourself understood in) other languages of this period on a successful Intelligence check (DC 20). Characters with the Linguist talent are able to speak fluently in all the languages of this time period.

Futuristic Technology (PL 7-9)

You are generally conversant with the technology of the future (from the Gravity Age and beyond).

Effect: Your attack penalty is reduced to -2 when using weapons from this time period and your skill penalty is reduced to -4 when interacting with this time period.

Normal: A character normally suffers a -4 attack penalty when handling unfamiliar weapons and a skill check penalty of -8 when interacting with this time period.

Futuristic Technology Expert (PL 7-9)

You are an expert in the technology and culture of the futuristic world. With this feat, you can appear as a perfectly civilized member of future society in every way, allowing you to pass without the slightest notice. You possess a deep familiarity with the technology and social conventions of the futuristic period.

Prerequisite: Futuristic Technology

Effect: You suffer no penalty to attack rolls when using weapons from this time period and you suffer no skill penalty when interacting with this time period.

You are fluent and can read and write two languages from this time period. You can understand (or make yourself understood in) other languages of this period on a successful Intelligence check (DC 20). Characters with the Linguist talent are able to speak fluently in all the languages of this time period.

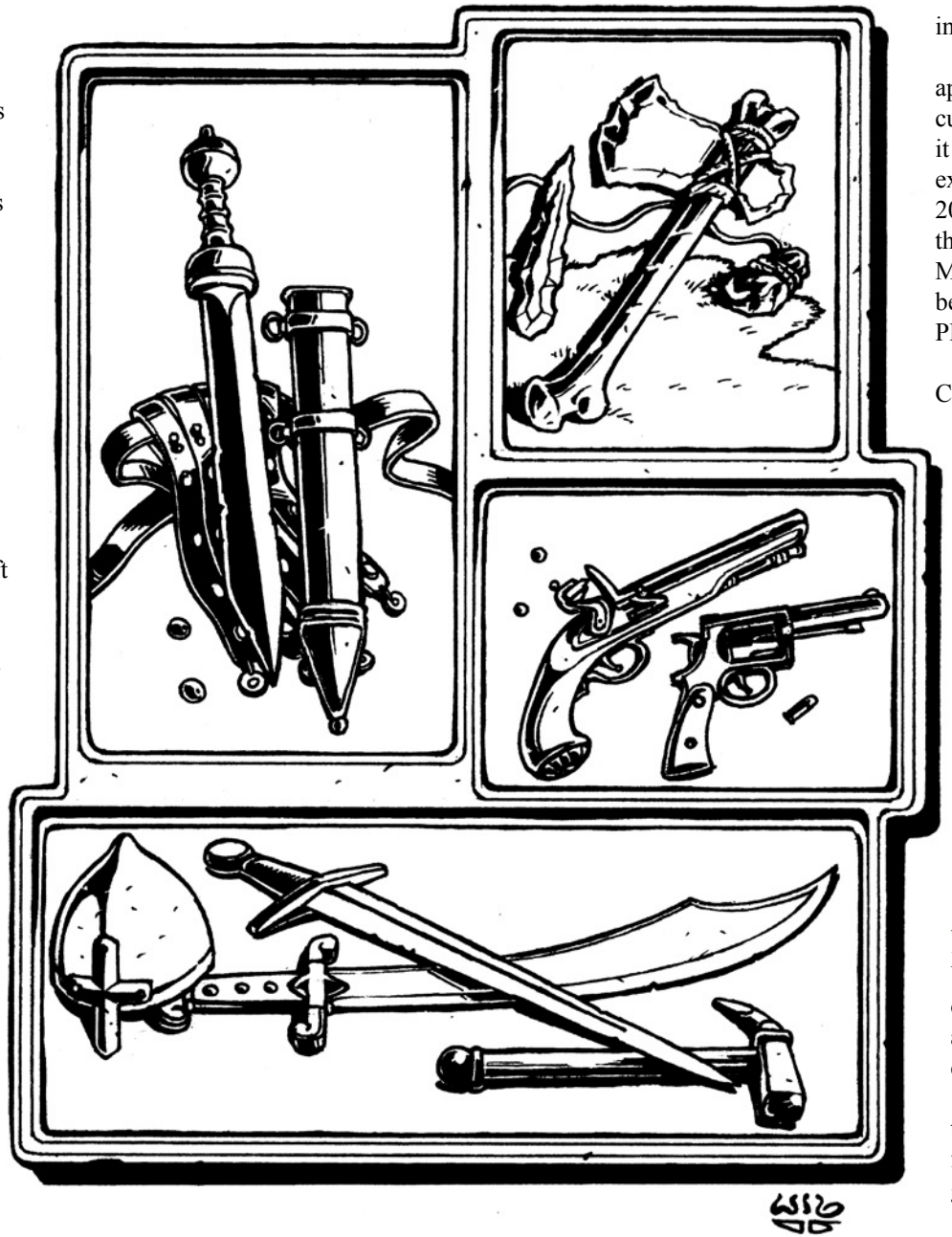
Equipment

Following are weapons and armor tables for every PL, from 0-4. These are included to provide the GM with details on weaponry carried by a time traveler's likely opponents. Should characters be unable to bring technology with them when they travel through time, they may wind up using these weapons themselves, since they will be limited to the technology they can find.

All weapons and armor are described in the usual information (damage, critical, damage type, range increment, size, weight and purchase DC). They are also described in two new ways, detailed below: Progress Level and Craft DC.

Progress Level: This is the Progress Level at which the weapon first appears. Weapons remain in use as long as they are viable–often well beyond the Progress Level in which they first appear.

If a weapon is purchased or constructed in a Progress Level later than that in which it first appears, that weapon will be less expensive and easier to make. Reduce the purchase price of a weapon by 2 times the difference between the PL in which it is being purchased and the PL in which it first appears. Reduce the Craft DC to construct the weapon by an amount equal to the difference between the PL in which it is being crafted and the PL in which it first appears.



For example, the hardwood club first appears in PL 0, where the difficulty of cutting and shaping hardwoods makes it expensive (Purchase DC 16) and extremely difficult to make (Craft DC 20). If someone wished to purchase the same club in a PL 2 society (the Middle Ages), the Purchase DC would be 12 (a base DC of 16, minus 4 for 2 PLs) and the Craft DC would be 18.

Craft DC: This lists the specific Craft skill (and DC) required to make the weapon.

PL 0 Weapons and Armor

Extremely primitive, PL 0 weapons are simple attempts to increase the damage the human body is capable of inflicting naturally. These weapons also increase the range at which a warrior or hunter can engage his enemy, protecting him from injury.

PL 0 Weapon Materials

Weapons of the Stone Age are made out of three materials: wood, stone and bone. Each of these materials is described below.

Wood: Wooden weapons have two advantages: they can always be fashioned with ease and materials are generally in ready supply. Still, these

weapons are primitive even by PL 0 standards.

A wooden weapon breaks on a natural attack roll of 8 or less (masterwork wooden weapons only break on a 4 or less). If a weapon breaks during a successful attack, normal damage is still inflicted on the target.

Wooden piercing and slashing weapons suffer a -2 circumstance penalty to attack rolls against armored targets, including creatures with a natural armor bonus of +2 or higher.

Crafting a wooden weapon requires a number of hours equal to its Craft (structural) DC.

Stone: A step up from wood, weapons made of stone can be honed to a sharp point by a well-equipped craftsman, increasing their damage potential. While still prone to flaking and shattering, these weapons are also more durable than their wooden counterparts.

A stone weapon breaks on a natural attack roll of 6 or less (masterwork stone weapons only break on a 3 or less). If a weapon breaks during a successful attack, normal damage is still inflicted on the target.

One of the advantages of stone weapons is the ease with which a skilled craftsman can create replacements when they break. Stone weapons require a construction time of 10 minutes times the Craft (structural) DC.

Bone: Bone weapons offer some advantages over stone, but also suffer some significant drawbacks. Bone weapons can be brought to a much finer point than stone or wood can, making these weapons some of the most dangerous encountered in a PL 0 society. Where bone weapons suffer in comparison to stone is in their durability.

A bone weapon breaks on a natural attack roll of 10 or less. In addition to their attack roll bonus, masterwork bone weapons increase their critical threat range by +1 as well. If a weapon breaks during a successful attack, normal damage is still inflicted on the target.

TABLE 1-4: PL 0 MELEE WEAPONS

Weapon	Damage	Critical	Damage Type	Range Inc.	Size	Weight	Purchase DC	Craft (Structural) DC
Chopper	1d2	20	Slashing	---	Small	2 lbs.	6	10
Club, soft wood	1d3	20	Blunt	10 ft.	Medium	2 lbs.	10	10
Club, bone	1d4	20	Blunt	10 ft.	Medium	2 lbs.	15	*
Club, hardwood**	1d6	20	Blunt	10 ft.	Medium	3 lbs.	17	20
Handaxe, stone	1d3	20	Slashing	---	Small	5 lbs.	9	13
Knife, wood	1d2	20	Piercing	---	Tiny	2 lbs.	4	10
Knife, stone	1d3	20	Piercing	---	Tiny	3 lbs.	6	12
Knife, bone	1d4	20	Piercing	---	Tiny	2 lbs.	7	14
Spear, wood	1d3	20	Piercing	20 ft.	Large	6 lbs.	11	11
Spear, stone	1d4	20	Piercing	10 ft.	Large	11 lbs.	13	14
Spear, bone	1d6	20	Piercing	20 ft.	Large	9 lbs.	17	18

*These weapons can only be found, not made. Anytime a Medium–size animal is killed and inspected, a successful Search check (DC 25) means that one of these is discovered in the remains. (This check may not be retried; failure indicates too much bone damage for a usable club.) For each size category above Medium, the DC of this check is reduced by 5.
**Due to the craftsmanship required to make these weapons, all should be considered masterwork weapons.

Crafting a bone weapon requires a number of hours equal to its Craft (structural) DC.

PL 0 Melee Weapons

Chopper: These tools are designed to dig through rough ground to find food (tubers and grubs), chop or shape soft woods, and skin animals. They could be pressed into service as a weapon, and become much more effective when combined with a haft to form a handaxe.

Club: Most Stone Age examples of this oldest weapon are improvised—often simply a sturdy branch found after a storm or broken off a tree. The bone club is salvaged from the remains of animal kills. The hardwood club, by contrast, is an extremely rare and potent weapon due to the difficulty of shaping hardwoods with stonecutting implements. Unlike other Stone Age clubs, the hardwood club is not a weapon of convenience and often features minor improvements like leather wrapping around the handle of the weapon, which makes it easier to grip in combat.

Handaxe: One of the major technological advancements of the Stone Age, these items are valuable as both tools and weapons (some argue more the former than the latter); they were developed from the "choppers," axe heads held in the hand to skin animals and chop wood. With these items comes the ability to shape wood for specific purposes, including the creation of more sophisticated clubs and the technique of hafting. With hafting, both the axe and spear are born and humans evolve from being prey for dangerous animals to hunters in their own right.

Knife: Like the chopper, the knife is more of a tool than a true weapon, although sharpened bone stakes were probably intended to be stabbing devices.

TABLE 1-5: PL 0 RANGED WEAPONS

Weapon	Damage	Critical	Damage Type	Range Inc.	Size	Weight	Purchase DC	Craft (Structural) DC
Arrow, wooden blunt	1d4 (NL)	20	Blunt	**	Small	1 lb. (15)	5 (12)	16
Arrow, wood	1d2	19-20	Piercing	**	Small	1 lb. (15)	5 (12)	16
Arrow, stone	1d3	19-20	Piercing	**	Small	1 lb. (10)	7 (12)	18
Arrow, bone	1d4	19-20	Piercing	**	Small	1 lb. (15)	9 (12)	20
Atlatl	***	***	***	+5 ft.	Small	3 lbs.	15	17
Atlatl, weighted	*** +1	***	***	+5 ft.	Small	5 lbs.	17	20
Dart, wood	1d2	20	Piercing	15 ft.	Tiny	1 lb. (20)	5 (20)	16
Dart, stone	1d3	20	Piercing	10 ft.	Tiny	1 lb. (16)	7 (20)	18
Dart, bone	1d4	20	Piercing	15 ft.	Tiny	1 lb. (20)	9 (20)	20
Javelin, wood	1d2	20	Piercing	25 ft.	Medium	3 lbs.	9	18
Javelin, stone	1d3	20	Piercing	15 ft.	Medium	5 lbs.	11	20
Javelin, bone	1d4	20	Piercing	25 ft.	Medium	3 lbs.	13	22
Shortbow	*	*	*	30 ft.	Medium	2 lbs.	15	20
Stone, thrown	1d3	20	Blunt	10 ft.	Tiny	1 lbs. (10)	3	13

*A bow's damage, critical and damage type depend on the type of arrow used.
** An arrow's range depends on the type of bow being used.
*** An atlatl's damage, critical and damage type depend on the type of javelin being used.

Like the chopper, these items benefit from the development of hafting techniques, when they are transformed into spears.

Spear: The spear was developed by the addition of a haft to a knife, allowing the attacker to increase his reach and keep his enemy at bay while increasing the force of his thrusts. These weapons can also be thrown, extending the attacker's range even further.

PL 0 Ranged Weapons

Arrow: Essentially a long dart designed to be fired from a bow. (When used as a melee weapon, an arrow should be treated as a dart in all respects except size and weight.) These weapons were already beginning to see specialized designs during the Stone Age, when they were crafted with blunt tips to stun game (usually small birds). A blunt arrow inflicts non-lethal damage and its target, if Medium-size or smaller, must make a Fortitude save (DC 10) or be stunned for one round. For every size category below Medium, increase the target's save DC by 5 and increase the duration of the stun effect by one round. Creatures larger than medium cannot be stunned by this weapon.

Atlatl: The atlatl is a "spear thrower" designed to increase the velocity (and thus the range and damage) of the javelin and the dart. These items modify the thrown weapon as listed in the equipment table above, granting an improved range increment and (in the case of the weighted atlatl) a damage bonus.

Dart: The dart is a tiny javelin used as a weapon by primitive cultures, often in conjunction with either poison or the atlatl.

Javelin: The javelin is one of the most effective ranged weapons of the Stone Age, especially when combined with the atlatl. Because of its superior range, many armies use these weapons for ranged attacks, with soldiers wielding only a single true spear for melee combat.

Shortbow: The shortbow is one of the most important weapons ever invented and has a tremendous impact on the development of hunting and warfare. The ability to hurl missiles accurately and with great force across great distances allows the wielder to keep his enemy at bay, hopefully killing an attacker or animal before it can close to injure him.

Shortbows do not allow the wielder to add his Strength modifier to bow damage.

Stone, thrown: One of the simplest weapons imaginable, this is nothing more than a rock, possibly shaped to extend its throwing range. This is also the ammunition for the sling.

PL 0 Armor

PL 0 armor is made out of natural materials: animal skins (tanned into leather) of varying thickness and weight, sometimes including fur for added protection and warmth.

Padded: This armor could be as simple as an extra layer of clothing or as "complicated" as scraps of different material placed underneath clothing. Padded armor serves to shield the wearer from the cold, and to provide mild protection against the blunt weapons common in PL 0.

Leather armor: Leather armor consists of animal skins treated to increase their durability and utility, making them more useful as armor. Simple and versatile, this armor stays in use for thousands of years.

Hide: Essentially leather armor made from an animal with a more durable hide. Depending on geographic location, hide armor could be fashioned from elephant, rhinoceros or even shark hide.

Furs: One of the early innovations of PL 0 is

TABLE 1-6: PL 0 ARMOR

Armor	Type	Equipment Bonus	Nonprof. Bonus	Max Dex	Armor Penalty	Speed (30 ft.)	Weight	Purchase DC	Craft (Structural) DC
Padded	Impromptu	+1	+1	+8	-0	30	4 lbs.	10	12
Leather armor	Light	+2	+1	+6	-0	30	15 lbs.	12	13
Hide	Medium	+3	+2	+4	-3	25	25 lbs.	13	14
Furs	Heavy	+4	+3	+1	-6	20	35 lbs.	16	14

layered clothing and armor—armor made from two different materials, each of which brings its own properties to the armor. This type of armor consists either of hides taken from a furry animal, with the fur left intact, or of furs sewn onto the outside of hide or heavy leather. This provides better protection than other armor types, and makes it possible for the wearer to live and hunt in conditions of extreme cold.

In addition to the armor bonus, this armor provides a +4 bonus to saving throws against cold attacks, including environmental damage.

PL 1 Weapons and Armor (circa 2100 BCE and later)

Weapons and armor of PL 1 are not truly innovative in their designs; most are based on the same principles of slash and thrust that formed the basis for the earliest weapons. What sets these items apart is the experimentation with different materials to make them more dangerous. Increasingly harder metals, from copper to bronze to iron, are used to fashion deadlier weaponry and more effective armor. Despite the increased use of metal, wooden weapons remain in use—especially the bow, the effectiveness of which could be vastly increased by combining two different types of wood in its design (the composite bow).

PL 1 Weapon Materials

Progress Level 1 covers three periods, each defined by the materials used to forge weapons and armor in that period. PL 1 is where man first learns how to forge metals; during this period, weapon-makers progress to harder and more durable metals, from copper to bronze and finally to iron.

Copper: Copper is the first metal forged for weapons and tools. Copper needs a companion material mixed with it to increase its strength; in most cultures, this companion material progresses quickly from arsenic to tin, which creates the much stronger and more functional bronze. In most parts of the world the "Copper Age" marks a very rapid transition from the Stone Age to the Bronze Age—indeed, one often finds copper tools and weapons in use alongside their stone counterparts.

A copper weapon breaks on a natural attack roll of 5 or less (masterwork copper weapons only break on a 3 or less). If a weapon breaks during a successful attack, normal damage is still inflicted on the target.

Copper weapons require a construction time equal to 6 hours times the Craft (structural) DC of the weapon. Thus, a copper shortsword (DC 16) requires 4 days to construct.

Bronze: Bronze is an alloy created when copper and tin are mixed to form a stronger, more durable metal. Bronze made for weaponry or armor is typically 60% copper and 40% tin. The use of bronze for other purposes, especially electronics, continues well into PL 5. Bronze is also the main component of gunmetal (the metallic part of a firearm) until the discovery of steel.

A bronze weapon breaks on a natural attack roll of 4 or less (masterwork bronze weapons only break on a 2 or less). If a weapon breaks during a successful attack, normal damage is still inflicted on the target.

Bronze weapons require a construction time equal to 6 hours times the Craft (structural) DC of the weapon. So a bronze shortsword (DC 18) requires 4½ days to construct.

Wrought Iron: The first iron tools, weapons and armor appear during PL 1. Iron is most commonly encountered naturally as hematite, a soft sandstone-like mineral not good for much of anything, especially not weapons or armor. To create iron that is hard and durable enough for weapons and armor, it must be heated and combined with a preferred chemical partner—in this case, carbon—through the smelting process.

Wrought iron is created through a process called "blooming," in which an air bellows is used to force air through a pile of burning charcoal and iron ore. This process creates enough heat to reduce the iron oxides to metallic iron and transfers carbon from the coal to the iron. It is not hot enough to melt the iron. Blooming results in a spongy mass called a bloom, which collects at the bottom of the furnace and is filled with ash, slag and other impurities. The bloom is then reheated, beaten and folded repeatedly to beat out the impurities. Finally, once an acceptable amount of impurities has been removed, the iron is beaten into its final shape and cooled.

Obviously this process, which requires the iron to be kept hot and beaten repeatedly over a long period of time, is dangerous and time–consuming; it requires a smith of great strength and endurance.

The material produced by this process, wrought iron, is far from an ideal material and is in fact worse in many ways than bronze. Bronze can be melted

TABLE 1-7: PL 1 MELEE WEAPONS

Weapon	Damage	Critical	Damage Type	Range Inc.	Size	Weight	Purchase DC	Craft (Structural) DC
Club, spiked	1d6	19-20	Piercing	10 ft.	Medium	3 lbs.	5	16
Cudgel	1d10	20	Blunt	---	Large	5 lbs.	7	20
Battleaxe, copper	1d6	20	Slashing	---	Large	6 lbs.	7	14
Battleaxe, bronze	1d6	19-20	Slashing	---	Large	4 lbs.	11	16
Battleaxe, iron	1d8	19-20	Slashing	---	Large	9 lbs.	15	18
Dagger, copper	1d3	20	Piercing	10 ft.	Tiny	1 lbs.	4	11
Dagger, bronze	1d3	19-20	Piercing	10 ft.	Tiny	1 lbs.	8	13
Dagger, iron	1d4	19-20	Piercing	10 ft.	Tiny	3 lbs.	13	16
Handaxe, copper	1d4	20	Slashing	10 ft.	Small	3 lbs.	5	12
Handaxe, bronze	1d4	20	Slashing	10 ft.	Small	2 lbs.	9	14
Handaxe, iron	1d6	20	Slashing	---	Small	4 lbs.	15	18
Mace, copper	1d6	20	Blunt	---	Medium	8 lbs.	7	14
Mace, bronze	1d6	20	Blunt	---	Medium	6 lbs.	11	16
Mace, iron	1d8	20	Blunt	---	Medium	12 lbs.	17	20
Shortsword, copper	1d4	20	Piercing	---	Small	2 lbs.	5	12
Shortsword, bronze	1d4	19-20	Piercing	---	Small	1 lbs.	9	14
Shortsword, iron	1d6	19-20	Piercing	---	Small	3 lbs.	15	18
Shortsword, gladius*	1d6	19-20	Piercing	---	Small	3 lbs.	20	23
Spear, copper	1d6	20	Piercing	20 ft.	Large	9 lbs.	7	14
Spear, bronze	1d6	20	Piercing	20 ft.	Large	6 lbs.	11	16
Spear, iron	1d8	20	Piercing	20 ft.	Large	12 lbs.	17	20
Spear, copper (long)**	1d6	20	Piercing	---	Large	9 lbs.	9	16
Spear, bronze (long)**	1d6	20	Piercing	---	Large	6 lbs.	13	18
Spear, iron (long)**	1d8	20	Piercing	---	Large	12 lbs.	19	22
Quarterstaff***	1d6/1d6	20	Blunt	---	Large	4 lbs.	5	16

* Due to the craftsmanship required to make these weapons, all should be considered masterwork weapons.
**Reach weapon.
***Double weapon.

sufficiently to liquefy it, allowing it to be "cast"—poured into molds that allow complex shapes to be built. The blooming process does not sufficiently heat iron to allow it to be cast, only beaten into simple shapes. The iron itself is also significantly heavier than bronze and prone to deep nicks and cracks under hard use.

A wrought iron weapon suffers damage on a natural attack roll of 4 or less (masterwork iron weapons suffer damage on a 2 or less). This damage imposes a permanent attack penalty to the weapon of -1 and can be repaired with a Repair skill check (DC 20). If the repair check to fix a damaged wrought iron weapon fails, the weapon may never be repaired. A wrought iron weapon that suffers damage while it is already damaged is destroyed. Repairing a wrought iron weapon requires one hour and cannot be jury-rigged to decrease the repair time (see the Repair skill for more information).

Craft times for wrought iron are extremely long and the following item creation times should be used rather than those given in the Modern core rules: prior to the 8th century, 1½ days times the Craft (structural) DC of the item; from the 8th to 11th century, 1 day times the Craft (structural) DC of the item; from the 12th century on, reduce the time by one day for every 100 years.

For example, a smith in the year 500 requires 27 days to make a wrought iron battleaxe; a smith in the 8th century requires 18 days to make the same weapon; and a smith in the 14th century requires 16 days.

PL 1 Melee Weapons

Club, spiked: Spikes are added to increase the damage potential of the club. These spikes can be of almost any substance harder than the wood itself, with bronze, iron and stone (flint or obsidian) being the most popular choices.

Cudgel: This two-handed version of the hardwood club provides even more damage potential than the spiked club, and is another popular choice for the PL 1 warrior on a budget.

Battleaxe: This larger, more dangerous axe is strictly designed for combat, having completely shed its roots as a tool.

Dagger: Small and concealable, the dagger is a potent weapon in the hands of a skilled wielder.

Handaxe: Unlike the battleaxe, this weapon probably still sees at least some use as a tool.

Mace: Taking the modification of the club a step further than the spiked club, damage is increased by replacing the striking head of the club with metal. (Note that while the damage of the copper and bronze mace are the same as that of the hardwood club, the chance of breakage is reduced.)

Shortsword: An extension of the dagger, the shortsword is one of the most popular military

weapons of PL 1 societies.

Shortsword, gladius: The preferred weapon of the Roman army, this sword carries the professional soldiers of that empire to numerous victories and allows them to dominate the known world for nearly a millennium.

Spear: The spear is all about keeping your opponent at bay, killing him before he can get close to kill you. In addition to inflicting respectable damage, spears come in two varieties—one that can be thrown, and one that is a reach weapon.

Quarterstaff: A basic staff, the PL 1 model is usually capped with metal at both ends to increase durability.

PL 1 Ranged Weapons

Arrow, broad: Broad arrows have wide cutting surfaces designed to inflict maximum damage on unprotected flesh. Against targets wearing medium or heavier armor (or with a natural armor bonus of higher than +4), broadhead arrows suffer a -2 attack penalty.

Arrow, armor piercing: Armor piercing arrows are specially designed to punch through armor and represent the first attempts to overcome the increasingly heavy metal armor that begin to appear in PL 1. An armor piercing arrow is a touch attack against any creature not wearing medium or heavy metallic armor.

Bullet: With the sling shifting from hunting tool to important military weapon, the sling bullet becomes the ammunition of choice, increasing the damage potential over the simple stone. These are typically made of lead.

Composite horsebow: Specifically designed for use on horseback, the composite horsebow gains a +1 equipment bonus to attack rolls when fired from horseback (this is in addition to the bonus it gains for being a masterwork weapon).

TABLE 1-8: PL 1 RANGED WEAPONS

Weapon	Damage	Critical	Damage Type	Range Inc.	Size	Weight	Purchase DC	Craft (Structural) DC
Arrow, copper (broad)	1d6	20	Slashing	**	Small	1 lbs. (10)	9 (12)	14
Arrow, copper (armor piercing)	1d4	20	Piercing	**	Small	1 lbs. (10)	11 (12)	16
Arrow, bronze (broad)	1d6	20	Slashing	**	Small	1 lbs. (15)	11 (12)	16
Arrow, bronze (armor piercing)	1d4	19-20	Piercing	**	Small	1 lbs. (15)	13 (12)	18
Arrow, iron (broad)	1d6	20	Slashing	**	Small	1 lbs. (8)	13 (12)	18
Arrow, iron (armor piercing)	1d4	19-20	Piercing	**	Small	1 lbs. (8)	15 (12)	20
Bullet	1d4	20	Blunt	**	Tiny	1 lbs. (5)	9 (12)	14
Composite horsebow***	*	*	*	30 ft.	Medium	2 lbs.	20	25
Composite shortbow	*	*	*	40 ft.	Large	2 lbs.	18	20
Sling	*	*	Blunt	30 ft.	Small	1 lbs.	5	15

*The damage of a bow or sling depends on the type of ammunition used.
**The range of an arrow or sling stone depends on the bow or sling used.
*** Due to the craftsmanship required to make these weapons, all should be considered masterwork weapons.

Composite horsebows allow the wielder to add his Strength bonus to the damage of the attack (attack rolls are still modified by Dexterity).

Composite shortbow: By using two different materials, one that resists compression and one that is strong under tension, the range of the shortbow is improved.

Composite shortbows allow the wielder to add his Strength bonus to the damage of the attack (attack rolls are still modified by Dexterity).

Sling: These simple weapons are as popular with PL 1 armies as the shortbow. Although they can use rocks as ammunition (inflicting the same damage as the PL 0 thrown rock, but with a greatly improved range), the preferred ammunition is the bullet.

PL 1 Armor

Chain shirt: A shirt made of metal links woven together, covering the chest and arms to the shoulders and extending to mid-thigh. This is one of the oldest and most successful metallic armors, used by cultures

TABLE 1-9: PL 1 ARMOR

Armor	Type	Equipment Bonus	Nonprof. Bonus	Max Dex	Armor Penalty	Speed (30 ft.)	Weight	Purchase DC	Craft (Structural) DC
Chain shirt, bronze	Light	+3	+1	+4	-2	30 ft.	16 lbs.	18	23
Chain shirt, wrought iron	Light	+4	+1	+3	-3	30 ft.	35 lbs.	19	24
Ring mail, bronze	Light	+2	+1	+5	-1	30 ft.	10 lbs.	17	22
Ring mail, wrought iron	Light	+3	+1	+4	-2	30 ft.	23 lbs.	18	23
Scale mail, bronze	Medium	+3	+2	+3	-4	25 ft.	20 lbs.	18	23
Scale mail, wrought iron	Medium	+4	+2	+2	-5	25 ft.	40 lbs.	19	24
Breastplate, bronze	Medium	+4	+2	+3	-4	25 ft.	20 lbs.	19	24
Breastplate, iron	Medium	+5	+2	+2	-5	25 ft.	40 lbs.	20	25
Lorica segmentata*	Heavy	+6	+3	+1	-6	20 ft.	20 lbs.	23	31

* Due to the craftsmanship required to make this armor, it should be considered masterwork.

as wide-ranging as 5th-century BCE Scythia (where some of the earliest finds are discovered) and the Roman army (where it is known as lorica hamata); it is still in use well into the Middle Ages.

Ring mail: Like chain mail, but with larger rings. Since piercing weapons can easily penetrate these large rings, they are typically sewn onto a hard leather backing.

Scale mail: Small overlapping leather scales, typically sewn onto a leather backing. Like chain mail, scale mail is worn by the Roman army (where it is known as lorica squamata).

Breast plate: Simple and efficient, a solid chest covering combined with a helmet, breastplates are among the longest-used pieces of armor. They can be found in the Greek armies of the 1st millennium BCE all the way to the Spanish Conquistadors 2,500 years later.

Lorica Segmentata: The army of the elite Roman Legionnaire, this armor is composed of heavy iron bands that overlap one another (what is sometimes referred to as "banded mail"). This armor is only worn by the elite heavy shock troops of the Roman army due to its complexity; it can only be made by an experienced smith with a well-stocked smithy. Chain and scale mail, on the other hand, can be made by simple slaves of the empire.

This armor is so difficult to make that it falls out of use in the later Roman Empire (approximately the 3rd century) and is not reintroduced until the 16th century CE, when rivets make its construction much faster and simpler.

PL 2 Weapons and Armor

By the Middle Ages, weapon design is becoming increasingly sophisticated. The armies of Alexander and of Rome designed weapons for specific modes of fighting and in PL 2 this specialization process continues, with weapons and armor being designed to counter specific types of attack or defense. Spears become increasingly sophisticated, growing into pole arms—weapons which often combine two of the most effective PL 1 weapons, the axe and the spear, with a longer handle to devastate an enemy before he can get close. Flails and morningstars come into use to bypass shields rather than attempt to bash through them, and the lance takes advantage of the stirrup to create the ultimate mounted warrior: the knight. Ranged weapons grow more sophisticated as well, taking two approaches: the longbow, the ultimate pre-gunpowder ranged weapon for the nation willing to commit to generations of training for its citizens; and the crossbow for those who want an effective weapon that is easy to teach.

PL 2 Weapon Materials

The Middle Ages period sees the introduction of the earliest steels in Europe. This material gives Muslim warriors a decided advantage in their struggles with Christians throughout the Middle Ages.

Damascus steel: Damascus steel is the name given in the Middle Ages to the pre-industrial steel of India and Arabia. Since this alloy is both hard and flexible, it is the ideal material for sword blades; it gave the Saracens a tremendous advantage in their conflicts with Europe between 900 and 1700, when the metal was manufactured. After 1700, the secret of making this metal was temporarily lost and was not rediscovered until the modern era.

Damascus steel weapons have no chance to break. Construction time is the same as a wrought iron weapon of the same era, since the weapon is forged in much the same manner. The difference is more in the material than in the construction process.

PL 2 Melee Weapons

Flail: The flail, also known as the morningstar, combines the striking power of the mace with the flexibility of the chain. Flails ignore shields when attacking and gain a +2 bonus on disarm attack rolls. The flail can also be used to execute trip attacks.

Glaive: The glaive is a reach weapon that essentially takes the axe and extends the shaft even further. This makes the weapon more effective against mounted opponents, and makes it particularly useful for soldiers fighting in formation.

The glaive is a reach weapon that threatens targets 10 feet away, but not those adjacent to the wielder.

Greataxe: The greataxe is an extremely large axe. Designed for two-handed use, it inflicts greater damage than the standard battleaxe.

Greatsword: The greatsword is an extremely large two-handed sword that inflicts more damage than a traditional one-handed sword.

Guisarme: The guisarme is a pole axe like the glaive, with the addition of hooks that can be used for trip and grapple attacks. The guisarme is also useful for unhorsing mounted opponents. Any successful hit with a guisarme forces a mounted opponent to make a Ride skill check (DC equal to the attack roll) or be pulled from the saddle.

The guisarme is a reach weapon that threatens targets 10 feet away, but not those adjacent to the wielder.

Halberd: The ultimate polearm, the halberd combines some of the best features of the spear, the glaive and guisarme into a weapon so potent (especially against mounted opponents) that it contributes directly to the decline of cavalry in the 15th and 16th centuries. With the advent of gunpowder soon after, combat is removed from the age of chivalry and takes on a more modern characteristic (though by the 19th century, advances in firearms cause cavalry to make another comeback).

TABLE 1-10: PL 2 MELEE WEAPONS

Weapon	Damage	Critical	Damage Type	Range Inc.	Size	Weight	Purchase DC	Craft (Structural) DC
Flail, wrought iron	1d8	20	Bludgeoning	---	Med.	8 lbs.	13	18
Glaive, wrought iron**	1d10	19-20	Slashing	---	Large	15 lbs.	15	20
Greataxe, wrought iron	1d12	19-20	Slashing	---	Large	18 lbs.	19	24
Greatsword, wrought iron	1d12	19-20	Slashing	---	Large	12 lbs.	19	24
Guisarme, wrought iron**	1d8	19-20	Slashing	---	Large	18 lbs.	13	18
Halberd, wrought iron	1d10	19-20	Piercing or Slashing	---	Large	18 lbs.	15	20
Lance, wrought iron**	1d8	19-20	Piercing	---	Large	15 lbs.	13	18
Longsword, wrought iron	1d8	19-20	Slashing	---	Med.	6 lbs.	13	18
Longsword, Damascus steel*	1d8	19-20	Slashing	---	Med.	6 lbs.	18	23
Ranseur, wrought iron**	1d8	19-20	Piercing	---	Large	18 lbs.	13	18
Scimitar, wrought iron	1d6	18-20	Slashing	---	Med.	6 lbs.	13	18
Scimitar, Damascus steel	1d6	18-20	Slashing	---	Med.	4 lbs.	18	23
Warhammer, wrought iron	1d8	19-20	Bludgeoning	---	Med.	7 lbs.	13	18

* Due to the craftsmanship required to make these weapons, all should be considered masterwork weapons.
**Reach weapon.

The halberd can be set against a charge to inflict double damage on a charging opponent. A halberd can also be used for trip attacks, and if a hit is scored on a mounted opponent he must make a Ride skill check or be unhorsed (as described in the glaive entry above).

The halberd is a reach weapon that threatens targets 10 feet away, but not those adjacent to the wielder.

Lance: The lance inflicts double damage when used in a charge from the back of a horse. It can be used one-handed while mounted.

The lance is a reach weapon that threatens targets 10 feet away, but not those adjacent to the wielder.

Longsword: A longer version of the sword suited to both stabbing and slashing, this weapon grows in popularity as the Roman Empire wanes and a more "barbarianized" Europe takes shape.

Ranseur: The ranseur is a pike with numerous hooks and projections around the tip to catch and bind an opponent's weapon. It gains a +2 bonus on disarm attack rolls.

The ranseur is a reach weapon that threatens targets 10 feet away, but not those adjacent to the wielder.

Scimitar: The scimitar is a saber with a heavy slashing blade that inflicts tremendous damage. It lacks some of the versatility of the longsword, since it is not usable as a stabbing weapon. Still, this weapon is popular for centuries and is still carried by cavalry officers as late as the 19th century.

Warhammer: A heavy hammer, these simple weapons are still effective on the battlefield.

PL 2 Ranged Weapons

Crossbow, light: The crossbow is one of two major advances in ranged combat that occur in PL 2, the other being the composite longbow (frequently referred to as the English longbow or Welsh longbow). Despite the fact that the longbow has better range and is more powerful than the crossbow, these weapons were so feared that they were temporarily banned by the Catholic Church as being "un-Christian."

The reason for this weapon's fearsome reputation lies in the fact that it is more powerful than the shortbow, and easier to use and more versatile than the longbow. Unlike the longbow, which takes decades to master and requires a man of great physical strength and endurance to use, the crossbow is fairly easy to master and can be used while kneeling or even laying down.

These factors lead to the crossbow's slow replacement of the shortbow throughout the Middle Ages, especially during siege warfare, when archers could take better advantage of cover when firing at the enemy.

Loading a crossbow is a move action that provokes an attack of opportunity. It requires two free hands to load.

The crossbow uses the ammunition listed in PL 1 ranged weapons. All the arrows listed and the bullet can be fired from a crossbow (crossbows firing stone or lead bullets are actually the first crossbows to appear and are known as stonebows).

Firing a crossbow can be done one-handed, but the wielder suffers a -2 penalty to his attack roll when using the weapon one-handed.

Crossbow, heavy: The heavy crossbow is a larger, more powerful weapon. It requires a full round to load and if fired one-handed the wielder takes a -4 penalty to his attack roll.

The crossbow uses the ammunition listed in PL 1 ranged weapons. All the arrows listed and the bullet can be fired from a crossbow (crossbows firing stone or lead bullets are actually the first crossbows to appear and are known as stonebows). A bullet fired from a heavy crossbow inflicts 1d6 damage rather than the usual 1d4.

An armor piercing arrow fired from a heavy crossbow is treated as a touch attack against light and medium armor (normal armor piercing arrows are

TABLE 1-11: PL 2 RANGED WEAPONS

Weapon	Damage	Critical	Damage Type	Range Inc.	Size	Weight	Purchase DC	Craft (Structural) DC
Crossbow, light	*	*	*	30 ft.	Med.	4 lbs.	15	20
Crossbow, heavy	*	*	*	40 ft.	Large	8 lbs.	18	23
Composite longbow (exotic)**	*	*	*	50 ft.	Large	3 lbs.	25	30

*The damage of a bow or sling depends on the type of ammunition used.
** Due to the craftsmanship required to make these weapons, all should be considered masterwork weapons.

touch attacks against light armor only).

Composite longbow (Exotic Weapon): Until the advent of gunpowder, the composite longbow was the most powerful ranged weapon ever devised. For the monarch willing to invest in the decades-long training required to use it effectively, this weapon provides a unique and powerful advantage, allowing small, lightly equipped forces to destroy much larger and heavier armed opponents (as seen in the British defeat of the French at the Battle of Agincourt).

Despite its range and power, the composite longbow has numerous drawbacks. First, the weapon can only be fired while standing and the archer is flat-footed on the round that he fires. Effective use of the composite longbow thus requires either cover or the protection of pikemen. (The Welsh were notorious for using rough mountainous terrain in combination with the longbow for devastating guerilla campaigns.)

The composite longbow fires the arrows listed under PL 1 missile weapons.

Secondly, the longbow requires decades to master (thus the old saying "to create a longbowman, start with his father"). This is represented in game terms by the longbow's classification as an exotic weapon, requiring a feat to use without penalty.

Of course, the weapon's abilities compensate for these drawbacks. First, a longbowman, unlike a character armed with a crossbow, can make his full allotment of attacks. Second, this weapon is more powerful that any pre-gunpowder weapon. All arrows fired from a longbow are considered armor piercing, meaning that they are touch attacks against light armor. When using armor piercing arrows, all ranged attacks are treated as touch attacks, even against targets wearing heavy suits of full chain or plate.

PL 2 Armor

Chain mail: As the need for heavier armor increases, suits of chain mail, the best armor available for thousands of years, begin to get heavier and cover more of the body. Evolving far beyond the simple chain shirts of PL 1, chain mail of this period appears in a wide variety of types—from chain that covers the arms and extends down to mid-thigh (chain mail on the table) all the way to full body suits of chain with coverings for the head, feet and hands (full chain mail on the table).

Plate mail: A step up from the full chain suit, this armor uses chain to cover the arms, legs and head but adds a breastplate and helmet for additional head and chest protection.

Full plate mail: Appearing at the very end of the era, this armor is solid metal from head to toe, using articulated joints to allow movement, leaving no "weak link" areas of chain at the joints. Although the protection this armor offered is second to none, its use is short-lived; soon the power of the longbow and the emerging use of gunpowder weapons make armor requirements too severe even for a mounted warrior. Developed at the end of the 15th century, this armor is strictly ceremonial less than 100 years later.

TABLE 1-12: PL 2 ARMOR

Armor	Type	Equipment Bonus	Nonprof. Bonus	Max Dex	Armor Penalty	Speed (30 ft.)	Weight	Purchase DC	Craft (Structural) DC
Chain mail	Medium	+5	+2	+1	-6	20 ft.	50 lbs.	20	25
Chain mail, full	Heavy	+7	+3	+0	-7	20 ft.*	60 lbs.	22	27
Plate mail	Heavy	+8	+3	+0	-8	20 ft.*	70 lbs.	23	28
Full plate mail**	Heavy	+9	+3	+1	-6	20 ft.*	75 lbs.	26	34

* A character wearing this armor may not charge or run.
** Due to the craftsmanship required to make this armor, it should be considered masterwork.

PL 3 Weapons and Armor

In terms of weaponry, PL 3 marks a transition period between the age of armor and the age of the gun. All the weapons and armor of earlier PLs are present but are used in different ways, typically in support of early firearms. Though these early firearms are impractical in many ways, their appearance revolutionizes warfare and forces tacticians to adopt new strategies.

Since early firearms have very slow rates of fire, pikes are used to protect gunners, much as they were to protect archers. Swords are still carried by gentlemen for hand-to-hand engagements and to settle matters of honor, but the sword is beginning its slow decline from essential battlefield weapon to martial symbol.

Firearms and Armor

PL 3 sees the soldier evolve from a heavily armored mounted knight to an unarmored foot soldier. The reason for this is the introduction of black-powder weapons that fire projectiles at extremely high speeds. These weapons are even better at penetrating armor than the longbow (though they are inferior to it in almost every other way). Against any armor of PL 4 and below, these weapons are considered touch attacks, bypassing armor completely. It isn't until the development of such modern materials as Kevlar (in PL 5) that armor again returns to the battlefield.

PL 3 Weapon Materials

PL 3 sees widespread adoption of steel, as the methods of making this substance become widely known. Once the advantage of a select few cultures, steel is the universal standard in PL 3 societies,

Steel: PL 3 sees the introduction of practical steel. While steel had existed in China, in Europe and the Middle East, it was too rare for large-scale projects such as armor, and was used for swords alone. With the arrival of plentiful steel in PL3, any earlier metallic weapon can be fashioned from steel instead.

Steel weapons inflict the same damage as their wrought iron counterparts but have no chance for damage or breakage and weigh 50% as much. In addition, steel armor has its maximum Dexterity increased by one and its armor check penalty lessened by one.

PL 3 Melee Weapons

Rapier: This "gentleman's sword" is too light to effectively penetrate heavy armor but is worn as a status symbol and a way to settle disputes in dueling contests. Rapiers suffer a -1 penalty to attack rolls against Medium metallic armor and a -2 penalty on attack rolls against Heavy metallic armor.

TABLE 1-13: PL 3 MELEE WEAPONS

Weapon	Damage	Critical	Damage Type	Range Inc.	Size	Weight	Purchase DC	Craft (Structural) DC
Rapier	1d6	19-20	Piercing	---	Med.	2 lbs.	13	18
Cavalry saber	1d6	18-20	Slashing	---	Med.	3 lbs.	13	18

Cavalry Saber: This heavy slashing weapon is used as a back-up weapon by cavalry forces in many PL3 armies. It is extremely similar to the scimitar of earlier progress levels, which was also a popular weapon among mounted soldiers.

PL 3 Firing Mechanisms

Another advance of PL 3 is the development of practical small arms. At first unreliable and expensive, the firing mechanisms that are the heart of these early small arms gradually become more reliable and practical as PL 3 advances.

Matchlock: The matchlock, which ushers in the age of small arms on the battlefield, is the result of several technical innovations. The first is the development of the earliest trigger, called a *serpentine* because of its s-curved shape. The serpentine is located on the side of the weapon rather than in the traditional location of a trigger today, and swiveling it simply brings a slow-burning match down onto a pan of black powder (covered to protect it from wind and rain). While this was a tremendous improvement over earlier attempts at firing mechanisms, one last step remained to turn the matchlock into a reliable system for the battlefield: a true trigger, internalized in the weapon's stock. Once this innovation was achieved the matchlock harquebus was born.

Since locksmiths were the only large body of craftsmen capable of performing the precision engineering needed for these new weapons of war, they came to be called locks, a name that was applied to these firing mechanisms for centuries.

A matchlock weapon takes a full round to reload and requires a full round to fire. It misfires on a natural attack roll of 4 or less (6 or less in windy or rainy conditions, or if the attacker has moved between the loading and firing of the weapon). On a natural attack roll of 2 or less, the weapon has misfired and jammed, requiring 1 minute (10 rounds) to clean and clear before it can be fired again. On a natural attack roll of 1 the round explodes, inflicting damage equal to the weapon's normal damage on the wielder; the weapon cannot be used until repaired, requiring at least one hour of work and a Repair skill check (DC 15).

Wheel lock: Of the many disadvantages of the matchlock, the one that proved the most difficult for the soldier was the need to keep the match smoldering, ready to ignite the powder when it was time to fire. If the match went out, the soldier was faced with the difficult task of relighting it, possibly while under fire. The solution to this was the wheel lock, which used a spring-loaded mechanism to rub iron pyrite against a serrated wheel. This caused sparks to rain down on the flash pan. Although the wheel lock was a significant improvement over the matchlock, especially in that it could be loaded and primed and then holstered until it was ready to be fired, the mechanism was extremely complicated to make and thus expensive. Thus, the wheel lock never had a significant impact on the development of firearms and was only used by a few wealthy officers in the militaries of the day.

A wheel lock weapon takes a full round to load and requires an attack action to fire. It misfires on

a natural attack roll of 3 or less (4 or less in rain). On a natural attack roll of 2 or less the weapon has misfired and jammed, requiring 1 minute (10 rounds) to clean and clear before it can be fired again. On a natural attack roll of 1 the round explodes, inflicting damage equal to the weapon's normal damage on the wielder; the weapon cannot be used until repaired, requiring at least one hour of work and a Repair skill check (DC 15).

Flintlock: The flintlock shares many of the advantages of the wheel lock but is far less expensive. Like the wheel lock, the flintlock can be loaded in advance and then fired at any time. Since it uses a much simpler mechanism that strikes a piece of flint against steel, adapted from fire-starting kits of the day, it could be manufactured more easily and cheaply. The flintlock can also be loaded faster than either the matchlock or the wheel lock.

A flintlock requires a move action to load and requires an attack action to fire. It misfires on a natural attack roll of 3 or less (4 or less in rain). On a natural attack roll of 2 or less the weapon has misfired and jammed, requiring 1 minute (10 rounds) to clean and clear before it can be fired again. On a natural attack roll of 1 the round explodes, inflicting damage equal to the weapon's normal damage on the wielder; the weapon cannot be used until repaired, requiring at least 30 minutes of work and a Repair skill check (DC 10).

Advanced flintlock: As arms makers in Britain, France and the fledgling United States start to use standardized parts from the industrial revolution, their firearms begin a process of gradual improvement and increased reliability. These advanced muskets gradually become lighter, while the muzzle velocity of the weapons (and thus their damage) increases. Precision manufacturing (as opposed to individual craftsmanship) also results in more reliable weapons.

All weapons on the table below noted as AF make use of these advanced flintlocks and misfire only on a 2 or less. On a natural attack roll of 1 the weapon either jams or explodes (50% chance) as described above.

TABLE 1-14: PL 3 RANGED WEAPONS

Weapon	Damage	Critical	Damage Type	Range Inc.	Size	Weight	Purchase DC	Craft (Structural) DC
Harquebus, matchlock	2d6	20	Ballistic	30 ft.	Large	10 lbs.	17	22
Harquebus, wheel lock*	2d6	20	Ballistic	30 ft.	Large	10 lbs.	22	27
Musket, wheel lock*	2d8	20	Ballistic	40 ft.	Large	20 lbs.	26	31
Musket, flintlock	2d8	20	Ballistic	40 ft.	Large	20 lbs.	21	26
Pistol, wheel lock*	2d6	20	Ballistic	20 ft.	Med.	5 lbs.	22	27
Pistol, flintlock	2d6	20	Ballistic	20 ft.	Med.	5 lbs.	17	22
Brown Bess musket, Model 1 (AF)	2d10	20	Ballistic	40 ft.	Large	18 lbs.	23	28
Brown Bess musket, Model 2 (AF)	2d10	20	Ballistic	40 ft.	Large	16 lbs.	23	28
Brown Bess musket, Model 3 (AF)	2d10	20	Ballistic	50 ft.	Large	14 lbs.	25	30
Baker Rifle (AF)*	2d10	20	Ballistic	60 ft.	Large	14 lbs.	32	37
Modele 1763 musket (AF)	2d10	20	Ballistic	30 ft.	Large	18 lbs.	21	26
Modele 1777 musket (AF)	2d10	20	Ballistic	40 ft.	Large	16 lbs.	23	28
Model 1795 musket (AF)	2d10	20	Ballistic	50 ft.	Large	16 lbs.	25	30
Model 1842 musket (AF)*	2d10	20	Ballistic	50 ft.	Large	14 lbs.	25	30

* Due to the craftsmanship required to make these weapons, all should be considered masterwork weapons.

PL 3 Ranged Weapons

Harquebus: The harquebus, sometimes called the arquebus or backbut, is the first firearm fired from the shoulder with a rifle-like stock; its appearance revolutionizes warfare. A heavy weapon with tremendous recoil, the weapon is often fired from a support. The harquebus is in widespread use from the mid-15th through the mid-16th centuries (though isolated examples of its use continue well into the 18th century). In the mid-16th century the musket becomes the preferred weapon of Europe's militaries.

A harquebus fired without a support of some kind suffers a -2 penalty to attack rolls.

Musket: A larger version of the harquebus, the musket is developed in Spain and quickly spreads throughout Europe in the 16th century. The earliest muskets are matchlocks, but by the 17th century the flintlock has supplanted this older firing mechanism. These early muskets are 5½ feet long and are often carried by a crew of two men, with one coordinating the reloading procedures and one firing from a support stand.

A musket fired without a support of some kind suffers a -2 penalty on attack rolls.

Brown Bess musket: The official weapon of the British Army, this weapon went through three models and was known as the "Long Land," "Short Land," and "India Pattern" musket in Britain. Americans referred to all three as the "Brown Bess." The Model 1 Brown Bess had a barrel length of 46 inches and fired a 19mm round. After experience in the French and Indian War revealed that a lighter weapon would be more versatile, the Model 2 was developed, with a 42-inch barrel. Finally in 1797 the India Pattern musket was adopted, with its even shorter 39-inch barrel. During the Napoleonic Wars in Europe and the War of 1812, over 1.6 million of Model 3 Brown Bess muskets were constructed by British ordnance

officials, headquartered at the Tower of London.

These weapons do not require a rest to be effective and can be fired from the shoulder unaided without penalty.

Pistol: With the invention of the wheel lock it becomes possible to load a weapon and then sheath it, carrying it until needed. These weapons are carried by soldiers who can afford them as back-up weapons in case of misfire, but their limited range keeps them from being truly effective battlefield weapons.

Baker rifle: The British Baker rifle might be the first sniper rifle ever created. Firearms designers realized early on the benefits of a rifled barrel—a barrel with grooves inside to give the bullet an aerodynamic spin and increased accuracy. These grooves made loading from the muzzle (the standard practice) difficult, and so despite an understanding of the concept of rifling, very few early muskets were designed to use it.

The Baker rifle was an exception. A muzzle-loading musket with a rifled barrel, this weapon is unmatched in PL 3 warfare for its range and accuracy. Although this weapon takes longer to load (increase the loading time from a move action to a full round), its range allows specialized teams of marksmen to harass enemy units at extreme range.

Modele 1763 and 1777 muskets: The Modele 1763 was the first standardized French small arm, rather primitive compared to its British counterpart. The Modele 1777 was a major leap forward, making this weapon the first true match for British small arms. Unfortunately this weapon was not produced in sufficient numbers early enough to allow the French to overcome the British. If mass production of the Modele 1777 was adopted earlier, the outcome of the Napoleonic Wars would be quite different (this would make an excellent hotspot in the timeline).

These weapons do not require a rest to be effective and can be fired from the shoulder unaided without penalty.

Model 1795 and 1842 muskets: After its emancipation from Britain, the United States began its own firearms production program based at national armories in Springfield, Massachusetts and Harper's Ferry, Virginia. The first weapon made was the Model 1795, an American version of the superb French Modele 1777. These national armories proved great sources of innovation; the later Model 1842 represented a turning-point in the arms of the world. Previously America had been copying the techniques of Europe; after the introduction of the Model 1842, other nations were soon attempting to copy what they called the "American System" —large-scale production of weapons made possible by the use of interchangeable parts.

Another advancement of the Model 1842 was the use of percussion caps, which were easily adapted to flintlock muskets and made the weapons even easier to handle (these weapons, at the cusp of PL 4, only misfire on a roll of 1).

TABLE 1-15: PL 3 EXPLOSIVE/SPLASH WEAPONS

Weapon	Damage	Critical	Damage Type	Burst Rad.	Reflex DC	Range Inc.	Size	Weight	Purchase DC	Craft (Structural) DC
Grenade	3d6	---	Concussion	10 ft.	15	10 ft.	Tiny	1 lb.	17	22

PL 3 Explosive/Splash Weapons

Grenade: Grenades, named after the bulbous pomegranate which they resembled, first came into use in the 15th century. They were so useful for assaulting fortifications (where enemy soldiers were packed together to defend ditches or breaches) that specialized units called grenadiers were organized and trained to use these weapons. Since accidents were common, these soldiers received higher pay, extra privileges, and were allowed to wear distinctive headdresses called *shako*. They were typically armed with an axe, both for use in hand-to-hand combat and because the axe was handy for hacking through the fortifications they were trained to assault.

Grenades require a move action to light their fuse. On a natural attack roll of two, the grenade does not go off. On a natural attack roll of one, it goes off in the wielder's hand, automatically inflicting maximum damage (18 points), though a Reflex saving throw for half damage is still allowed.

PL 4 Weapons and Armor

PL 4 continues to see the firearm as the predominate weapon on the battlefield. With the Industrial Revolution in full swing, firearms continue to be improved with the revolver, bolt-action rifle, and manual machine gun (commonly known as the Gatling gun) all making their first appearances.

This Progress Level also sees smokeless powder replace black powder. This innovation, along with percussion caps, rimfire cartridges, and in 1881 the full-length copper-jacketed cartridge, eliminates the threat of misfire so common with the firearms of PL 3.

PL 4 Ranged Weapons

Minie rifle: French Captain Claude-Etienne Minie solved the problem of the muzzle-loading rifled musket. His weapon, known as the Minie rifle, allowed muzzle-loaded firearms to be easily loaded with a new type of bullet he invented, the Minie ball. The new bullets flew with even greater accuracy than that of the Baker rifle. Other countries took note and Minie rifles were soon in use in the armies of

TABLE 1-16: PL 4 RANGED WEAPONS

Weapon	Damage	Critical	Damage Type	Range Inc.	ROF	Mag.	Size	Weight	Purchase DC	Craft (Structural) DC
Minie rifle	2d8	20	Ballistic	70 ft.	Single	1 Int.	Large	12 lbs.	23	28
Breech-loading rifle	2d8	20	Ballistic	70 ft.	Single	1 Int.	Large	10 lbs.	25	30
Revolver	2d6	20	Ballistic	30 ft.	S	5 or 6 cyl.	Med.	6 lbs.	17	22
Bolt-action rifle	2d8	20	Ballistic	80 ft.	S	5 box	Large	10 lbs.	25	30
Gatling gun	2d10	20	Ballistic	70 ft.	A	Linked	Huge	80 lbs.	30	35

Britain and the United States. The British version of this weapon was called the P/51; the American version was known as the Model 1861. The age of the smoothbore was over, and the age of the rifle had begun. The value and power of these weapons were soon tested in heavy combat, with the Model 1861 serving as the primary infantry weapon for the North and the South in the American Civil War.

Breech-loading rifle: The breech-loading rifle allows a soldier to load and fire quickly. Although these weapons are loaded as a free action, they may still only be fired once per round. In other words, the wielder can load, fire and move each round.

Revolver: In 1835 Samuel Colt patented the cap-and-ball revolver. This weapon could be loaded with five (sometimes six) rounds at once and then fired repeatedly. Early revolvers had to be loaded much as muzzle-loaders, with each chamber requiring a move action to load (meaning that a complete loading for a 6-chamber revolver would take three full rounds). In 1857, when Colt's patent on the revolver expired, Horace Smith and Daniel P. Wesson introduced the cartridge revolver, which allowed jacketed bullets to be loaded from the rear. (This weapon is reloaded as a modern revolver from the Modern core rules). The revolver is the earliest weapon that allows a character his full range of attacks (it may be fired more than once per round as part of a full attack if the shooter is capable of multiple attacks).

Bolt-action rifle: The bolt-action rifle uses the innovative cartridge magazine to fire multiple rounds in succession. This is the first true semi-automatic weapon and allows the wielder his full range of attacks. The smokeless-powder bolt-action, magazine-fed repeating rifle was soon in use by every major army in the world, and would be the primary weapon used by these powers in the First World War.

Gatling gun: The first true machine gun, the 6- or 10-barreled Gatling gun was a hand-cranked manual machine gun that could be fired for long periods of time, with stacks of rounds continuously fed into the weapon. This gun was used in limited numbers in Cuba during the Spanish-American War, where the tactics and usefulness of mass-fire weapons began to spark the imaginations of military tacticians.

TABLE 1-17: SHIELDS

Armor	Equipment Bonus	Armor Penalty	Weight	Purchase DC	Craft (Structural) DC
Small shield	+1	-0	2 lbs.	12	15
Large shield	+2	-0	1 lbs.	16	18

Shields (all progress levels)

Although the shield has been reduced to use by riot control forces in modern warfare, it is one of the most important ancient protective devices. In time travel games where travelers cannot bring technology with them into the past, familiarity with this protective device will add greatly to a character's chances for survival.

Shield Defense and the Advance of Technology:

All shields grant either a +1 Equipment bonus to Defense (if small) or a +2 Equipment bonus to Defense (if large). As technology advances, however, weapon materials are improved and shield technology must improve to keep pace. Shields are therefore only useful against attacks from weapons of their own PL or earlier. For example, a PL 0 shield would provide no defense against the weapons of the Bronze Age, and would being easily pierced or shattered by such an attack.

Shields are also ineffective against ballistic attacks at PLs 3-5.

Shields are typically constructed of the same materials as the armors of their era.

Chapter II: Temporal Mechanics

This chapter discusses the "how" of time travel, which must be determined by the Gamemaster before any campaign can take place. Rather than provide one set of time travel rules, this chapter discusses several different options, allowing the Gamemaster to choose the temporal mechanics most appropriate for the type of campaign he wants to run.

Method of Travel

The precise method by which the characters travel through time has an enormous impact on the feel of the campaign. Do they use a mysterious mystic artifact, a captured alien device, a complicated slingshot around the sun or a natural phenomenon? Each of these methods could have unique rules and limitations that govern how and why the PCs travel through the eons. When deciding upon a method of time travel, the Gamemaster should consider the following issues, all of which are discussed in more detail below: power source, accuracy, preparation time, effects of transport, and size/weight restrictions on transport.

Power Source

What powers a time machine influences the flavor of the campaign more than it does the actual mechanics of time travel. If the power source is rare and/or expensive, time travel will be conducted only for important purposes. This rules out flights of fancy and tourism (unless the tourist is *very* rich) and puts time travel on a par with modern spaceflight as something only done by governments and the ultra-rich.

On the other hand, if time travel is cheap and inexpensive, and if the technology is commonly known, *anyone* can take a jaunt through time—putting time travel on the level of the automobile. Without strict enforcement of laws governing time travel and interaction with the past, this could lead to a widespread muddling of the timestream. Travel to certain time periods would have to be restricted or forbidden to avoid contamination; the crucifixion of Christ, for example, would probably be affected by millions of time travelers showing up to watch.

One last consideration when determining the power source of the campaign's mode of time travel is whether that source is mystical or technological. If the power source is mystical, then time travel might have always existed, leading to the possibility of visitors from the *past* and not just the future. These sorcerers from the past might attempt to change the future (perhaps to prevent the industrial revolution and keep technology from supplanting magic, for example) just as a visitor from the future might seek to alter the past.

Accuracy

The accuracy of a time travel method, like the nature of its power source, helps determine how often those in possession of a means

of traveling through time are willing to use it. If the method is accurate only within 100 years, for example, then there would be little point in trying to use it to witness or change an event that only happened on a specific day (such as Lincoln's assassination).

It might be interesting to combine low-accuracy time travel with a campaign where history is easily altered at hotspots, but where arriving at those hotspots requires pinpoint accuracy. For example, if preventing Pearl Harbor would radically affect the course of World War II, travelers might be forced to send dozens of teams back in time in a shotgun-like pattern attempting to hit the critical target date.

Another condition that might arise from inaccurate travel is the concept of time "sleeper agents." If Pearl Harbor can be prevented and history changed, but *only* on December 7, 1941, then a team arriving in 1930 might be expected to stay and wait, blending in with the population, making sure they are in Hawaii on that fateful day for their chance to change history.

By contrast, if time travel is very accurate, then it would be preferable to make a few short trips rather than one long one, decreasing the chance of contaminating the past. One quick trip might be made to scout the layout of Ford's Theater when it is empty and then another, arriving minutes before Lincoln's assassination, to make the desired observations or changes.

Of course, accuracy might not be temporal. A team of travelers might be able to arrive at the year, the day or even the hour of their choosing, but find themselves scattered around the globe. This would lead mission planners to target times well in advance of the target date to allow the mission team time to regroup and coordinate before heading to their objective.

Preparation Time

Preparation time factors into the tone of the campaign in much the same way as the power source. Are trips through time like modern interstellar missions, requiring years of training and preparation before the fateful insertion into the past? Or do the PCs sit in a ready room playing poker, waiting for an orderly to burst in and yell "someone just assassinated Scipio, let's roll"?

Time machines that require years (or decades) of preparation might mean that travelers are expected to stay for long periods of time. This would be especially true on missions of observation rather than conquest or timeline-alteration. The time historian would be expected to blend in and record years or even decades of history before being retrieved.

A lengthy preparation time also means the heroes can expect less support if they get in trouble, since there will be long "windows" between expeditions. If the preparation time is very lengthy (more than six months), the agency for which the characters work might be unwilling to waste another half-year on one mission and might decide not to send help at all. The timestream is a big "place," and if only 60 missions can be conducted in 30 years, then any time agency must choose carefully and be prepared to accept some losses.

Effects of Transport

The effects of time travel on the traveler affects the campaign in very tangible, mechanical ways. Do the PCs arrive naked and vomiting, or do they arrive in 28th-century combat regalia with full possession of their faculties? Time travel might be arduous physically, mentally, or both, and it might render any device brought with the traveler (such as a weapon) unusable.

It is particularly important to decide what types of items can be brought through time. If weapons are transportable through time, then the PCs will likely have a significant edge on their opponents in the past. If weapons can't be transported, then the PCs will have to meet the past on its own terms. At the other extreme, if *nothing* but the characters can be transported, then the PCs may need to be accomplished thieves, capable of stealing period-appropriate clothing without drawing unnecessary attention.

If the physical or psychological effects of time travel are somewhat dangerous, travelers are likely to be chosen from among the best and brightest of the society, like astronauts today. They are expected to be physically fit and possess an advanced education to cope with the rigors of transport and the dangers of exploring unknown, often violent times.

On the other hand, if the effects of travel are too dangerous, then expendable members of a society might be chosen. Criminals might be the perfect combination of expendability and survivability; PCs from a futuristic society might find themselves pulled from prison and offered a chance at redemption in exchange for performing one simple task.

Size/Weight Restrictions

The amount of material that can be transported at a time also affects the campaign mechanically. Do the PCs have to travel one at a time? Is there a time gate large enough to drive a tank through? These considerations have a considerable effect on the nature of missions into the timestream.

Especially when combined with a lack of time travel accuracy, the PCs might find themselves miles (and years) apart; missions would begin with a lengthy and dangerous isolation. This would affect the type of travelers chosen—time agencies would look for people who are physically and emotionally

capable of holding to their mission in hostile territory, surrounded by potential enemies.

If weight limits are very low, then travelers need to be in shape; this might lead to women or even children being the preferred travelers. Even then, a very low weight requirement excludes the transport of any but the most vital equipment. Of course, the other parameters of the transport device will factor into this; if time travel is cheap and easy and accurate, a tank could be transported one part at a time and assembled on site.

Changing History

Not all time travelers will be passive historians wanting to witness history as it unfolds. What's the point of being able to travel through time if you can't remake history to your liking? This section discusses the practical effects of changing the past and the pitfalls that come with meddling in the complex realm of the temporal.

Hotspots

A hotspot is like a fork in the road, a point at which the alteration of a single event will have far-reaching effects for the rest of history. Like a pebble dropped in a pond, a change made at a hotspot can spark a chain reaction of unanticipated events and alterations to the timeline. The number and location of the hotspots that exist in a given campaign must be determined by the Gamemaster. In general, a campaign that features highly "elastic" time (see Temporary Elasticity below) will have more hotspots than a campaign in which time is more rigid. Examples of possible hotspots are the fall of the Roman Empire, the Battle of Tours (where Charles Martel halted the Islamic advance into Europe), the rise to power of Adolf Hitler, the Japanese attack on Pearl Harbor, and the Cuban Missile Crisis.

The PCs might find themselves defending a particularly important hotspot on more than one occasion and for different reasons. For example, the PCs might prevent a group of nationalistic Japanese time travelers from making the attack at Pearl Harbor too successful—if the American aircraft carriers are wiped out along with the battleships, Japan might be able to defeat America in World War II's Pacific theater. Later in the campaign, the PCs might have to prevent Nazi time travelers from stopping the Pearl Harbor attack altogether to delay or prevent entirely America's entry into the war.

In some time travel campaigns, changing the past is the point of the entire campaign; events might all revolve around a single particularly crucial hotspot in the past. PCs from a world ravaged by war (especially those living in a full-fledged post-apocalypse world) might travel back in time to prevent their timeline from existing at all.

Possible Hotspots

"Great Man Theory"

The great man theory contends that history is made by people and that the elimination of key individuals will greatly change history. If Lincoln dies before the end of the Civil War, the North loses; if he is not assassinated at Ford's Theater, history takes a different turn; and so forth. Historically significant individuals thus form time hotspots centered on themselves.

This theory is currently dismissed by historians, but it makes for great gaming. Protecting an important historical individual is a tangible goal that likely involves a heavy dose of action, as the bad guys attempt to kill whoever the PCs are protecting.

Another advantage of centering hotspots on historical figures is that it gives the PCs opportunities to interact with the important figures of history, or at least walk a mile in their shoes. What person wouldn't want to attend a Shakespeare play in the company of Queen Elizabeth or ride on campaign with Alexander the Great?

Centering campaigns on individuals is a good idea for fantasy and modern games, since interaction (an activity called "role playing"—I'm skeptical but I hear it happens) is the key to a good game every bit as much as action. When you add in the ability to draw from the cast of history's good, bad and downright ugly, this idea becomes more appealing.

In addition to the classic bodyguard scenario, centering hotspots on history's men and women opens up other avenues for adventure as well. Suppose a bumbling time historian, on hand to witness the Lincoln assassination, gasps at just the right time and alerts him, allowing the President to live. Now the PCs might find themselves in a quandary, as they are assigned to ensure that the assassination goes off without a hitch.

Or perhaps a historical figure is somehow permanently lost. One of the time travelers might have to take his place to ensure that history remains intact.

Economic Forces

Centering hotspots on economic forces assumes that you can "follow the money" in a historical sense. Europe never bothers to colonize the New World if it is led to believe the lands are barren. Make the Great Depression much, much worse for the United States and the country is too damaged economically to render any meaningful assistance to the Allies in World War II.

While this theory holds some weight, centering an adventure on the laws of supply and demand will

be a tough sell for most Gamemasters. It's just too nebulous to make for a good, exciting culmination to an adventure. Where economic hotspots really come into play is in combination with a more tangible hook.

If the campaign usually centers hotspots on individuals, perhaps the elimination (or discrediting) of Adam Smith's theories leads capitalism to never exist. Economies continue to work under the principles of mercantilism, with a scientific study of the laws of economics never seriously considered by policy makers.

If the campaign usually centers hotspots on technology, then using futuristic technology to make Faraday think his electric motor is a failure, or blowing up the lab in which Tesla is experimenting with alternating current, can be events on which to base an adventure.

In other words, even if economics is the key, centering the hotspot on something concrete will make this more of an adventure and less of a college lecture for the players.

Cultural Forces

Cultural forces are those movements made up of the great mass of humanity rather than the individual: communism, socialism, capitalism; democrats and republicans, loyalists and revolutionaries.

A hotspot centered on a cultural phenomenon is going to be almost impossible to change. Cultural forces are even harder to pin down (and thus harder to change) than economic forces. It might be hard to prevent the Great Depression from occurring world-wide, but it would likely be orders of magnitude harder to prevent the desire for self-determination that spawned the women's suffrage movements of the 19th and 20th centuries.

For all campaigns except those with an "elastic" timeline (where changes in the timeline are very difficult), hotspots centered around cultural forces are very rare. For campaigns that want to make the timeline extremely difficult to change, this is a good model for hotspots. If all hotspots are centered on movements and trends, rather than individuals and solitary events, then history will be all but impossible to change. For example, if the Gamemaster determines the hotspot involved in the Cold War is the cultural clash of capitalism and communism, a time traveler attempting to turn the Cold War into a nuclear World War III (or to lengthen or shorten the Cold War) will find it an almost impossible task, requiring that the mindset of peoples in both the United States and the Soviet Union be fundamentally altered.

Environmental Forces

Environmental forces are a special kind of hotspot. Climate affects all life, especially developing lifeforms. Altering the climate or diverting a natural disaster (such as the meteor strike that wiped out the dinosaurs and paved the way for mankind) would radically alter Earth's history (and even the types of lifeforms that evolved in the first place). Altering a hotspot like this usually requires technology beyond the means of time travelers to transport. Even if the time traveling method used in the campaign allows the transportation of technology through time, diverting the course of a comet or changing the climate is going to require a *lot* of that technology.

Technological Forces

Technology plays an important role in history. Outnumbered by the indigenous peoples of the Americas, Europeans relied on firearms and steel to displace mighty empires. Providing 100 AK-47s to the Confederate Army could change the course of the Civil War, particularly if the Southern forces were able to reverse engineer them and begin making their own.

In other words, introducing technological change at a faster or slower rate than what happened historically will change the timeline in far-reaching ways.

This style of hotspot, like the "great man of history" option, works well from a gaming standpoint because it's tangible. It provides a steady source of hooks around which you can build solid adventures: prevent the shipment of AK-47s from reaching General Lee; prevent the sabotage of Manhattan Project headquarters in America; remove steel weapons from the hands of a time traveler-led Neanderthal tribe.

This type of hotspot combines well with hotspots centered around people, but in this case the people around whom hotspots are centered would be scientists and engineers rather than politicians and generals. In other words, killing General Lee won't keep the South from winning the Civil War if they have AK-47s. Prevent the discovery of gunpowder weapons by Europe, on the other hand, and you witness a history in which the Aztecs could colonize Europe.

Temporal Elasticity

This is one of the most important choices the Gamemaster of a time travel campaign will make. If the death of a single insect could result in the destruction of all life on planet Earth, then time travel will be barely feasible and undertaken only under extremely controlled circumstances. On the other hand, if time always finds a way around events, then nothing can be changed. Hitler might die only to be replaced by another maniac who triggers World War II just as Hitler would have; history remains largely unchanged.

Levels of Temporal Elasticity

Butterfly Effect: The "butterfly effect" model of temporal elasticity is not really playable. The butterfly effect relies on chaos theory, and postulates that even miniscule changes will cascade over time to produce enormous consequences. As chaos theory would phrase it, "small variations in the initial conditions of a dynamic system produce large variations in the long-term behavior of a system"[1]. For the time traveler, this makes travel into the past (especially the distant past) nigh-impossible since the farther back one travels, the greater the effect of the tiniest change. Were you to travel back to witness a battle during World War II and leave footprints in the mud, you would return to find the outcome of the war to be radically different. Travel to the age of the dinosaurs and *exhale* and you might return to find that humanoid bees are Earth's dominant species rather than humans.

Normal: The default level of elasticity is chosen not for any notions of realism but out of a sense of what makes the best role playing environment. In normal elasticity, time is mutable but changing it isn't easy. In other words, simply visiting the past and speaking with a policeman won't change all of human history.

Normal time elasticity assumes that events have multiple causes, requiring a careful orchestration of events to cause a drastic change in history. Killing Adolph Hitler will not stop a madman from rising up to lead the Nazi party or stop the Nazis from taking over Germany and leading it to war and genocide. Altering the economic circumstances that led the German people into Hitler's arms would have a better chance of working.

What this means in game terms is that an attempt to seriously alter the past will require a number of changes, giving the PCs multiple chances to stop the "big change" from occurring. While true hotspots (single events that lead to a major shift in the timeline) are rare in normal elasticity, they do exist. These events are likely to be restricted if not outright banned to time travelers.

Elastic Time: In a universe with elastic time, time travelers experience both the best and worst aspects of being able to move through time. On the one hand, you can't change anything. This is great for the time historian who wants to observe the building of Stonehenge; he can watch the construction, take several photographs in front of the stunned craftsmen, shoot a couple with a tranquilizer gun and dissect them, all in full view of the natives… and he can do it safe in the knowledge that it will all wash out in the end. A month after the incident, tribesmen will scoff at the tale the way modern people do at urban legends. Ten years later it will be a regional folktale and twenty years after that completely forgotten.

Of course, the flip side of a universe with elastic time is that you can't change anything. Want to kill Hitler? Sure, who doesn't?—but it won't do you any good. Things will unfold as they "should." Kill Hitler, and someone just as racist and unbalanced takes his place. Supply the Americans at Pearl Harbor with jet fighters and the Japanese still manage to slip in and pull off their attack because the presence of such fantastic aircraft makes the American forces too smug and their security grows lax… and all the jets you provide are "conveniently" destroyed on the ground during the first salvo. (And no, no one thought to take one apart and figure out how they work.) For the time traveler with an axe to grind, time travel becomes the world's second most frustrating sport, behind golf.

Like the other extreme, the butterfly effect, this option tends to make time travel more useful in a practical sense and less fun in a gaming sense. In other words, people will be able to build time machines into their cars and go see Lincoln's assassination—great for commerce, but adventuring time travelers might have a hard time finding serious missions to keep them occupied.

One avenue of gameplay that is opened up by elastic time is the comedic campaign. Since you don't have to worry about mucking up the timestream, you can go show those primitive screwheads in the dark ages your BOOMSTICK and everything will be where (and who) it should when you come home.

Multiverse: In this special form of time elasticity, any event that is changed splits off the timeline, creating a divergent or alternate timeline. What this means is that nothing can truly be changed, because everything has already happened. This allows travel between an infinite number of alternate Earths. Indeed, it may be that "time travel" is actually traveling to completely different timelines in an infinite multiverse. See Alternate Timelines below for more discussion about traveling between alternate timelines.

Paradoxes

Paradoxes are headaches. Headaches for time travelers (especially when they remove the time travelers from the timeline altogether) and headaches for Gamemasters running time travel campaigns.

Most paradoxes are conundrums because they disrupt the linearity of causation that we deal with in our everyday lives: cause followed by effect. A causality paradox is one that violates the chain of cause and effect, putting an effect before its cause. One of the best known examples of a causal paradox is the so-called "grandfather paradox" in which a man travels back in time and kills his own grandfather. This leads to the man never existing, which means there was no one to kill the grandfather, and so on to infinity.

Paradoxes also involve the conundrum of a person communicating with himself. Here we run into one of the most difficult paradoxes, from a gaming

perspective: sending messages to yourself, interacting with yourself, even helping yourself. Here's an example: a player walks through a door and sets off a trap; the player leaves a message for his past self before he leaves for the mission, warning him not to go through that door; or later in the adventure the player is outnumbered four to one, so he travels back in time three more times, allowing all four of him to deal with the attackers.

Dealing with Paradoxes

Perhaps the best way to deal with paradoxes is through the "observer effect." This theory makes two basic claims that are handy for sorting out gameable temporal mechanics: the act of observing changes things, and the act of observing collapses all possibilities into a single state.

What this means is that the act of observation changes the course of events (allowing for changes in the event, possibly major ones), but also fixes the way the event happens down from infinite possibilities to one possibility. The famous thought problem *Schrödinger's Cat* illustrates the concept of collapsing infinite possibilities into one; it basically states that until something is observed, all possibilities must be considered true, and once an event *is* observed then only one is known to be true.

In game terms this means that each individual traveler gets only one chance to alter an event. Was Lincoln killed, or did he live? Until you have visited the event and seen it for yourself, you do not know. Lincoln could have hired a double to attend the play and when that double was killed lived the rest of his life in obscurity. Once you go and witness the event and determine that Lincoln did die, there is nothing you can do to change the event. Another time traveler might try, but for the purposes of your reality, the question is decided.

This means that while you might visit the same time more than once, you cannot interact with yourself or change the result of any event you observe. An interesting theory that also makes for great gaming. (Nice.)

Schrödinger's Cat

A cat is placed in a sealed box. Attached to the box is an apparatus containing a radioactive nucleus and a canister of poison gas. This apparatus is separated from the cat in such a way that the cat can in no way interfere with it. The experiment is set up so that there is exactly a 50% chance of the nucleus decaying in one hour. If the nucleus decays, it will emit a particle that triggers the apparatus, which opens the canister and kills the cat. If the nucleus does not decay, then the cat remains alive. According to quantum mechanics, the unobserved nucleus is described as a superposition of "decayed nucleus" and "undecayed nucleus" (meaning it exists partly as each simultaneously). However, when the box is opened, the experimenter sees only a decayed nucleus/dead cat or an undecayed nucleus/living cat.

Alternate Timelines

Alternate timelines, usually inhabiting alternate dimensions, provide an alternative type of campaign that shares many elements of the time travel campaign. In this model, the players do not travel through time at all, but between dimensions—to places where history happened a little (or a lot) differently. Alternate timelines offer many of the same adventure possibilities as the time travel game (visiting a post-nuclear United States, for example) without any of those pesky problems of causality or timeline alteration. If you prevent a nuclear war (or start one) it won't affect the "true" reality you call home.

Of course, if the players can travel through dimensions, there is always the possibility that denizens of other dimensions are visiting *our* reality, perhaps merely exploring… or perhaps looking to conquer. It's even possible to run a campaign with invaders from an alternate dimension as a straightforward *d20 Modern* campaign; the characters almost never leave the Earth we know and love, but must constantly deal with threats from other dimensions.

A popular form of the alternate timeline campaign has the main characters (the PCs) shifting uncontrollably through dimensions attempting to find their way home, perhaps as the result of a scientific experiment gone awry. This brand of storytelling allows the Gamemaster to set the pace and conditions of the timeline shifts to best serve the campaign; it has been seen in popular television shows and recently in the medium of comic books.

Campaign Model: Time Enforcers

Breaking the Time Barrier

As humans expanded beyond the bounds of Earth, exploring and colonizing the solar system, they began to discover alien devices fueled by a previously unknown substance, dubbed "quicksilver" because of its discovery on the planet Mercury. One of these devices was a stardrive that allowed starships to exceed the speed of light, something that should be

impossible. During an attempt to reverse engineer the stardrive, several accidents occurred in which scientists disappeared for a moment only to reappear shortly thereafter, much older and quite insane. Many were dead by very unusual causes, such as frostbite, dehydration or severe burns. Others were alive, but babbling incoherently about decades spent in jungles being hunted by terrible creatures.

Unable to explain these phenomena, scientists were nevertheless able to reverse engineer the stardrives and begin the creation of relatively primitive copies. Although many people questioned the wisdom of employing devices about which so little was known, the devices seemed relatively stable, and their potential for military and exploratory applications seemed worth any risks. One of these risks was that occasionally ships would simply disappear for no apparent reason. Usually they were never seen again, but sometimes they reappeared seconds later, carrying long dead-crews and showing signs of decades or even centuries of cosmic collisions.

It wasn't until an engine malfunction aboard the Earth starship *Repulse* was successfully reversed that scientists learned the truth: the quicksilver drives not allowed objects to exceed the speed of light; it also allowed them to move through time. The malfunction was examined exhaustively and new safeguards were put into place to make such "events" less likely in the future. But scientists continued to wonder how to harness this new and highly classified capability. Random exploration was deemed too dangerous, and the governments of Earth agreed in secret to impose a moratorium against further research.

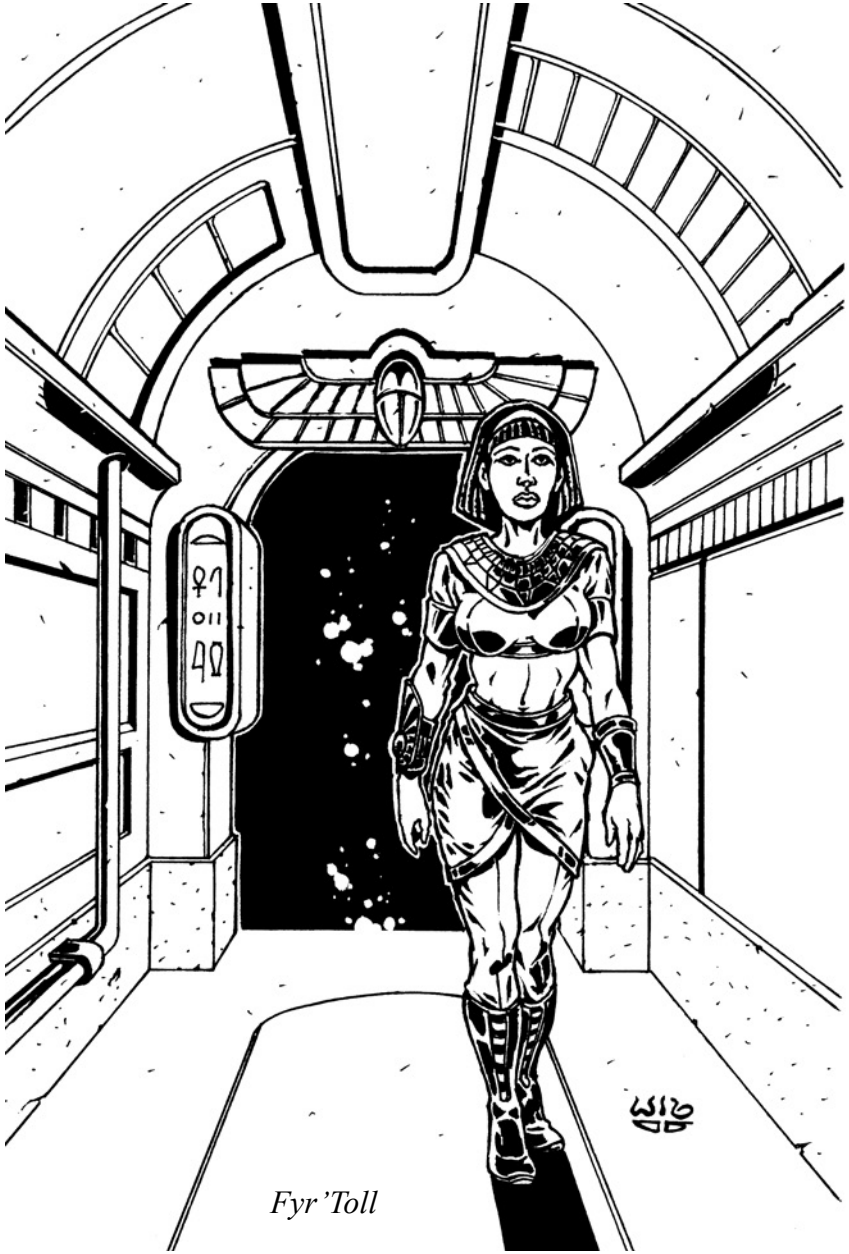
But when a team of archaeologists on Mars, exploring an area cordoned off and labeled forbidden territory by the governments of Earth due to the large of number of ruins there, discovered an ancient gateway that allowed controllable transport through time, government officials knew they had an opportunity to explore an even more daunting frontier than the strange and wondrous stars beyond the Sol system.

In complete secrecy, the governments of a now-United Earth began authorizing experiments with this time gateway, establishing the Time Enforcement Agency (TEA) to manage and regulate the use of this technology for science and exploration.

Disturbing Trends

As TEA agents began to explore the parameters of the device, including the frustrating inability to transport any equipment containing moving parts or a power source through time, they also realized that they were being watched. There were others moving through time as well… and unlike the TEA agents, they were not merely observing and recording. They were attempting to change things.

When the governments of United Earth was informed of this situation, their response was again unanimous: the TEA would expand beyond science and research and become a true enforcement body, with the military objective of learning who these forces were and preventing them from making a fatal change to the timestream. While 99.9% of the population slept soundly and unaware, the most important struggle in the history of mankind had begun: the Time War.



Fyr'Toll

Known Factions

The following factions are known to have access to time travel technology and to be actively engaged in attempts to alter the history of Earth. Each is discussed briefly below, along with their known time gates (listed by location and time) and their apparent goals.

Eternal Reich

Methods: Assassination, direct time intervention, observation, terrorism.

Goals: Destruction of the United States, German world domination, anti-Semitism.

Known Gate Locations: Turkey (1901-2500), Vienna (1905-1913), Munich (1913-1938), Berlin (1945).

History: The Eternal Reich is the time traveling arm of the Thule Society, a group of Nazi mystics. This group exerted considerable influence over the Nazi Party and Adolf Hitler (though he was never admitted membership) and several high-ranking Nazi Party officials, including Rudolf Hess, Alfred Rosenberg and Dietrich Eckart.

The group and its founder Rudolf von Sebottendorff appeared out of nowhere in post-World War I Turkey. No one knows who this mysterious leader is or where (and when) he came from; all that is known is that in 1918 he appeared in Turkey with a group of fanatically devoted followers, an enormous fortune and time travel technology. From a hidden base in Turkey, he directs his forces in an attempt to achieve the group's twisted goals. In addition to the goals listed above, von Sebottendorff also seeks to insure that Adolf Hitler lives to take his place as the head of a Nazi Party that comes to rule Germany. Thus, any attempt to alter the course of World War II by eliminating the Nazi Party or assassinating a young Adolf Hitler will be opposed by Thule Agents. Indeed, TEA agents investigating the Eternal Reich have observed a near obsession with Hitler and note that the construction of their Munich time portal coincides with Hitler's arrival in Munich. Some members of TEA believe that von Sebottendorff is Hitler, but there is no hard evidence for this.

Fyr'Toll

Methods: Subterfuge, impersonation, supporting weak-minded puppet rulers.

Goals: Unknown.

Known Gate Locations: Unknown.

History: The identification of these humanoid aliens interfering with Earth's historical development is what sparked the militarization of the TEA, triggering what is colloquially referred to by agents and government officials as the Time War. Physically, the Fyr'Toll are nearly indistinguishable from humans; TEA investigators believe that the Egyptian Pharaoh Akhenaton was a member of this race. Many theorize that this race is responsible for the alien ruins discovered throughout the Sol system. A large minority of investigators believe that the Fyr`Toll actually *are* humans from the far future, manipulating time to ensure that some event, unknown to humans of the 26th century, either happens or does not happen.

With the motives and identity of the Fyr'Toll so much in doubt, TEA investigators are advised to treat this race with extreme caution and to record the smallest details about them and their activities should they be encountered.

The truth is even more mysterious than any of the investigators have yet realized. The Fyr'Toll are a PL 9 society that colonized the Sol system in the distant past, establishing bases on outlying planets and colonies and warring with the indigenous inhabitants of the system, a mysterious race of planetary symbiotes inhabiting the planet Mars. Both races mysteriously went extinct in the early 20th century, leaving numerous ruins scattered around the system to be discovered by humans in the 21st and 22nd centuries. Natural time travelers, the Fyr'Toll are attempting to manipulate Earth history so that when their race begins to die in the early 20th century, they will be able to easily conquer Earth and move their population there, which will allow their race to survive.

Darkvision (Ex): Fyr'Toll possess Darkvision to a range of 60 feet.

Advanced Technology (Ex): The Fyr'Toll are a PL 9 society with regards to time travel technology, and a PL 7 society otherwise. They are extremely few in number and thus need to severely weaken Earth society to effect its conquest, even with their superior technology. Due to the nature of time travel, they have no access to their advanced technology in the past and are forced to rely on guile.

Natural Time Travelers (Ex): The Fyr'Toll are natural time travelers, extremely knowledgeable and gifted in the art of temporal mechanics. They receive a +2 bonus on all skill checks involving the construction and maintenance of time travel technology.

Ability Modifiers: +4 Int, -2 Str, -2 Con.

Typical FyrToll Sentinel (Dedicated Hero 3): CR 3; Medium-size humanoid; HD 3d6+3; HP 14; Mas 12; Init +0; Spd 30 ft; Defense 16, touch 12, flatfooted 16 (+0 size, +0 Dex, +2 class, +4 equipment); BAB +2; Grap +2; Atk +2 melee (1d8+0/19-20, Wrought Iron Warhammer), or +2 ranged (1d4+0, Sling); FS 5 ft by 5 ft; Reach 5 ft; SQ ; AL The Hegemony; SV Fort +3, Ref +1, Will +4; AP 1; Rep +1; Str 11, Dex 10, Con 12, Int 16, Wis 15, Cha 8.

Occupation: Chrononaut (Bluff, Forgery)

Background: Progress Level 9 ()
Skills: Bluff +8, Forgery +9, Knowledge (History) +9, Knowledge (Technology) +9, Listen +4, Read/Write Language +6 (Ancient Greek, Ancient Hebrew, Latin, English, Mandarin, Middle Egyptian), Sense Motive +8, Speak Language +6 (Ancient Greek, Ancient Hebrew, Latin, English, Mandarin, Middle Egyptian), Spot +10
Feats: Alertness, Ancient Technology (PL 0-3), Ancient Technology Expert (PL 0-3), Armor Proficiency (light), Futuristic Technology (PL 7-9), Modern Technology (PL 4-6), Simple Weapons Proficiency
Talents (Dedicated Hero): Skill Emphasis (Bluff), Aware
Possessions: Wrought Iron Chain Shirt, Wrought Iron Warhammer, Sling

Advanced FyrToll Sentinel (Dedicated Hero 3/Anomaly 3): CR 6; Medium-size humanoid; HD 3d6+3 plus 3d8+3; HP 31; Mas 12; Init +0; Spd 30 ft; Defense 17, touch 13, flatfooted 17 (+0 size, +0 Dex, +3 class, +4 equipment); BAB +3; Grap +3; Atk +3 melee (1d8+0/19-20, Wrought Iron Warhammer), or +3 ranged (1d4+0, Sling); FS 5 ft by 5 ft; Reach 5 ft; SQ ; AL The Hegemony; SV Fort +5, Ref +3, Will +6; AP 3; Rep +2; Str 11, Dex 10, Con 12, Int 16, Wis 15, Cha 8.
Occupation: Chrononaut (Bluff, Forgery)
Background: Progress Level 9 ()
Skills: Bluff +11, Forgery +12, Knowledge (History) +12, Knowledge (Physical Sciences) +9, Knowledge (Technology) +12, Listen +4, Pilot +6, Read/Write Language +6 (Ancient Greek, Ancient Hebrew, Latin, English, Mandarin, Spanish), Sense Motive +8, Speak Language +6 (Ancient Greek, Ancient Hebrew, Latin, English, Mandarin, Spanish), Spot +10
Feats: Alertness, Ancient Technology (PL 0-3), Ancient Technology Expert (PL 0-3), Armor Proficiency (light), Combat Expertise, Futuristic Technology (PL 7-9), Futuristic Technology Expert (PL 7-9), Modern Technology (PL 4-6), Simple Weapons Proficiency
Talents (Dedicated Hero): Skill Emphasis (Bluff), Aware
Talents (Anomaly): Time Sense, Fast Forward
Possessions: Wrought Iron Chain Shirt, Wrought Iron Warhammer, Sling

Time Enforcement Agency (TEA)

Methods: Passive observation, direct and indirect action.
Goals: Historical and scientific study, protecting the known timeline.
Known Gate locations: Jericho (9000 BCE-2500), Memphis (3100 BCE-600), Athens (1000 BCE-500), Alexandria (300 BCE-600), Rome (700 BCE-2500), Byzantium/Constantinople/Istanbul (500 BCE-2500), London (100-2500), Moscow (1160-2500), Tenochtitlan/Mexico City (1350-2500), New York City (1650-2500), Mars (2400-2500).
History: The Time Enforcement Agency is the sole agency authorized by the United Earth Government of the 26th century to travel through time. Its agents are authorized to arrest unauthorized time travelers and to take action to preserve the known timeline. The primary mission of the agency is, however, the study and documentation of Earth's history.

Campaign Set-Up

Power Source: Cannibalized alien technology
Accuracy: Very accurate if a gate exists on each side of the journey; 99.9% of such journeys occur without mishap and the rest involve a mysterious time delay of several seconds. In time jumps without a gate present at both ends, 95% are accurate within one hour of the target time, 4.9% are off by 1-100 years and .1% are wildly inaccurate, being several millennia off target or even shunting travelers to alternate dimensions and/or timelines.
Preparation Time: None if a gate exists at each end. If a gate exists at only one end, several hours spent performing temporal calculations is recommended and improves accuracy.
Effects of Transport: Mild. Travelers must make a Fortitude save (DC 20) or be fatigued by transport. Items with moving parts or power sources may not be transported.
Size/Weight Restrictions: There are no weight restrictions. Size restrictions depend on the physical dimensions of the gate (the smallest gate at either end). Most gates are kept small to prevent a quick, unauthorized movement from either end of the machine.
Hotspots: Hotspots are most commonly centered on people. To a lesser degree hotspots are centered on technological innovation and environmental change. A very few hotspots are centered on economic and cultural forces.
Temporal Elasticity: Normal. Events are relatively easy to change in the short term, but hard to change in the long term. Any interference with a hotspot is much more likely to induce a lasting and/or radical change.
Paradoxes: Paradoxes are not possible. Most paradoxes are prevented by the observer effect, which prevents the same person from being in the same place with himself at the same time. Any attempt to travel to a location and time the character already inhabits will cause the transport to fail.

Generic Ancient NPCs

The time enforcer is most at home in ancient time periods, having received specialized training with ancient weapons, his brawn and natural combat skills allow him to adapt readily to combat in an era where muscle and sinew and iron are what separates those who live from those who die.

Temporal Historian Low (Smart Hero 3/Temporal Historian 2): CR 5; Medium-size humanoid; HD 3d6+3 plus 2d6+2; HP 23; Mas 13; Init +0; Spd 30 ft; Defense 15, touch 12, flatfooted 15 (+0 size, +0 Dex, +2 class, +3 equipment); BAB +2; Grap +1; Atk -1 melee (1d6+-1/19-20, Spiked Club), or +0 ranged (1d6+0, Composite Shortbow w/ Bronze Broad Arrow); FS 5 ft by 5 ft; Reach 5 ft; SQ ; AL none; SV Fort +2, Ref +1, Will +7; AP 2; Rep +2; Str 8, Dex 10, Con 13, Int 16, Wis 14, Cha 12.

Occupation: Law Enforcement (Diplomacy, Gather Information)

Background: Progress Level 8 ()

Skills: Bluff +6, Computer Use +11, Craft (electronic) +11, Craft (mechanical) +11, Craft (structural) +11, Diplomacy +7, Disable Device +9, Gather Information +7, Investigate +8, Knowledge (History) +9, Knowledge (Physical Sciences) +9, Knowledge (Technology) +12, Read/Write Language +3 (Ancient Greek, Latin, Spanish), Repair +9, Research +9, Speak Language +3 (Ancient Greek, Latin, Spanish)

Feats: Ancient Technology (PL 0-3), Armor Proficiency (light), Combat Expertise, Futuristic Technology (PL 7-9), Futuristic Technology Expert (PL 7-9), Modern Technology (PL 4-6), Simple Weapons Proficiency

Talents (Smart Hero): Savant (Knowledge [Technology]), Exploit Weakness

Talents (Temporal Historian): Superstition (Ancient), Detailed Files (one PL)

Possessions: Bronze Chain Shirt, Spiked Club, Composite Shortbow w/ Bronze Broad Arrow

Temporal Historian Medium (Smart Hero 3/Temporal Historian 7): CR 10; Medium-size humanoid; HD 3d6+6 plus 7d6+14; HP 56; Mas 14; Init +0; Spd 30 ft; Defense 16, touch 13, flatfooted 16 (+0 size, +0 Dex, +3 class, +3 equipment); BAB +4; Grap +3; Atk +3 melee (1d8+-1, Wrought Iron Flail), or +4 ranged (1d4+0/19-20, Light Crossbow w/ Iron Armor Piercing Arrows); FS 5 ft by 5 ft; Reach 5 ft; SQ ; AL none; SV Fort +5, Ref +3, Will +9; AP 5; Rep +4; Str 8, Dex 10, Con 14, Int 16, Wis 14, Cha 12.

Occupation: Law Enforcement (Diplomacy, Gather Information)

Background: Progress Level 8 ()

Skills: Bluff +6, Computer Use +16, Craft (electronic) +16, Craft (mechanical) +16, Craft (structural) +16, Decipher Script +8, Diplomacy +7, Disable Device +11, Forgery +8, Gather Information +7, Investigate +13, Knowledge (History) +14, Knowledge (Physical Sciences) +9, Knowledge (Tactics) +8, Knowledge (Technology) +17, Read/Write Language +5 (Ancient Greek, Latin, Mandarin, Sanskrit, Spanish), Repair +9, Research +9, Speak Language +5 (Ancient Greek, Latin, Mandarin, Sanskrit, Spanish)

Feats: Ancient Technology (PL 0-3), Ancient Technology Expert (PL 0-3), Armor Proficiency (light), Armor Proficiency (medium), Combat Expertise, Defensive Martial Arts, Futuristic Technology (PL 7-9), Futuristic Technology Expert (PL 7-9), Modern Technology (PL 4-6), Modern Technology Expert (PL 4-6), Simple Weapons Proficiency

Talents (Smart Hero): Savant (Knowledge [Technology]), Exploit Weakness

Talents (Temporal Historian): Superstition (Ancient), Detailed Files (one PL), Scientific Expert (one time period), Detailed Files (one time period), Superstition (Modern), Scientific Expert (second time period), Achilles Heel, Detailed Files (two time periods)

Possessions: Bronze Chain Shirt, Wrought Iron Flail, Light Crossbow w/ Iron Armor Piercing Arrows

Temporal Historian High (Smart Hero 5/Temporal Historian 10): CR 15; Medium-size humanoid; HD 5d6+10 plus 10d6+20; HP 83; Mas 14; Init +0; Spd 30 ft; Defense 18, touch 15, flatfooted 18 (+0 size, +0 Dex, +5 class, +3 equipment); BAB +7; Grap +6; Atk +6 melee (1d8+-1, Wrought Iron Flail), or +7 ranged (1d4+0/19-20, Light Crossbow w/ Iron Armor Piercing Arrows); FS 5 ft by 5 ft; Reach 5 ft; SQ ; AL none; SV Fort +6, Ref +4, Will +12; AP 7; Rep +6; Str 8, Dex 10, Con 14, Int 16, Wis 14, Cha 12.

Occupation: Law Enforcement (Diplomacy, Gather Information)

Background: Progress Level 8 ()

Skills: Bluff +9, Computer Use +19, Craft (electronic) +19, Craft (mechanical) +19, Craft (structural) +19, Decipher Script +11, Demolitions +8, Diplomacy +7, Disable Device +14, Forgery +11, Gather Information +7, Investigate +13, Knowledge (Earth and Life Sciences) +7, Knowledge (History) +17, Knowledge (Physical Sciences) +9, Knowledge (Tactics) +8, Knowledge (Technology) +22, Navigate +8, Read/Write Language +10 (Ancient Greek, Arabic, Blackfoot, German, Latin, Mandarin, Navaho, Russian, Sanskrit, Spanish), Repair +12, Research +12, Speak Language +10 (Ancient Greek, Arabic, Aramaic, German, Latin, Mandarin, Navaho, Russian, Sanskrit, Spanish)

Feats: Ancient Technology (PL 0-3), Ancient Technology Expert (PL 0-3), Armor Proficiency (light), Armor Proficiency (medium), Combat Expertise, Defensive Martial Arts, Futuristic

Technology (PL 7-9), Futuristic Technology Expert (PL 7-9), Improved Trip, Modern Technology (PL 4-6), Modern Technology Expert (PL 4-6), Simple Weapons Proficiency

Talents (Smart Hero): Savant (Knowledge [Technology]), Exploit Weakness, Linguist

Talents (Temporal Historian): Superstition (Ancient), Detailed Files (one PL), Scientific Expert (one time period), Detailed Files (one time period), Superstition (Modern), Scientific Expert (second time period), Achilles Heel, Detailed Files (two time periods), Scientific Expert (all time periods), Detailed Files (all time periods)

Possessions: Bronze Chain Shirt, Wrought Iron Flail, Light Crossbow w/ Iron Armor Piercing Arrows

Time Enforcer Low (Strong Hero 3/Time Enforcer 2): CR 5; Medium-size humanoid; HD 3d8+6 plus 2d10+4; HP 35; Mas 15; Init +2; Spd 20 ft; Defense 19, touch 14, flatfooted 18 (+0 size, ++1 Dex, +3 class, +5 equipment); BAB +4; Grap +6; Atk +7 melee (1d8+6/19-20, Longsword, wrought iron), or +6 ranged (1d4+0/19-20, Heavy Crossbow w/Iron Armor Piercing Arrows); FS 5 ft by 5 ft; Reach 5 ft; SQ ; AL none; SV Fort +6, Ref +5, Will +2; AP 2; Rep +0; Str 14, Dex 14, Con 15, Int 10, Wis 12, Cha 8.

Occupation: Law Enforcement (Drive, Knowledge [Tactics])

Background: Progress Level 6 ()

Skills: Climb -1, Craft (structural) +3, Drive +6, Handle Animal +2, Intimidate +2, Knowledge (Tactics) +6, Repair +3, Ride +4, Survival +4

Feats: Ancient Technology (PL 0-3), Ancient Technology Expert (PL 0-3), Armor Proficiency (light), Armor Proficiency (medium), Modern Technology (PL 4-6), Power Attack, Simple Weapons Proficiency

Talents (Strong Hero): Melee Smash, Improved Melee Smash

Talents (Time Enforcer): Weapon Focus, Weapon Specialization

Possessions: Chain Mail, Longsword, wrought iron, Heavy Crossbow w/Iron Armor Piercing Arrows

Time Enforcer Medium (Strong Hero 3/Time Enforcer 7): CR 10; Medium-size humanoid; HD 3d8+6 plus 7d10+14; HP 73; Mas 15; Init +2; Spd 20 ft; Defense 22, touch 17, flatfooted 21 (+0 size, ++1 Dex, +6 class, +5 equipment); BAB +8; Grap +10; Atk +11 melee (1d8+6/19-20, Longsword, wrought iron), or +10 ranged (1d4+0/19-20, Heavy Crossbow w/Iron Armor Piercing Arrows); FS 5 ft by 5 ft; Reach 5 ft; SQ ; AL none; SV Fort +8, Ref +7, Will +4; AP 5; Rep +2; Str 14, Dex 14, Con 15, Int 10, Wis 12, Cha 8.

Occupation: Law Enforcement (Drive, Knowledge [Tactics])

Background: Progress Level 6 ()

Skills: Climb +2, Craft (structural) +3, Demolitions +3, Drive +9, Handle Animal +2, Intimidate +5, Jump -1, Knowledge (History) +3, Knowledge (Tactics) +9, Repair +7, Ride +4, Survival +4

Feats: Ancient Technology (PL 0-3), Ancient Technology Expert (PL 0-3), Armor Proficiency (light), Armor Proficiency (medium), Armor Proficiency (powered), Futuristic Technology (PL 7-9), Modern Technology (PL 4-6), Modern Technology Expert (PL 4-6), Point Blank Shot, Power Attack, Simple Weapons Proficiency

Talents (Strong Hero): Melee Smash, Improved Melee Smash

Talents (Time Enforcer): Weapon Focus, Weapon Specialization, Temporal Tactical Expert (one time period), Weapon Focus (one PL), Temporal Tactical Expert (all time periods)

Possessions: Chain Mail, Longsword, wrought iron, Heavy Crossbow w/Iron Armor Piercing Arrows

Time Enforcer High (Strong Hero 3/Time Enforcer 10/Fast Hero 2): CR 15; Medium-size humanoid; HD 3d8+9 plus 10d10+30 plus 2d8+6; HP 123; Mas 16; Init +2; Spd 20 ft; Defense 29, touch 21, flatfooted 29 (+0 size, ++0 Dex, +11 class, +8 equipment); BAB +11; Grap +13; Atk +14 melee (1d8+6/19-20, Longsword, Damascus Steel), or +14 ranged (1d4+2, Crossbow, Heavy); FS 5 ft by 5 ft; Reach 5 ft; SQ ; AL none; SV Fort +10, Ref +10, Will +5; AP 7; Rep +3; Str 14, Dex 14, Con 16, Int 10, Wis 13, Cha 8.

Occupation: Law Enforcement (Drive, Knowledge [Tactics])

Background: Progress Level 6 ()

Skills: Climb +3, Craft (mechanical) +4, Craft (structural) +3, Demolitions +6, Drive +16, Handle Animal +2, Intimidate +5, Jump -3, Knowledge (History) +3, Knowledge (Tactics) +14, Repair +10, Ride +4, Survival +4

Feats: Ancient Technology (PL 0-3), Ancient Technology Expert (PL 0-3), Armor Proficiency (heavy), Armor Proficiency (light), Armor Proficiency (medium), Armor Proficiency (powered), Double Tap, Futuristic Technology (PL 7-9), Futuristic Technology Expert (PL 7-9), Modern Technology (PL 4-6), Modern Technology Expert (PL 4-6), Point Blank Shot, Power Attack, Precise Shot, Simple Weapons Proficiency

Talents (Strong Hero): Melee Smash, Improved Melee Smash

Talents (Time Enforcer): Weapon Focus, Weapon Specialization, Temporal Tactical Expert (one time period), Weapon Focus (one PL), Temporal Tactical Expert (all time periods), Weapon Specialization (one PL), Weapon Focus (one time period), Weapon Specialization (one time period)

Talents (Fast Hero): Evasion

Possessions: Plate Mail, Longsword, Damascus Steel, Heavy Crossbow w/Iron Armor Piercing Arrows

Generic Modern NPCs

At lower levels the time enforcer is somewhat at home with modern weapons but takes penalty at lower levels. His skills still allow him to adapt to the better weaponry and at medium levels he is almost as much at home in modern combat as he is in the ancient world.

Temporal Historian Low (Smart Hero 3/Temporal Historian 2): CR 5; Medium-size humanoid; HD 3d6+3 plus 2d6+2; HP 23; Mas 13; Init +0; Spd 30 ft; Defense 15, touch 12, flatfooted 15 (+0 size, +0 Dex, +2 class, +3 equipment); BAB +2; Grap +1; Atk -1 melee (1d6+-1/19-20, Metal Baton), or +0 ranged (2d6+0, Colt Python); FS 5 ft by 5 ft; Reach 5 ft; SQ ; AL none; SV Fort +2, Ref +1, Will +7; AP 2; Rep +2; Str 8, Dex 10, Con 13, Int 16, Wis 14, Cha 12.

Occupation: Law Enforcement (Diplomacy, Gather Information)

Background: Progress Level 8 ()

Skills: Bluff +6, Computer Use +11, Craft (electronic) +11, Craft (mechanical) +11, Craft (structural) +11, Diplomacy +7, Disable Device +9, Gather Information +7, Investigate +8, Knowledge (History) +9, Knowledge (Physical Sciences) +9, Knowledge (Technology) +12, Read/Write Language +3 (Ancient Greek, Latin, Spanish), Repair +9, Research +9, Speak Language +3 (Ancient Greek, Latin, Spanish)

Feats: Ancient Technology (PL 0-3), Armor Proficiency (light), Combat Expertise, Futuristic Technology (PL 7-9), Futuristic Technology Expert (PL 7-9), Modern Technology (PL 4-6), Simple Weapons Proficiency

Talents (Smart Hero): Savant (Knowledge [Technology]), Exploit Weakness

Talents (Temporal Historian): Superstition (Ancient), Detailed Files (one PL)

Possessions: Undercover Vest, Metal Baton, Colt Python

Temporal Historian Medium (Smart Hero 3/Temporal Historian 7): CR 10; Medium-size humanoid; HD 3d6+6 plus 7d6+14; HP 56; Mas 14; Init +0; Spd 25 ft; Defense 18, touch 13, flatfooted 18 (+0 size, +0 Dex, +3 class, +5 equipment); BAB +4; Grap +3; Atk +3 melee (1d6+-1/19-20, Metal Baton), or +4 ranged (2d6+0, Beretta 93R); FS 5 ft by 5 ft; Reach 5 ft; SQ ; AL none; SV Fort +5, Ref +3, Will +9; AP 5; Rep +4; Str 8, Dex 10, Con 14, Int 16, Wis 14, Cha 12.

Occupation: Law Enforcement (Diplomacy, Gather Information)

Background: Progress Level 8 ()

Skills: Bluff +6, Computer Use +16, Craft (electronic) +16, Craft (mechanical) +16, Craft (structural) +16, Decipher Script +8, Diplomacy +7, Disable Device +11, Forgery +8, Gather Information +7, Investigate +13, Knowledge (History) +14, Knowledge (Physical Sciences) +9, Knowledge (Tactics) +8, Knowledge (Technology) +17, Read/Write Language +5 (Ancient Greek, Latin, Mandarin, Sanskrit, Spanish), Repair +9, Research +9, Speak Language +5 (Ancient Greek, Latin, Mandarin, Sanskrit, Spanish)

Feats: Ancient Technology (PL 0-3), Ancient Technology Expert (PL 0-3), Armor Proficiency (light), Armor Proficiency (medium), Combat Expertise, Defensive Martial Arts, Futuristic Technology (PL 7-9), Futuristic Technology Expert (PL 7-9), Modern Technology (PL 4-6), Modern Technology Expert (PL 4-6), Simple Weapons Proficiency

Talents (Smart Hero): Savant (Knowledge [Technology]), Exploit Weakness

Talents (Temporal Historian): Superstition (Ancient), Detailed Files (one PL), Scientific Expert (one time period), Detailed Files (one time period), Superstition (Modern), Scientific Expert (second time period), Achilles Heel, Detailed Files (two time periods)

Possessions: Light Duty Vest, Metal Baton, Beretta 93

Temporal Historian High (Smart Hero 5/Temporal Historian 10): CR 15; Medium-size humanoid; HD 5d6+10 plus 10d6+20; HP 83; Mas 14; Init +0; Spd 30 ft; Defense 18, touch 15, flatfooted 18 (+0 size, +0 Dex, +5 class, +5 equipment); BAB +7; Grap +6; Atk +6 melee (1d6-1/19-20, Metal Baton), or +7 ranged (2d6+0/19-20, Beretta 93R); FS 5 ft by 5 ft; Reach 5 ft; SQ ; AL none; SV Fort +6, Ref +4, Will +12; AP 7; Rep +6; Str 8, Dex 10, Con 14, Int 16, Wis 14, Cha 12.

Occupation: Law Enforcement (Diplomacy, Gather Information)

Background: Progress Level 8 ()

Skills: Bluff +9, Computer Use +19, Craft (electronic) +19, Craft (mechanical) +19, Craft (structural) +19, Decipher Script +11, Demolitions +8, Diplomacy +7, Disable Device +14, Forgery +11, Gather Information +7, Investigate +13, Knowledge (Earth and Life Sciences) +7, Knowledge (History) +17, Knowledge (Physical Sciences) +9, Knowledge (Tactics) +8, Knowledge (Technology) +22, Navigate +8, Read/Write Language +10 (Ancient Greek, Arabic, Blackfoot, German, Latin, Mandarin, Navaho, Russian, Sanskrit, Spanish), Repair +12, Research +12, Speak Language +10 (Ancient Greek, Arabic, Aramaic, German, Latin, Mandarin, Navaho, Russian, Sanskrit, Spanish)

Feats: Ancient Technology (PL 0-3), Ancient Technology Expert (PL 0-3), Armor Proficiency (light), Armor Proficiency (medium), Combat Expertise, Defensive Martial Arts, Futuristic Technology (PL 7-9), Futuristic Technology Expert

(PL 7-9), Improved Trip, Modern Technology (PL 4-6), Modern Technology Expert (PL 4-6), Simple Weapons Proficiency

Talents (Smart Hero): Savant (Knowledge [Technology]), Exploit Weakness, Linguist

Talents (Temporal Historian): Superstition (Ancient), Detailed Files (one PL), Scientific Expert (one time period), Detailed Files (one time period), Superstition (Modern), Scientific Expert (second time period), Achilles Heel, Detailed Files (two time periods), Scientific Expert (all time periods), Detailed Files (all time periods)

Possessions: Light Duty Vest, Metal Baton, Beretta 93

Time Enforcer Low (Strong Hero 3/Time Enforcer 2): CR 5; Medium-size humanoid; HD 3d8+6 plus 2d10+4; HP 35; Mas 15; Init +2; Spd 25 ft; Defense 21, touch 15, flatfooted 19 (+0 size, +2 Dex, +3 class, +6 equipment); BAB +4; Grap +6; Atk +6 melee (1d6+4/19-20, Metal Baton), or +4 ranged (2d6`+0, Beretta 93R); FS 5 ft by 5 ft; Reach 5 ft; SQ ; AL none; SV Fort +6, Ref +5, Will +2; AP 2; Rep +0; Str 14, Dex 14, Con 15, Int 10, Wis 12, Cha 8.

Occupation: Law Enforcement (Drive, Knowledge [Tactics])

Background: Progress Level 6 ()

Skills: Climb +0, Craft (structural) +3, Drive +6, Handle Animal +2, Intimidate +2, Knowledge (Tactics) +6, Repair +3, Ride +4, Survival +4

Feats: Ancient Technology (PL 0-3), Ancient Technology Expert (PL 0-3), Armor Proficiency (light), Armor Proficiency (medium), Modern Technology (PL 4-6), Power Attack, Simple Weapons Proficiency

Talents (Strong Hero): Melee Smash, Improved Melee Smash

Talents (Time Enforcer): Weapon Focus, Weapon Specialization

Possessions: Tactical Vest, Metal Baton, Beretta 93R

Time Enforcer Medium (Strong Hero 3/Time Enforcer 7): CR 10; Medium-size humanoid; HD 3d8+6 plus 7d10+14; HP 73; Mas 15; Init +2; Spd 25 ft; Defense 23, touch 18, flatfooted 21 (+0 size, +2 Dex, +6 class, +5 equipment); BAB +8; Grap +10; Atk +10 melee (1d6+4/19-20, Metal Baton), or +10 ranged (2d6+0, AK-47); FS 5 ft by 5 ft; Reach 5 ft; SQ ; AL none; SV Fort +8, Ref +7, Will +4; AP 5; Rep +2; Str 14, Dex 14, Con 15, Int 10, Wis 12, Cha 8.

Occupation: Law Enforcement (Drive, Knowledge [Tactics])

Background: Progress Level 6 ()

Skills: Climb +3, Craft (structural) +3, Demolitions +3, Drive +9, Handle Animal +2, Intimidate +5, Jump +0, Knowledge (History) +3, Knowledge (Tactics) +9, Repair +7, Ride +4, Survival +4

Feats: Ancient Technology (PL 0-3), Ancient Technology Expert (PL 0-3), Armor Proficiency (light), Armor Proficiency (medium), Armor Proficiency (powered), Futuristic Technology (PL 7-9), Modern Technology (PL 4-6), Modern Technology Expert (PL 4-6), Point Blank Shot, Power Attack, Simple Weapons Proficiency

Talents (Strong Hero): Melee Smash, Improved Melee Smash

Talents (Time Enforcer): Weapon Focus, Weapon Specialization, Temporal Tactical Expert (one time period), Weapon Focus (one PL), Temporal Tactical Expert (all time periods)

Possessions: Tactical Vest, Metal Baton, AK-47

Time Enforcer High (Strong Hero 3/Time Enforcer 10/Fast Hero 2): CR 15; Medium-size humanoid; HD 3d8+9 plus 10d10+30 plus 2d8+6; HP 123; Mas 16; Init +2; Spd 20 ft; Defense 30, touch 21, flatfooted 30 (+0 size, ++0 Dex, +11 class, +9 equipment); BAB +11; Grap +13; Atk +13 melee (1d6+4/19-20, Metal Baton), or +13 ranged (2d10+0, HK G3); FS 5 ft by 5 ft; Reach 5 ft; SQ ; AL none; SV Fort +10, Ref +10, Will +5; AP 7; Rep +3; Str 14, Dex 14, Con 16, Int 10, Wis 13, Cha 8.

Occupation: Law Enforcement (Drive, Knowledge [Tactics])

Background: Progress Level 6 ()

Skills: Climb +3, Craft (mechanical) +4, Craft (structural) +3, Demolitions +6, Drive +16, Handle Animal +2, Intimidate +5, Jump -3, Knowledge (History) +3, Knowledge (Tactics) +14, Repair +10, Ride +4, Survival +4

Feats: Ancient Technology (PL 0-3), Ancient Technology Expert (PL 0-3), Armor Proficiency (heavy), Armor Proficiency (light), Armor Proficiency (medium), Armor Proficiency (powered), Double Tap, Futuristic Technology (PL 7-9), Futuristic Technology Expert (PL 7-9), Modern Technology (PL 4-6), Modern Technology Expert (PL 4-6), Point Blank Shot, Power Attack, Precise Shot, Simple Weapons Proficiency

Talents (Strong Hero): Melee Smash, Improved Melee Smash

Talents (Time Enforcer): Weapon Focus, Weapon Specialization, Temporal Tactical Expert (one time period), Weapon Focus (one PL), Temporal Tactical Expert (all time periods), Weapon Specialization (one PL), Weapon Focus (one time period), Weapon Specialization (one time period)

Talents (Fast Hero): Evasion

Possessions: Forced Entry Unit, Metal Baton, HK G3

Generic Futuristic NPCs

At low and medium levels the time enforcer is limited in his ability to operate in futuristic combat but at high levels his mastery of futuristic weapons makes him a truly fearsome combatant.

Temporal Historian Low (Smart Hero 3/Temporal Historian 2): CR 5; Medium-size humanoid; HD 3d6+3 plus 2d6+2; HP 23; Mas 13; Init +0; Spd 30 ft; Defense 15, touch 12, flatfooted 15 (+0 size, +0 Dex, +2 class, +3 equipment); BAB +2; Grap +1; Atk +1 melee (2d8+-1/19-20, Concussion Rod), or +2 ranged (2d10+0, Plasma Pistol); FS 5 ft by 5 ft; Reach 5 ft; SQ ; AL none; SV Fort +2, Ref +1, Will +7; AP 2; Rep +2; Str 8, Dex 10, Con 13, Int 16, Wis 14, Cha 12.

Occupation: Law Enforcement (Diplomacy, Gather Information)

Background: Progress Level 8 ()

Skills: Bluff +6, Computer Use +11, Craft (electronic) +11, Craft (mechanical) +11, Craft (structural) +11, Diplomacy +7, Disable Device +9, Gather Information +7, Investigate +8, Knowledge (History) +9, Knowledge (Physical Sciences) +9, Knowledge (Technology) +12, Read/Write Language +3 (Ancient Greek, Latin, Spanish), Repair +9, Research +9, Speak Language +3 (Ancient Greek, Latin, Spanish)

Feats: Ancient Technology (PL 0-3), Armor Proficiency (light), Combat Expertise, Futuristic Technology (PL 7-9), Futuristic Technology Expert (PL 7-9), Modern Technology (PL 4-6), Simple Weapons Proficiency

Talents (Smart Hero): Savant (Knowledge [Technology]), Exploit Weakness

Talents (Temporal Historian): Superstition (Ancient), Detailed Files (one PL)

Possessions: Undercover Vest, Concussion Rod, Plasma Pistol

Temporal Historian Medium (Smart Hero 3/Temporal Historian 7): CR 10; Medium-size humanoid; HD 3d6+6 plus 7d6+14; HP 56; Mas 14; Init +0; Spd 30 ft; Defense 16, touch 13, flatfooted 16 (+0 size, +0 Dex, +3 class, +3 equipment); BAB +4; Grap +3; Atk +3 melee (2d8+-1/19-20, Concussion Rod), or +4 ranged (2d10+0, Plasma Pistol); FS 5 ft by 5 ft; Reach 5 ft; SQ ; AL none; SV Fort +5, Ref +3, Will +9; AP 5; Rep +4; Str 8, Dex 10, Con 14, Int 16, Wis 14, Cha 12.

Occupation: Law Enforcement (Diplomacy, Gather Information)

Background: Progress Level 8 ()

Skills: Bluff +6, Computer Use +16, Craft (electronic) +16, Craft (mechanical) +16, Craft (structural) +16, Decipher Script +8, Diplomacy +7, Disable Device +11, Forgery +8, Gather Information +7, Investigate +13, Knowledge (History) +14, Knowledge (Physical Sciences) +9, Knowledge (Tactics) +8, Knowledge (Technology) +17, Read/Write Language +5 (Ancient Greek, Latin, Mandarin, Sanskrit, Spanish), Repair +9, Research +9, Speak Language +5 (Ancient Greek, Latin, Mandarin, Sanskrit, Spanish)

Feats: Ancient Technology (PL 0-3), Ancient Technology Expert (PL 0-3), Armor Proficiency (light), Armor Proficiency (medium), Combat Expertise, Defensive Martial Arts, Futuristic Technology (PL 7-9), Futuristic Technology Expert (PL 7-9), Modern Technology (PL 4-6), Modern Technology Expert (PL 4-6), Simple Weapons Proficiency

Talents (Smart Hero): Savant (Knowledge [Technology]), Exploit Weakness

Talents (Temporal Historian): Superstition (Ancient), Detailed Files (one PL), Scientific Expert (one time period), Detailed Files (one time period), Superstition (Modern), Scientific Expert (second time period), Achilles Heel, Detailed Files (two time periods)

Possessions: Undercover Vest, Concussion Rod, Plasma Pistol

Temporal Historian High (Smart Hero 5/Temporal Historian 10): CR 15; Medium-size humanoid; HD 5d6+10 plus 10d6+20; HP 83; Mas 14; Init +0; Spd 20 ft; Defense 19, touch 15, flatfooted 19 (+0 size, +0 Dex, +5 class, +4 equipment); BAB +7; Grap +6; Atk +6 melee (2d8+-1, Concussion Rod), or +7 ranged (2d10+0/19-20, Concussion Rifle); FS 5 ft by 5 ft; Reach 5 ft; SQ ; AL none; SV Fort +6, Ref +4, Will +12; AP 7; Rep +6; Str 8, Dex 10, Con 14, Int 16, Wis 14, Cha 12.

Occupation: Law Enforcement (Diplomacy, Gather Information)

Background: Progress Level 8 ()

Skills: Bluff +9, Computer Use +19, Craft (electronic) +19, Craft (mechanical) +19, Craft (structural) +19, Decipher Script +11, Demolitions +8, Diplomacy +7, Disable Device +14, Forgery +11, Gather Information +7, Investigate +13, Knowledge (Earth and Life Sciences) +7, Knowledge (History) +17, Knowledge (Physical Sciences) +9, Knowledge (Tactics) +8, Knowledge (Technology) +22, Navigate +8, Read/Write Language +10 (Ancient Greek, Arabic, Blackfoot, German, Latin, Mandarin, Navaho, Russian, Sanskrit, Spanish), Repair +12, Research +12, Speak Language +10 (Ancient Greek, Arabic, Aramaic, German, Latin, Mandarin, Navaho, Russian, Sanskrit, Spanish)

Feats: Ancient Technology (PL 0-3), Ancient Technology Expert (PL 0-3), Armor Proficiency (light), Armor Proficiency (medium), Combat Expertise, Defensive Martial Arts, Futuristic Technology (PL 7-9), Futuristic Technology Expert (PL 7-9), Improved Trip, Modern Technology (PL 4-6), Modern Technology Expert (PL 4-6), Simple Weapons Proficiency

Talents (Smart Hero): Savant (Knowledge [Technology]), Exploit Weakness, Linguist

Talents (Temporal Historian): Superstition (Ancient), Detailed Files (one PL), Scientific Expert (one time period), Detailed Files (one time period), Superstition (Modern), Scientific Expert (second time period), Achilles Heel, Detailed Files (two time periods), Scientific Expert (all time periods), Detailed Files (all time periods)

Possessions: Medium Combat Armor, Concussion Rod, Concussion Rifle

Time Enforcer Low (Strong Hero 3/Time Enforcer 2): CR 5; Medium-size humanoid; HD 3d8+6 plus 2d10+4; HP 35; Mas 15; Init +2; Spd 20 ft; Defense 21, touch 15, flatfooted 19 (+0 size, +2 Dex, +3 class, +6 equipment); BAB +4; Grap +6; Atk +6 melee (2d6+4/19-20, High Frequency Sword), or +4 ranged (3d8+0, Laser Rifle); FS 5 ft by 5 ft; Reach 5 ft; SQ ; AL none; SV Fort +6, Ref +5, Will +2; AP 2; Rep +0; Str 14, Dex 14, Con 15, Int 10, Wis 12, Cha 8.

Occupation: Law Enforcement (Drive, Knowledge [Tactics])

Background: Progress Level 6 ()

Skills: Climb +0, Craft (structural) +3, Drive +6, Handle Animal +2, Intimidate +2, Knowledge (Tactics) +6, Repair +3, Ride +4, Survival +4

Feats: Ancient Technology (PL 0-3), Ancient Technology Expert (PL 0-3), Armor Proficiency (light), Armor Proficiency (medium), Modern Technology (PL 4-6), Power Attack, Simple Weapons Proficiency

Talents (Strong Hero): Melee Smash, Improved Melee Smash

Talents (Time Enforcer): Weapon Focus, Weapon Specialization

Possessions: Tactical Vest, High Frequency Sword, Laser Rifle

Time Enforcer Medium (Strong Hero 3/Time Enforcer 7): CR 10; Medium-size humanoid; HD 3d8+6 plus 7d10+14; HP 73; Mas 15; Init +2; Spd 25 ft; Defense 23, touch 18, flatfooted 21 (+0 size, +2 Dex, +6 class, +5 equipment); BAB +8; Grap +10; Atk +10 melee (2d6+4/19-20, High Frequency Sword), or +10 ranged (3d8+0, Laser Rifle); FS 5 ft by 5 ft; Reach 5 ft; SQ ; AL none; SV Fort +8, Ref +7, Will +4; AP 5; Rep +2; Str 14, Dex 14, Con 15, Int 10, Wis 12, Cha 8.

Occupation: Law Enforcement (Drive, Knowledge [Tactics])

Background: Progress Level 6 ()

Skills: Climb +3, Craft (structural) +3, Demolitions +3, Drive +9, Handle Animal +2, Intimidate +5, Jump +0, Knowledge (History) +3, Knowledge (Tactics) +9, Repair +7, Ride +4, Survival +4

Feats: Ancient Technology (PL 0-3), Ancient Technology Expert (PL 0-3), Armor Proficiency (light), Armor Proficiency (medium), Armor Proficiency (powered), Futuristic Technology (PL 7-9), Modern Technology (PL 4-6), Modern Technology Expert (PL 4-6), Point Blank Shot, Power Attack, Simple Weapons Proficiency

Talents (Strong Hero): Melee Smash, Improved Melee Smash

Talents (Time Enforcer): Weapon Focus, Weapon Specialization, Temporal Tactical Expert (one time period), Weapon Focus (one PL), Temporal Tactical Expert (all time periods)

Possessions: Tactical Vest, High Frequency Sword, Laser Rifle

Time Enforcer High (Strong Hero 3/Time Enforcer 10/Fast Hero 2): CR 15; Medium-size humanoid; HD 3d8+9 plus 10d10+30 plus 2d8+6; HP 123; Mas 16; Init +2; Spd 30 ft; Defense 30, touch 23, flatfooted 28 (+0 size, +2 Dex, +11 class, +7 equipment); BAB +11; Grap +15; Atk +15 melee (2d8+6/19-20, Beam Sword), or +13 ranged (3d10+0, Pulse Rifle); FS 5 ft by 5 ft; Reach 5 ft; SQ ; AL none; SV Fort +10, Ref +12, Will +5; AP 7; Rep +3; Str 14 (18 in Boost Armor), Dex 14, Con 16, Int 10, Wis 13, Cha 8.

Occupation: Law Enforcement (Drive, Knowledge [Tactics])

Background: Progress Level 6 ()

Skills: Climb +10, Craft (mechanical) +4, Craft (structural) +3, Demolitions +6, Drive +16, Handle Animal +2, Intimidate +5, Jump +4, Knowledge (History) +3, Knowledge (Tactics) +14, Repair +10, Ride +4, Survival +4

Feats: Ancient Technology (PL 0-3), Ancient Technology Expert (PL 0-3), Armor Proficiency (heavy), Armor Proficiency (light), Armor Proficiency (medium), Armor Proficiency (powered), Double Tap, Futuristic Technology (PL 7-9), Futuristic Technology Expert (PL 7-9), Modern Technology (PL 4-6), Modern Technology Expert (PL 4-6), Point Blank Shot, Power Attack, Precise Shot, Simple Weapons Proficiency

Talents (Strong Hero): Melee Smash, Improved Melee Smash

Talents (Time Enforcer): Weapon Focus, Weapon Specialization, Temporal Tactical Expert (one time period), Weapon Focus (one PL), Temporal Tactical Expert (all time periods), Weapon Specialization (one PL), Weapon Focus (one time period), Weapon Specialization (one time period)

Talents (Fast Hero): Evasion

Possessions: Boost Armor, Beam Sword, Pulse Rifle

NPCs

Archimedes

If statistics are needed for Archimedes use the high level Temporal Historian NPC above, outfitted appropriately for the current tech level.

Adventure Hook: "Retrieval"—After capturing a TEA gate (perhaps as a result of the time Gate War adventure hook below), the Romans mount an expedition into the future, capturing and retrieving Archimedes for his military genius. The PCs must mount a rescue mission both to secure the gate and to recover one of TEA's most valuable agents.

Lon Vestrel

If statistics are needed for Lon Vestrel use the high level Time Enforcer NPC above, outfitted appropriate to the current tech level.

Adventure Hook: "Stranded"—While on a training assignment with Lon Vestrel, the head of the TEA, the PCs' gate malfunctions, stranding them in the past. When their training officer is injured, the PCs must attempt to keep him alive and return home, either by repairing the gate or finding and using another gate.

Campaign Hooks

Gate Wars

The Fyr'Toll have decided to deny the TEA access to the past by assaulting and destroying their gates. Agents are stranded throughout the timeline in the early days of this conflict; the PCs are TEA enforcement agents tasked with securing and retaking gates throughout the timestream and then going on the offensive, destroying Fyr`Toll gates.

Thousand Year Reich

A new "night of long knives" has occurred, with the mysterious assassinations of Franklin Roosevelt, Winston Churchill, Joseph Stalin and even a (then) little-known Senator from Missouri, Harry Truman. TEA officials have determined that agents of the Eternal Reich are behind these murders and the PCs have been assigned to foil the killings. The Gamemaster can either have a different team assigned to each killing or send the PCs through time multiple times (since they will be at a different location each time, this is possible under the temporal mechanics of the Time Enforcers Campaign Model). Thus this incursion could serve for one adventure or several. For added temporal fun, if the PCs go back several times, any Eternal Reich agents who survive will also be sent back several times, allowing the PCs to deal with short-term recurring villains as they confront the same agents again and again.

Root of all evil

During an unrelated mission into the past, the PCs see several of their fellow TEA agents in a time period they have no business being in. Unaware of any mission to this period other than their own, the PCs further learn that the agents are considered brilliant captains of industry and have made themselves fabulously wealthy in a short period of time. If they report these activities to their superiors (or simply investigate on their own), the PCs will uncover a wide-ranging plot by several of their fellow agents to enrich themselves through the use of time travel. They will then have to bring down their own friends, making several enemies among their brothers and sisters in the TEA.

Chapter III: A Brief History of the World

Author's note about this timeline

Many things that are stated as fact in this timeline are hotly debated by modern scientists and historians. When was the Big Bang, really? What event killed 90% of all life on Earth 250 million years ago? Why did the dinosaurs go extinct? These are questions to which science may never know definitive answers, yet definitive answers are given here. The reason for this is simple: in a time travel game, it is presumed that someone could *go look*. Feel free to substitute any explanation you choose, or even no explanation for these events. But be prepared for players who will expect to know the answers to age-old conundrums—and who, if no answers are available, will want to know "why not?" If the answer you provide is "no one has visited that time period yet," you still need an answer—since your players might decide to go check themselves!

13.7 Billion Years Ago: Big Bang. Creation of the universe.

4.6 Billion Years Ago: Formation of Earth's solar system.

3.9 Billion Years Ago: Formation of Earth.

3.5 Billion Years Ago: Bacterial life on Earth.

2.5 Billion Years Ago: Cyanobacteria, the first organisms to use photosynthesis, appear. These organisms produce oxygen as a byproduct and transform the Earth into the oxygen-rich planet we know today. The appearance of oxygen leads to the "oxygen catastrophe" as the substance kills the majority of life on the planet Earth—lifeforms for which oxygen is poisonous.

1 Billion Years Ago: The oldest known supercontinent, Rodinia.

750 Million Years Ago: Rodinia breaks up, forming three large continents: Protolaurasia, Protogondwana, and the Congo continental craton. (A craton is a section of crust at least 500 million years old; cratons are usually not independent continents but are found in the exterior of older continents.)

Earth enters a severe period of ever-worsening glaciation.

600 Million Years Ago: Multicellular life on Earth.

The Congo continental craton connects Protolaurasia to Protogondwana, forming the short-lived supercontinent of Pannotia.

580 Million Years Ago: "Snowball Earth:" glaciers now cover the entire Earth, bringing photosynthesis to a complete halt. Earth is a very dry, cold, blindingly white planet during this period, with its internal temperature allowing for the existence of water only beneath several kilometers of ice.

542 Million Years Ago: In the "Cambrian Explosion," as the Earth emerges from the "Snowball Earth" period, there is an explosion of life leading to the rapid development of diverse forms of animal life. Animal life flourishes on Earth during this period, and hard body parts (mostly shells) make their first appearance in the fossil record.

540 Million Years Ago: Pannotia breaks up into the continents of Laurentia (the craton at the heart of North America), Baltica (the craton in northwest Eurasia), Siberia (the craton at the heart of modern Siberia) and Gondwana (modern Antarctica, South America, Madagascar, Africa, India, Arabia, Australia and New Zealand).

300 Million Years Ago: The supercontinent of Pangaea is formed. Many of the mountain ranges formed during this period are still in existence today, including the Appalachian mountains of North America, the Ural mountains of Eurasia, and the Atlas mountains of North Africa. The one ocean surrounding Pangaea has been named Panthalassa.

252 Million Years Ago: Permian-Triassic extinction event. The worst extinction event known to science, this period sees 90% of all marine life and

Adventures in Time: Snowball Earth

Whether or not Earth was ever truly completely encased in ice is a subject of much debate in scientific circles. Scientifically-inclined time travelers might want to visit this period to study the conditions for themselves. Even if the planet is not entirely encased in ice, conditions are likely to be brutally harsh—closer to an alien planet than what is normally thought of as Earth, especially if the PCs' stay ends up being longer than planned (but what are the odds of *that?*).

This period could also serve as a "gulag in time," a nice place to send someone as a punishment, assuming you gave them adequate supplies to survive. If someone were to arrive in this era unprotected from the elements, whether they were forcibly sent back through time or simply stumbled upon it unprepared, they would likely die from exposure in minutes.

70% of all land vertebrates go extinct. At the end of this event, fungi are the dominant form of terrestrial life.

Science has advanced many theories as to the cause of P-T extinction. Since time travelers could go see for themselves, the following explanation is offered: a supernova near Earth ("near" in this case meaning within 10 parsecs) releases a blast of gamma radiation that completely destroys Earth's ozone layer. The resulting direct exposure of the Earth to the Sun's ultraviolet radiation results in the destruction of almost all life on Earth.

Note that this theory is simply offered as one possible explanation. Feel free to insert your own—just decide what happens, since chances are someone has gone and looked.

245-202 Million Years Ago: The Triassic period sees new life flourishing in the wake of the P-T extinction. Dinosaurs and reptiles begin to dominate life on both land and sea.

200 Million Years Ago: Triassic-Jurassic extinction event results in the death of 50% of all species on Earth. This allows the dinosaurs, which had begun to appear in large numbers during the Triassic period, to take their place as the dominant form of life on land and sea.

200-146 Million Years Ago: Jurassic period, commonly referred to as the "Age of Dinosaurs." Dominant sea life includes fish, ichthyosaurs, plesiosaurs and marine crocodiles. Dominant land species include Archosaurs, large herbivorous sauropods, and predators including Megalosaurs, Allosaurs and Ceratosaurs. Although birds evolve near the end of the Jurassic period, the dominant form of aerial life is the Pterosaur, which fills the ecological niche occupied by modern birds.

180 Million Years Ago: Pangaea breaks up into two supercontinents: Gondwana to the south and Laurasia to the north (the latter composed of modern-day North America and Europe and Asia).

160 Million Years Ago: Africa breaks away from Gondwana and begins to drift toward its current position.

146-65 Million Years Ago: Cretaceous period. In one of the best examples of mutual evolution, flowering plants appear along with a new type of insect—the bee. Other new types of insect, including ants, termites, butterflies, aphids and grasshoppers, also appear. Many of these insects bear a radical new trait that will help them compete in the biosphere: social organization built on sterile worker "castes." Many modern trees, including figs and magnolias, appear for the first time.

Some older species of plants such as conifers continue to thrive. Mammals—the first monotremes, marsupials and placental mammals—are common, though most are small and rat-like. Dinosaurs are at their most varied and dominant during this period; many of the most famous dinosaurs, including the Tyrannosaurus Rex and the horned dinosaurs, appear near the very end of the Age of Dinosaurs.

Avian life is dominated by Pterosaurs at the beginning of the Jurassic, but is slowly taken over by birds. Throughout the Jurassic period, Pterosaurs retreat into ever-more-specialized ecological niches.

At sea plesiosaurs, ichthyosaurs and crocodiles continue to dominate alongside new life forms including the Elasmosaur and Mosasaur. This period also sees the appearance of rays, sharks and teleosts (modern fish).

125 Million Years Ago: India breaks away from Gondwana and begins to drift toward its current position.

80 Million Years Ago: New Zealand breaks away from Gondwana and begins to drift toward its current position.

65 Million Years Ago: Cretaceous-Tertiary extinction event. A massive asteroid strikes Earth, breaking up as it enters the atmosphere and impacting at several locations around the globe. The largest piece, more than 10 km in diameter, strikes off the Yucatan peninsula while other pieces land in the North Sea, Alberta (Canada), Brazil and the Ukraine. The Earth is covered in a cloud of thick dust which blocks out the light of the sun and plunges the planet into "nuclear winter"-type conditions.

All dinosaurs are rendered extinct by this event, as are most birds and all large sea reptiles. Many types of plants are also killed by the extended darkness blanketing the Earth; this causes the almost total extinction of large creatures dependant on plants for survival (which includes both herbivores and the large carnivores that feed on them). Insects, which could survive on stores of food or carrion, and mammals, which at this time subsist largely on carrion and insects, fare rather well during this mass extinction. The stage is set for the advancement of mammals into advanced creatures capable of filling every ecological niche… and beyond that, eventually humanity.

65-56 Million Years Ago: Paleocene epoch. Modern plants and mammals begin to evolve, with the first large mammals (up to the size of a modern hippo) making their appearance. With the extinction of the dinosaurs, mammals begin to move into ecological niches once dominated by their reptilian predecessors. The first mammalian predators appear during the Paleocene. Crocodiles during this time grow quite large and are the apex predators throughout most of the world.

Like mammals, birds undergo an explosion of adaptation and diversification during the Paleocene; cranes, hawks, herons, pelicans, ducks, owls and woodpeckers all appear for the first time. Birds, like mammals, also adapt into predators—large, flightless "terror birds" grow large and ferocious during this period, becoming important predators in South

America, where they are most commonly found.

The climate of the Paleocene is generally warm, and temperatures continue to rise throughout the period. Conditions at the poles are temperate and mild, while areas further north and south are arid and the equator very hot and humid. The continents continue to move slowly toward their modern-day locations. North America, Europe and Asia still form the supercontinent Laurasia, but Greenland begins to pull away during this period. Gondwana to the south continues to break up as Africa, South America, Antarctica and Australia slowly drift further apart. The Western Interior Seaway (see above) begins to slowly dry up during this period, allowing new life to take hold in the interior of modern North America.

New plants, including the first cactus and palm, appear during this period. The majority of the planet is covered in thick jungle and subtropical forests. The ice-free polar regions are home to pine forests.

56-34 Million Years Ago: Eocene epoch. Mammals continue to diversify and by the end of this period have adapted for almost every environment and ecological niche. Many modern mammal types (among them primitive whales) make their first appearances. The flora of this period sees the emergence of grasses and the retreat of northern pine as a cooling Antarctica is once again covered in glaciers.

34-23 Million Years Ago: Oligocene epoch. This period sees a flurry of evolution and is a transitionary period between the older tropical Earth and the emergence of recognizable modern ecosystems.

23-5.3 Million Years Ago: Miocene epoch. Climate worldwide is close to that of modern Earth, and both mammals and birds shift toward their modern species and ecological dispersal. Horses and mastodons experience remarkable growth in the numbers of both species and individuals. The first primitive hominids appear, the earliest direct ancestors of mankind and the great apes.

Adventures in Time: Western Interior Seaway

During the Cretaceous period, the central area of the United States was 800m below water in what is called the Western Interior Seaway, which stretched from the Rocky Mountains in the west to the Appalachian Mountains in the east. This shallow sea mixed warm water from the southern Gulf of Mexico with cold water from the arctic, and also mixed salt water and fresh water.

Teeming with plankton, this rich environment attracted every type of sea life, from the smallest (plankton and creatures which fed on them) to the top marine predators of the age—the ichthyosaur, mosasaur, plesiosaur, shark and crocodile.

An exotic and potentially dangerous locale, the Western Interior Seaway is a massively complex system of deltas and estuaries unlike any in existence on modern Earth, and would be a logical place for scientifically-inclined time travelers to visit.

5.3-1.8 Million Years Ago: Pliocene epoch. This period sees the Earth's cooling intensify from a recognizably modern climate into Earth's most recent ice age. The Antarctic glaciation which began tens of millions of years earlier expands and becomes year–round; the Arctic glaciates as well. By the end of this epoch, glaciers have advanced north and south into the mid-latitudes.

North and South America become linked by the Isthmus of Panama, with severe consequences for world-wide weather patterns and the ecosystems of both continents. The linkage of the two continents allows predator mammals to migrate south, causing the extinction of the marsupial and avian predators unique to South America (including the aforementioned "terror birds"). The linkage of the two continents also accelerates the ice age, as warm ocean currents can no longer circulate worldwide. This triggers a substantial cooling of the waters of the Atlantic Ocean.

Africa's collision with Europe creates the Mediterranean Sea. Severe glaciation lowers water levels enough to expose a land bridge across the Bering Straits, allowing animals from Russia and Asia to migrate to North America.

The fauna of this period are greatly impacted by these temperature shifts. Tropical jungle is forced to retreat into a narrow band around the equator, allowing deciduous and coniferous forests to spread. Grasses also flourish in this new environment, spreading to every continent except Antarctica. The drying of Earth's climate causes deserts and savannahs to appear in Asia and Africa.

This epoch also sees the appearance of the extinct hominids Australopithecus Afarensis and Australopithecus Africanus, two species that are directly related to Homo Erectus.

Herbivores begin to increase notably in size, and the carnivores that hunt them follow suit. It is believed that the enhanced ability of animals to migrate is the cause of this increase in size; creatures are able to migrate by land from the south of Africa all the way to South America thanks to the Bering land bridge and the Isthmus of Panama. Bears evolve into faster, more ferocious animals, radiating into predatory niches of the ecology. This period also sees the development of saber-toothed cats, along with a new Pliocene predator that hunts in packs and is important today as a domesticated animal:

the dog. With the appearance of predatory bears and the arrival of dogs alongside the cats and hyenas of Africa, the hyena is forced to adapt away from a predatory to a more scavenging role.

2.5 Million Years Ago: Homo Habilis and Homo Erectus begin the development of human technology, making hand-axes, spears and other tools using techniques such as flint-knapping.

1.6 Million through 10,000 Years Ago: Pleistocene epoch. This ice age sees as much as 30% of the Earth covered with glaciers. All of Canada and parts of America (the Great Lakes region) are covered with glaciers. Glaciers stretch south of Moscow in Russia. Extending from these glaciers is an area of permafrost up to several hundred kilometers further south (less in North America, far more in Asia). Temperatures at the edge of the glaciers average -6 degrees C (21 degrees Fahrenheit), while temperatures at the southern edge of the permafrost average 0 degrees C (32 degrees Fahrenheit).

South of these areas of bitter cold are massive freshwater lakes fed by seasonal runoff. North America is dominated by two massive lakes: Lake Agassiz and Lake Bonneville. Lake Agassiz covers the center of North America in modern-day Manitoba, Western Ontario, Saskatchewan, northern Minnesota and northern North Dakota; this body of water contains more water than all the Great Lakes combined. At its largest, it is larger than any lake in the modern world and even larger than the Caspian Sea, measuring 440,000 square kilometers. It is survived by the modern-day Lake Winnipeg. Lake Bonneville covers modern Utah and parts of modern Idaho and Nevada. At one time Lake Bonneville measures as much as 52,000 square kilometers, with a depth of up to 300 meters. It is survived by Utah's Great Salt Lake.

Larger mammals flourish during this epoch, but eventually begin to go extinct. Species that fall into extinction include mammoths, mastodons, saber-toothed cats and ground sloths. Other species (including horses and camels) survive but are eliminated from North America.

Beginnings of Civilization

At this point in our brief history of the world we shift gears to the 12 millennia of humanity, and begin to count time not in absolute terms as we have before, but in the modern fashion. From this point on, we will be counting down from 10,000 Before the Common Era (BCE) and then up from the Common Era (CE).

10,000 BCE (circa): Dire wolves, saber-tooth cats, giant beavers, ground sloths, mammoths and American lions all go extinct in North America.

Glaciers retreat, causing large amounts of glaciated land to become habitable once again.

As sea levels rise, the Bering land bridge is flooded once again, separating North America from Asia.

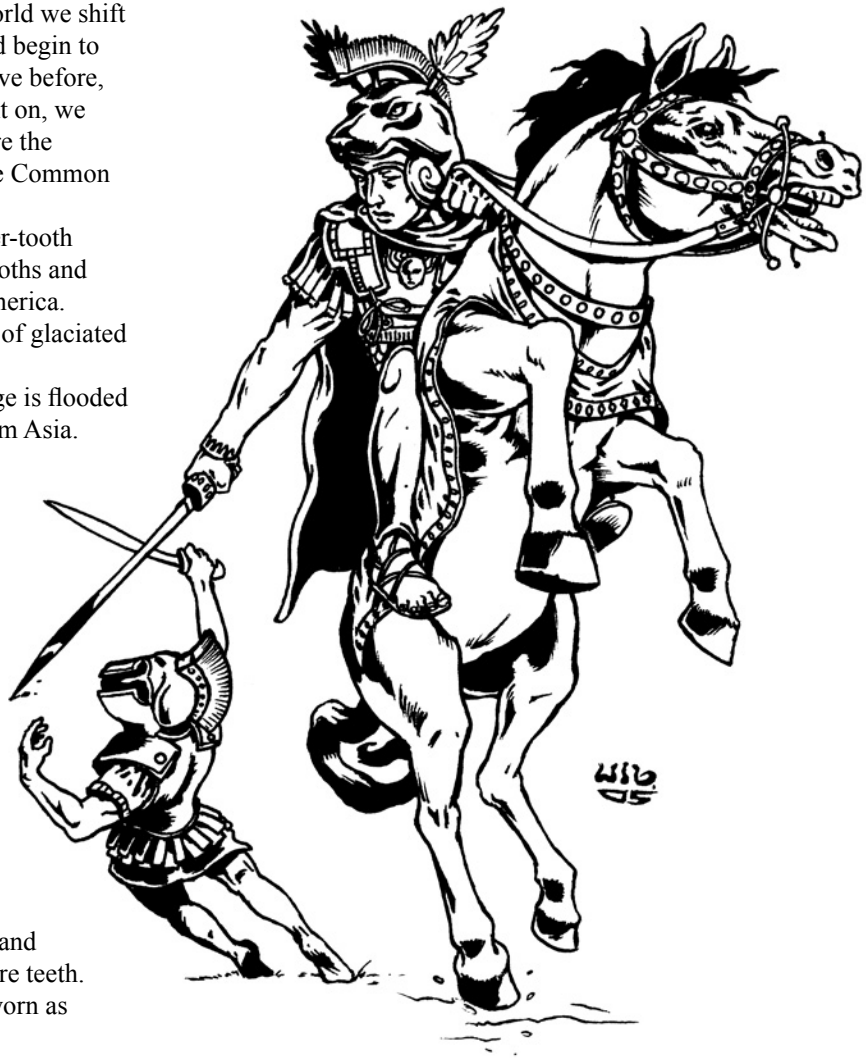
Azilian tribesmen occupy Spain, France, Switzerland, Belgium and Scotland. The Azilians craft stone harpoons and tools as well as decorative pebbles.

Sami tribesmen occupy Sweden, Norway, Finland and Russia. These tribes engage in hunting, fishing and reindeer herding.

Magdalenian tribesmen occupy France, where they hunt reindeer, red deer and horses for food. They leave behind vivid cave paintings that survive to this day. The Magdalenians also produce other types of art, including elaborate bone, antler and ivory carvings and jewelry made from sea shells and carnivore teeth. (These items are usually perforated and worn as necklaces.)

In Japan, the earliest known pottery is in use by the Jomon tribesmen near Honshu.

In North America, tribesmen engage in big-game hunting on a large scale. They manufacture very fine



The Invention of Pottery

Pottery is one of the most important PL 0 technological advances. The ability to store, cook and transport food in sanitary and reusable containers is vital to the development of agriculture and trade. Pottery was developed at different times around the world but always had a huge impact on a culture once discovered. Pottery appears at the following times: 10000 BCE (Japan), 8500 BCE (China), 7500 BCE (Africa, including the Nile Valley and the Sahara), 6500 BCE (South Asia), 5500 BCE (Central Europe), 2200 BCE (South America), and 1500 BCE (Central America).

For the time traveler, pottery represents a valuable trade commodity. It can allow travelers to bribe local tribesman or to trade discretely for necessities they cannot bring with them on their trips through time.

stone spears and arrows (known as the Clovis Points); similar stone tool manufacturing techniques are in use throughout the Great Plains.

In the southwest United States, Folsom tribesmen flourish.

In Australia, the first depictions of humans in art appear.

In Mesopotamia, three or more language groups including Sumerian and Semitic tribesmen flourish. These tribes collect wheat barley for the production of malt beer.

Dogs first domesticated.

9,560 BCE: Atlantis sinks into the ocean. This Atlantic-based civilization was a military threat to the ancient Greeks and ruled all the islands of the Atlantic, both those off the coast of Africa and those in the Caribbean. For time travelers, this mysterious land and its lost civilization are prime points of interest.

9,000 BCE (circa): First stone structures built at Jericho.

In the first evidence of true cultivation, Einkorn wheat is grown in Northern Syria.

In Mesopotamia, the sheep is first domesticated.

Mediterranean islands begin to be settled.

In the Sahara, a large and successful culture develops finely-made spear and arrowheads and depicts in beautiful rock art many species now extinct in the Sahara: the elephant, giraffe, hippopotamus and rhinoceros.

In North America, cultivation of grasses, squash, beans, peppers and potatoes.

8,000 BCE (circa): Nomadic hunters have settled in Britain in Scotland and Yorkshire.

Earliest known African engravings.

There is some evidence that trade in tobacco was occurring during this time between Africa and South America (perhaps an expeditionary group of time travelers should verify this?).

World population stands under 10,000,000.

7,500 BCE: Earliest known cemetery in North America.

Manioc (also known as cassava), a tuber that is a staple source of carbohydrates, is cultivated along the Amazon basin.

7,000 BCE: Farming spreads from Anatolia to Southeast Europe.

6,500 BCE: Copper-smelting in Anatolia, Southwest Asia. Metallic implements made of copper are quickly alloyed with tin to create bronze, marking the beginnings of PL 1 technology in the Middle East.

Cattle domesticated in the Sahara region of North Africa.

Rising sea levels separate the British Isles from Europe.

Adventures in Time: "And the walls came crumbling down"—Jericho

Situated on an east-west route north of the Dead Sea, Jericho has been continuously inhabited for as long as 11,000 years. This makes it an excellent destination and meeting area for time travelers, especially those unable to bring items with them into the past and who need a known urban center at which to acquire supplies.

Even if Jericho is not used as a base of operations, there is another reason for time travelers to visit the ancient city. In the 16th century BCE, Joshua brings down the city's walls and conquers it, using rams' horns blown by priests and possibly the Ark of the Covenant to penetrate the walls. Time travelers might want to witness these events and determine what really happened. They might also seek to acquire the Ark and the power it conveys.

Joshua's attack on Jericho would be of particular import to one other group of time travelers: the Nazis. Were Nazis to gain access to time travel technology or magic, this would be a likely destination; here they would not only have a chance to steal one of the most valuable mystic artifacts of the ancient world (the Ark), but would also have an opportunity to wipe out the Jewish people at one of their most vulnerable periods of history. In campaigns featuring time traveling Nazis, this is a "hotspot" that would need to be defended by those who wish history to develop as it should.

6,200 BCE: Farming spreads to Sicily and Southern Italy.

6,000 BCE: Nile Valley agriculture and pastoralism.

Farming spreads along the west coast of the Mediterranean Sea.

Corn cultivated in Ecuador.

5,500 BCE: First irrigation system in the world at Choga Mami, Mesopotamia.

Pottery produced by farmers in Central Europe.

5,400 BCE: Agricultural villages in Central Europe begin clearing forest to increase the amount of farmable land.

5,000 BCE: Copper in use in Mesopotamia.

Settlements along the Huang He (Yellow) River in China develop rice agriculture and domesticate dogs and pigs.

Agriculture and metallurgy (of both copper and gold) spread to Western Europe.

4,500 BCE: Irrigation spreads to the Indus Valley, allowing agriculture to support a much larger population.

First use of the sail in Mesopotamia.

Horse domesticated in Central Asia.

Cattle used as draft animals in Europe.

4,000 BCE: Plow first used in Mesopotamia.

City planning in China, with distinct mercantile, residential and craftsman areas.

Use of the sail in Egypt.

The Sahara begins desertification; populations begin to migrate out of the area.

Mining of important raw materials occurs across Europe, with copper mined in Eastern Europe and flint in Western Europe.

3,800 BCE: Ditches used to defend towns in Europe.

3,650 BCE: Ox-drawn wagons in use in Central Russia—the first evidence of wheeled vehicles.

3,500 BCE: Emergence of city-states in Mesopotamia (the great city-states of Uruk, Ur and Eridu), the Indus Valley and China. Uruk is possibly the first true city in the world. One thing that early cities have in common is a need for a strong defense; walls (typically made of stone or rammed earth) and ditches form the bulwark of defense for these early cities.

Trade also begins to increase during this period, and the first markets for luxury items are found. Social stratification begins to appear as well, with citizens of these first cities divided by "class" for the first time.

Cotton is cultivated in Central America for fishing nets, clothing and other textiles.

Lama used as a pack animal in Peru.

3,300 BCE: First walled towns in Egypt: Hieraconpolus and Naqada.

3,250 BCE: Writing appears for the first time in Mesopotamia.

3,200 BCE: Wheeled vehicles in Sumeria.

Hieroglyphic writing in Egypt.

Stone circles and rows of standing stones built throughout Europe.

3,100 BCE: Upper Egypt united with Lower Egypt by King Narmer, who becomes the first Pharaoh. He founds the city of Memphis as the capital of his new unified Egypt.

3,000 BCE: Rice farming spreads to Korea.

First evidence of jade working in China.

Chinese along the Yellow River develop the potter's wheel and are the most skilled pottery experts in the world at this time.

Adventures in Time: Cradles of Civilization

For all practical purposes, civilization began in three places: Mesopotamia (modern Iraq) along the Tigris and Euphrates rivers, Pakistan in the Indus Valley, and North Africa along the Nile. Peaceful time explorers would certainly wish to visit these areas and witness man's first attempts at agriculture, which lead in turn to his ability to remain sedentary, build cities and have the leisure time to explore and understand the workings of the universe.

Other travelers might come to these regions with an agenda, wishing not to watch history unfold but to replace it with something else. If settlers were somehow discouraged from cultivation in these areas—whether through a subtle introduction of bacteria or poisons that make crops fail, or through more overt means that might be seen as the posturing of angry gods—the world today would be almost unrecognizable.

The reasons for wanting such a drastic change to civilization would depend on the group doing the changing. Perhaps they plan to conquer the world at a time when mankind is still few in numbers and more intent on finding food than mastering the planet. Environmentally conscious travelers might prefer a world in which humans are forced to live in harmony with nature, hunting and gathering, numbering in the millions rather than the billions, never able to advance technologically to a point where their actions could cause extinctions or threaten the ecological balance of Earth.

Of course, such a radical change is likely to backfire or at least form a serious paradox, since a world without civilization would never create time travelers capable of going back and instigating the change in the first place.

Sheep and cattle domesticated in Northern China, water buffalo domesticated in southern China, first Chinese use of the plow.

1st-3rd dynasties rule Egypt.

A bristlecone pine germinates in the White Mountains of California. Nicknamed "Prometheus" in the 20th century, it is the longest-lived creature to inhabit the planet Earth, living close to 5,000 years.

First ziggurats built in Sumeria.

Medicine wheels begin to be built in North America.

2,750 BCE: China enters the Bronze Age (PL 1).

2,700 BCE: Silk weaving in China.

Another bristlecone pine tree germinates in the White Mountains in California. It is still alive over 4,700 years later, when it is nicknamed "Methuselah."

2,650 BCE: Pyramid construction begins in Egypt; the Step Pyramid of Zoser is built at Saqqara.

2,575 BCE: 4th-6th dynasties rule Egypt.

2,540 BCE: The Great Pyramid of Giza (sometimes called the Great Pyramid of Khufu) is constructed during the reign of the 4th Dynasty Pharaoh Khufu. This is the largest pyramid and the first wonder of the ancient world to be constructed; it is the only one of the Wonders still standing today.

This pyramid takes approximately 20 years to construct and is designed by an architect named Hemon, who was Khufu's relative, Master of Public Works and Vizier. It stands with the other pyramids in the Giza Necropolis outside modern-day Cairo.

2,500 BCE: The Mesopotamian city of Ur is a major center of trade and craftsmanship.

Mesopotamian city of Elba begins trade with peoples along the coast of the Mediterranean.

Mohenjo-Daro and Harappa, cities in the Indus Valley, have populations over 40,000. This marks a step forward for the Indus Valley civilization, which enters the Bronze Age (PL 1) and produces the first woven cotton cloth in the world.

Egyptian priests divide the day into 24 equal units.

Copper working reaches Britain.

South American farmers discover techniques of hybridization and selection, greatly improving crop yields and allowing the growth of large, permanent settlements. Many of these settlements begin to trade with their distant neighbors, and long-distance trade soon extends throughout South America.

2,400 BCE: Akkadian Dynasty founded in Southern Mesopotamia.

2,300 BCE: Sargon I, founder and ruler of the Southern Mesopotamian city of Agade, unites the city-states of Mesopotamia under his rule.

Europe enters the Bronze Age (PL 1).

2,150 BCE: Floods cause famine in Egypt, leading to instability in the government of the Egyptian Old Kingdom, resulting in its collapse. Egypt falls under the sway of a collection of powerful nobles, who rule for approximately 100 years.

2,040 BCE: Egypt reunited under the Pharaohs of the Middle Kingdom. A new capital is built at El-Lisht.

2,000 BCE: Indus Valley civilization collapses.

First Anatolian cities.

Founding of the Minoan civilization on the isle of Crete. Palace of Knossos built.

Sailing ships begin to be used in the Aegean Sea.

Stonehenge built.

Farmers in Peru begin large-scale cultivation of corn.

Early Inuit culture spreads from Siberia to Greenland, employing small tools made of bone.

1,965 BCE: Nubia conquered by Egypt.

1,900 BCE: First Shang cities grow along the Yellow River in China.

1,800 BCE: The Near East sees an explosion of military innovation with the development of the two-wheeled war chariot and the battering ram.

Shang Dynasty rules northeastern China.

Horse introduced to Egypt.

1,783 BCE: Fall of the Middle Kingdom in Egypt.

1,775 BCE: Palace of Zimri-Lim constructed in Mari (modern Syria). This palace contains a temple of Ishtar and over 25,000 clay tablets written in Akkadian.

1,763 BCE: Hammurabi conquers all of Sumer and founds the Babylonian Dynasty.

1,759 BCE: Palace of Zimri-Lim sacked by Hammurabi.

1,750 BCE: Hammurabi writes his law code, the first legal code in the history of the world.

Minoans begin writing in Linear A.

1,650 BCE: Anatolian city-states united as the Hittite Empire. The city of Hattushash is the capital of this new empire.

Indo-Aryans arrive in India from the Near East, bringing with them their Vedic religion (the precursor to Hinduism) as well as their powerful and fast two-wheeled war chariots.

1,633 BCE: Egypt ruled by the Hyksos, an Asiatic people. The Hyksos conquer Egypt with new weapons and tactics revolving around their powerful war technologies: the two-wheeled chariot, composite shortbow, bronze helmets, and mail shirts.

Although the Hyksos possess military technologies unknown to their Egyptian subjects, they quickly become assimilated into the rich culture they have conquered. Soon the Hyksos are using scarabs as symbols of office and worshipping the Egyptian god Set.

Deir-el-Medina, a city of craftsmen charged with the building of royal tombs, is founded in Egypt. These craftsmen are responsible for most of the tombs in the Valley of Kings. At its peak, the city houses 110 artisans and their families.

1,600 BCE: Kassites conquer Mesopotamia.

Minoans begin writing in Linear B.

Adventures in Time: The Battle of Kadesh

Needless to say, the time traveling historian would want to witness this gigantic battle to study the use of the chariot in large-scale conflict. In the deserts of Syria Ramesses II and Muwatalli, both skilled generals, attempted to outwit and outmaneuver each other with their fast, maneuverable vehicles in what must have been analogous to the tank battles fought in the deserts of World War II. In fact the bloody stalemate was almost a fabulous victory—at one point Ramesses nearly encircled his enemy, which would have led to a slaughter. The Hittites were able to retreat and preserve at least a draw.

For the time traveler whose interests are more (ahem) material, the silver tablet containing the peace treaty between Egypt and the Hittites would be an utterly priceless artifact.

Mycenae becomes the dominant power in the Aegean Sea and on the Greek mainland.

1,595 BCE: Hittites sack Babylon.

1,570 BCE: Egyptian rulers begin to be buried in the Valley of the Kings.

1,550 BCE: Indo-Aryans control all of northern India.

Founding of the Egyptian New Kingdom, with its capital in Thebes. The Theban Pharaohs wage a sustained campaign against the Hyksos invaders, and when the Hyksos are finally overthrown the New Kingdom leadership attempts to expunge all traces of their rule from monuments and official records.

1,500 BCE: Widespread warfare between Hittites and Egyptians over control of the Levantine region (the area between the Sinai and the Nile, including the Sinai Peninsula).

1,450 BCE: Minoan palaces on Crete destroyed; Mycenaeans take control of the island.

1,417 BCE: Egyptian power and prestige at its high-water mark during the reign of Amenophis III.

1,285 BCE: Hittites and Egyptians meet at the Battle of Kadesh on the banks of the Orontes River (in modern Syria). It is the largest military engagement involving chariots in history and one of the great battles of the ancient world, involving over 5,000 chariots and over 9,000 foot soldiers.

The Hittites had been pushing the Egyptians further back for centuries, and the reign of Akhenaten had been particularly bad for Egypt militarily. Ramesses I had begun the long process of pushing the Hittites back, and now his son Ramesses II was continuing that campaign. Ramesses II commanded the Egyptian forces and Muwatalli the Hittite forces.

Modern historians consider the Battle of Kadesh a draw, but at the time both sides claimed victory. There were heavy casualties on both sides, but neither was able to make any territorial gains as a result of the battle. The loss of so many forces affected the Egyptians and Hittites more internally than externally, with unrest rising in both empires with the diversion of troops usually assigned to maintain order.

Although other factors surely play their part, less than 100 years after the end of this battle—a battle that severely weakened both sides—the Hittite and the Egyptian empires collapse under the weight of internal unrest and foreign invasion.

1,258 BCE: A peace treaty is signed between Ramesses II and the new Hittite king, Hattusili III. It is inscribed on a silver tablet which has been lost. A Hittite clay copy and an Egyptian papyrus copy have survived. This treaty is regarded as one of the first international peace treaties; a copy hangs in the United Nations today.

1,200 BCE: Hittite Empire collapses.

Jews begin their Exodus from Egypt, eventually

Adventures in Time: The Assyrian Empire

The Assyrians were a ruthless empire that used several military innovations and the political instability of the nations around them to become a powerful force in the ancient world.

As Assyria grew in military might, its war machine consumed the patchwork of small, squabbling nations that surrounded it; conquered nations were forced to pay tribute. Nations that were subjugated in this manner included Israel, Judaea, Syria, Phoenicia and even parts of Egypt.

Eventually the many states conquered by Assyria joined forces and destroyed their oppressors, sacking the cities of Nineveh and Nimrud.

For the time traveler interested in historical research, Assyria would be a prime destination. Assyria was a unique and aggressive military culture that mastered the use of heavy shock troops, combining heavy mail armor with the chariot. The Assyrians were also skilled at siege warfare, a technique they used to bring resisting cities to heel during their conquests.

For the time traveler interested in conquest, the Assyrians could make perfect muscle. Aggressive and militaristic, with a few key technological advances and the advice of a savvy time-altering megalomaniac who knows the future, Assyria might ascend to world domination rather than Rome.

Adventures in Time: Ancient Olympics

The Olympics are first known to have been held in 776 BCE (although they were almost certainly much older). This expression of ancient Greek culture was considered so important that it is often used by historians as the beginning of the classical Greek period. Its historical importance is comparable to that of the death of Alexander the Great in 323 BCE, which is typically considered to mark the end of the classic period.

The Olympic games were also of enormous importance to the ancient Greeks themselves. At the time, Greece was composed of a number of independent city-states that were not always at peace. Yet every four years, an Olympic Truce was called, during which all differences were set aside in favor of this grand celebration of athletic achievement.

The games also possessed religious significance, being used to honor Zeus; an enormous statue of the god was built at the site of the games in Olympia. The games paid special homage to the hero Pelops, a legendary charioteer.

The games were held every four years until 393 CE, when the Roman Emperor Theodosius banned the games as a "pagan festival."

Witnessing the ancient games would be an obvious goal for both the time historian and the time tourist, but doing so is not for the prudish time traveler—the athletes were all male, naked and oiled, as one of the purposes of the competition was to celebrate the human body in all its beauty.

settling in Palestine.

Olmec civilization emerges on the Yucatan Peninsula in South America. This culture establishes large urban centers and a continent-spanning trade network in luxuries such as basalt, jade and obsidian.

1,166 BCE: Death of Ramesses III, Egyptian's last great Pharaoh. The reign of Ramesses III was a difficult one and included mass migratory invasions by the "sea people" of the type that would contribute to the fall of the Roman Empire millennia later. Although Ramesses defeated many of these invasions, the drain to his treasury produced an inevitable decline in Egypt's fortunes. Ramesses' reign also features the first recorded labor strike in Egyptian history, as the Pharaoh was unable to pay the food rations of the tomb builders at Deir-el-Medina.

1,100 BCE: Collapse of Mycenaean control of the Greece mainland. The vacuum created in Mediterranean sea trade allows the Phoenicians to expand their sea trade operations.

1,070 BCE: Fall of Egyptian New Kingdom.

1,000 BCE: Iron is in general use throughout Eurasia (note that these cultures are still PL 1, though a late PL 1).

King David unites Israel and Judea, establishing the capital of his new kingdom in Jerusalem. He brings with him the most revered artifact of his people: the Ark of the Covenant.

The Phoenicians become the major maritime power in the Mediterranean and Aegean Seas. As well as spreading trade throughout the region, they also spread their unique language, which is based on alphabetic letters unlike the pictograph and hieroglyph-based written languages of the day. It is from Phoenician alphabetic writing that all modern European languages descend.

Chinese bronze-working is elevated to a high level of craftsmanship, the best in the entire world at this time. Chinese innovations, including bronze-working techniques and wet rice cultivation, begin to spread to Korea.

Iron-working spreads to Europe from the Near East.

Etruscans begin to settle in Italian peninsula.

Settlers in the Ohio river valley begin to develop the distinctive Adena culture.

On the islands of Fiji, Samoa and Tonga, the culture of Polynesia begins to emerge.

965 BCE: Solomon ascends to kingship of Israel.

951 BCE: Megiddo rises in importance, becoming a center for the administration and defense of the kingdom of Israel.

950 BCE: Foundation of Assyrian Empire.

945 BCE: Egypt erupts into civil war, dividing the once-mighty empire into a number of small, feuding states.

900 BCE: Indian culture begins to evolve; Hinduism is shaped by the writings of early Vedas, Brahmanas and Upanishads.

850 BCE: Earliest Roman village on Palatine Hill.

The Chavin cult, involving the worship of part-animal, part-human supernatural beings, reaches its height in Peru, South America.

814 BCE: Phoenicians establish a trading colony at Carthage.

800 BCE: Iron Age reaches the Celts of Britain and Western Europe.

Greek-styled Etruscan city-states begin to grow in central Italy.

Greece adopts Phoenician alphabet.

First evidence of written language in North America, among the Zapotec in south-central Mexico.

776 BCE: Athletics festival held in honor of

Adventures in Time: Rome

For the time traveler who isn't content to simply observe history, but who wants to leave his mark on the human timeline, 753 BCE has one and only one vacation spot: Rome. Destroying the city in its infancy would be a difficult way to change history, since Rome's central location makes it a natural spot for a trading center. Still, if a bolt from the heavens strikes the ground clean every time anyone tries to settle in the area, people will eventually get the message that the gods do not desire a city to be built there. A future without Rome would likely be unrecognizable to a traveler visiting the 20th century of "Rome-less" Earth.

Of course, an easier solution for the would-be world conqueror might be to seize the site of the future city as your own, using an upgraded Assyrian war machine (see the Assyria sidebar above) to dominate Italy and Greece. In this manner, a conqueror could easily sweep through Europe as Julius Caesar would do centuries later, dominating the continent much more decisively than historical Rome ever managed.

For the time historian, this date also poses many unanswered questions. Who were Romulus and Remus? Did they even exist? Was the city actually founded in this year, or had it been inhabited for some time?

Zeus at his sanctuary in Olympia. This is the year traditionally marked as the beginning of the classical Greek culture.

771 BCE: Decline of central control of the Zhou Dynasty in China. Eastern Zhou establishes its own capital, beginning what Chinese historians refer to as the "Spring and Autumn" period of Chinese history, during which China is divided into two nominal state: Eastern Zhou and Western Zhou.

753 BCE: Rome founded by the brothers Romulus and Remus.

750 BCE: Amos, a shepherd-turned-prophet native to Israel, delivers his prophetic gospel.

First evidence of Greek alphabet; first appearances of the *The Iliad* and *The Odyssey* are recorded.

747 BCE: Nubians control Egypt.

733 BCE: Corinth founds the colony of Syracuse; beginnings of Greek colonies in the Mediterranean.

722 BCE: Israel conquered by Assyria, becomes an Assyrian province.

705 BCE: Assyrian capital moved from Khorsabad to Nineveh.

700 BCE: Rise of Adena culture in Ohio valley, North America.

Rise of great Greek city-states.

689 BCE: Babylon destroyed by Assyria.

671 BCE: Assyria captures Egyptian capital of Memphis.

670 BCE: Construction begins on the Temple of Artemis at Ephesus.

669 BCE: Northern Egypt conquered by Assyria.

663 BCE: Assyrian Empire reaches its height with the sack of the Egyptian city of Thebes.

660 BCE: Reign of Jimmu (whose name literally means "divine might"), first Emperor of Japan.

650 BCE: Introduction of iron-working to China.

616 BCE: Tarquin I, an Etruscan, becomes King of Rome.

612 BCE: Assyrian cities of Nineveh and Nimrud sacked by the Babylonian-Mede alliance. End of the Assyrian Empire.

605 BCE: Nebuchadnezzar II ascends to the Babylonian throne.

Lao-Tzu, traditional founder of Taoism and author of the Dao De Jing, is born in Chu (today part of southern China).

600 BCE: Ball courts found in Olmec ruins.

Aryans control Northern India, which is divided into 16 individual kingdoms. These kingdoms are often at war with one another, and elephants are used in warfare for the first time. Hinduism develops in this tumultuous environment. Eventually the kingdom of Magadha rises to prominence.

Babylon, ruled by Nebuchadnezzar II, completes construction of the Hanging Gardens, one of the seven wonders of the ancient world.

597 BCE: Jerusalem conquered by the Babylonian Empire.

587 BCE: City of Jerusalem destroyed along with the Temple of the Jews. The Jewish Babylonian exile begins.

569 BCE: Greek mathematician, philosopher and mystic Pythagoras born on the island of Samos. He is the author of the Pythagorean Theorem, one of the most famous and important geometric theories of all time.

563 BCE: Buddha is born to noble parents. Forsaking a life of wealth and ease, he instead chooses a life of asceticism and contemplation.

559 BCE: Cyrus II, known to history as Cyrus the Great, ascends to the throne of the Persian Empire in modern-day Iran.

551 BCE: Birth of Confucius, the most important Chinese philosopher.

Zoroastrianism adopted as official religion of the Persian Empire.

550 BCE: Persia conquers the Medes.

The Temple of Artemis, one of the seven wonders of the ancient world, is completed at Ephesus (modern-day Turkey). The temple has taken 120 years to construct.

539 BCE: Cyrus II adds Babylon to the growing Persian Empire without bloodshed. After his victory over Babylon, Cyrus decrees that all Babylonians will be shown mercy, granted freedom of religion and the

Adventures in Time: Homer

For the time traveling literary scholar and historian, one of the central mysteries of the ancient world waiting to be answered revolves around Homer, the enigmatic poet credited with the composition of the epic poems *The Iliad* and *The Odyssey*. He is also credited with numerous short works, including the *Homeric Hymns* (short poems written in praise of the Greek gods), the *Frog Mouse War* (a comic "mini epic"), and the Theban cycle about Oedipus and his sons.

Homer as described in legend is a larger-than-life figure, a blind poet who is credited with virtually every important literary work of the ancient Greek world. Historians have long doubted his historical existence, as the works attributed to him appeared at widely varying points in the chronology of Greek culture. Of course, since these works were all part of an older oral tradition, the fact that they were written down at different times reveals nothing of when they were originally composed. And of course blind poets who compose great works in spite of their handicap are not unknown (John Milton), and artists who produce a large amount of classic work are frequently the subject of skepticism even when there is much more evidence for their existence than there is for Homer's (William Shakespeare springs to mind here).

So for the historian, the very existence of Homer would be a subject of interest. If he existed, chronicling his life would add greatly to our understanding of the oral history of the era. If he did not, chronicling the development of the rhapsodes, the epic poets who sung the Greek masterpieces of the oral tradition and who credited their work to the great legend Homer, would also add greatly to the historical record.

For the literary scholar, the task is much larger and more daunting, though no less important. Regardless of authorship, there were no doubt hundreds if not thousands of variations on the works of Greece's oral-history period—all of which were masterpieces in their own right that might shed new light on the imagery and subtext of the great written works that came after. Furthermore, no one is even entirely sure how the epic poems were sung—so a single recording of a great poet singing an epic in the original Greek would be a treasure of immense value to the literary community! Also, it is estimated that as little as 10% of the Greek epic cycle has survived, either because the other 90% was never recorded in writing or because the writings were lost. Some of what has come down to us, such as the *Homeric Hymns,* is very incomplete. Each new work that is discovered would be a tremendous find, one that would enhance the already impressive cultural legacy of ancient Greece.

Of course, for the financially motivated, the literary treasures noted above are treasures in a more practical, monetary sense as well. Given the eagerness with which historians and scholars seek answers to the above questions, a properly motivated time explorer could extract a "finder's fee" for the discoveries (assuming time travel is well-known enough that he would be believed).

right to choose their own profession. He also frees all Babylonian slaves, including the Jews in exile, who return to Israel. Cyrus' generosity is hailed for centuries as the model of royal benevolence.

529 BCE: Death of Cyrus the Great.

525 BCE: Persian Empire, now ruled by Cambyses II, conquers Egypt.

525-456 BCE: Life of Aeschylus, one of the three great Athenian tragedians and one of the greatest playwrights of all time. He participated in the Battle of Marathon in 490 and in the Battle of Salamis in 480. One of his most famous plays, *The Persians,* is about the Battle of Salamis and was first performed in 472, eight years after the battle. Aeschylus wrote over 90 plays, only seven of which survive today. Aeschylus' epitaph was of his own composition, written years before his death; it makes no mention of his literary prowess, highlighting instead his military accomplishments at Marathon.

521 BCE: Persian Empire reaches its zenith under King Darius I.

520 BCE: Persian and Egyptian engineers complete construction of a canal connecting the Nile River to the Red Sea.

510 BCE: Romans depose the tyrannical King Tarquin, expelling their Etruscan overseers and establishing the Roman Republic.

Temple of Jupiter Optimus Maximus built in Rome.

505 BCE: The Greek city-state of Athens adopts a democratic form of government.

500 BCE: Hebrews develop a seven-day week.

497-406 BCE: Life of Sophocles, one of the three great Athenian tragedians and one of the greatest playwrights ever to have lived. Author of 123 plays, he placed first in the annual competition at the Festival of Dionysus 20 times and never placed lower than 2nd place. Of the 123 plays he is reported to have written, only seven survive to the present day.

496 BCE: Romans defeat the Latins at Battle of Lake Regillus.

490 BCE: Persia defeated by the Greeks at the Battle of Marathon.

486 BCE: Darius I is succeeded as emperor of the Persian Empire by Xerxes, who launches a new invasion of Greece. Persia is again defeated.

480-406 BCE: Life of Euripides, one of the three

Adventures in Time: Cyrus the Great

Cyrus the Great is one of the most influential rulers in the history of the world, and is considered the second greatest Emperor in the ancient world after Alexander the Great. When he ascended to the throne of Persia in 559 BCE, his kingdom was a vassal-state to the Medes. In less than 10 years Cyrus had conquered the Medes.

Whether or not Cyrus would have been content to rule a united Iran is debatable, but fate forced his hand when he learned of an alliance between Lydia, Babylon and Egypt to destroy him. Such alliances had destroyed far more powerful kingdoms than Persia, including the once-mighty Assyrian Empire. But Cyrus reacted faster than his opponents anticipated and conquered Lydia before the alliance was ready to act against him. Contrary to the custom of the day, Cyrus did not kill King Croesus but rather made him an advisor. This gained Cyrus a reputation as a wise and merciful ruler, a reputation that served him in good stead during the next phase of his campaign: Babylon.

Cyrus then moved against Babylon, ruled at the time by King Nabonidus. The Babylonian people were unhappy with Nabonidus' rule, as he was not interested in politics or religion and had left the management of his empire to corrupt underlings. Cyrus arrived at the Babylonian city before its own king and was hailed a liberator rather than a conqueror.

Upon his bloodless conquest of Babylon, Cyrus again demonstrated his skill at diplomacy. He issued what many scholars consider the first human rights document in the history of the world, guaranteeing the Babylonians freedom of religion and choice of profession by royal decree.

Cyrus then freed the Jews who had been living in Babylonia in a state of slavery, placing only one royal command on them in return for their freedom: that they rebuild their Temple in Jerusalem. To assist them in this task, he returned to them holy relics that had been stolen from them by the Babylonians and even provided them with a substantial sum of money with which to purchase building supplies.

His treatment of the Jews was such that he is the only non-Jew proclaimed a Messiah (divinely appointed king) by the Jewish people. The Hebrew version of the name Cyrus, Koresh, is a common street and family name in Israel to this day in his honor.

In many ways the reign of Cyrus and his successors (especially Darius and Xerxes) ushered in the age of the "super empire," an empire composed of radically different ethnicities, religions and languages. His tolerance of religion and use of local governors (called satraps in the Persian Empire) to run such a large empire efficiently were used as the models for the empires of Alexander the Great and the Roman Empire centuries later.

The Cyropaedia, Xenophon's depiction of Cyrus' upbringing and education, remained an enormously influential political treatises from the ancient world through the Renaissance.

For the time historian, much about Cyrus' reign would be of interest. Much of his life story as it is known to history is clearly fictional, such as the story of his grandfather's attempt to eliminate the young Cyrus, who is then raised by a shepherd unable to carry out his order to kill the boy. Xenophon's account of the boy's education, though influential, is equally fictional. Given Cyrus' accomplishments, however, his true life history would be of great value to political and military historians.

Of course for those who would alter the course of history, eliminating Cyrus might prevent the "age of empires" from ever happening. The time traveler might even have benign motivations for such an alteration of history—perhaps hoping that a lack of super-empires would prevent the wars that come from empire-building and keep men like Alexander, Caesar or Napoleon from slaughtering countless innocents.

Because of his role in freeing the Jews from Babylonian captivity and the construction of the Second Temple of Jerusalem, those wishing to alter religious history or eliminate the Jews from history might seek to do so by eliminating Cyrus, one of the greatest benefactors of the Jewish people in the ancient world.

great Athenian tragedians and one of the greatest playwrights of all time. Euripides wrote 90 plays, of which 18 complete manuscripts survive along with fragments of almost all the others. More of his work survives than that of Aeschylus and Sophocles combined, thanks to the chance survival of a (severely damaged) manuscript of his complete works.

448 BCE: City-state of Athens at its peak. Construction of the Parthenon begins (completed in 432 BCE).

435 BCE: Phidias, one of the most famous sculptors of the ancient world, completes his 40-foot tall statue of Zeus at Olympia (ancient home of the Olympic Games). The statue is one of the seven wonders of the ancient world. This magnificent work of art was composed of several different materials: the body of the god was carved from ivory; his robes

were made of gold; his throne of cedar.

431-404 BCE: Peloponnesian War between Athens and Sparta.

410 BCE: The historian Xenophon is employed as a mercenary in a Persian civil war. When the Persian leaders of this force are killed, Xenophon is elected as one of its leaders; he helps guide the 10,000 Greek mercenaries through hostile territory to the Black Sea, where they successfully sail back to Greece. Xenophon gives his account of this harrowing journey in his book *Anabasis* (or "The Expedition").

403-221 BCE: Warring States period in China. Chinese warlords no longer claim any allegiance to the Zhou Dynasty, calling themselves kings and fighting amongst themselves to consolidate power. Soon China is divided into numerous small states: Yan, Zhongshan, Zhao, Wei, Qi, Lu, Song, Qin, Han, Chu, Shu and Ba.

400 BCE: Work on the two greatest epics of Sanskrit literature, the Mahabharata and Ramayana, begins in India.

Carthage begins to dominate the Western Mediterranean.

399 BCE: Greek philosopher Socrates is sentenced to death on a charge of "corrupting the youth of the city."

396 BCE: Rome conquers the Etruscan city of Veii.

390 BCE: Celts sack and burn city of Rome.

385 BCE: Plato returns to Athens and opens his Academy. Within the next year he has composed his first major philosophical treatise, *The Symposium*.

380 BCE: As part of the rebuilding of Rome the massive Servian Wall is constructed, making an attack on the city much more difficult.

378 BCE: An uprising in Thebes forces Sparta to abandon its garrison in that city.

370 BCE: Social reforms in Rome allow plebians (commoners) to be elected Consul.

362 BCE: Battle of Mantinea, in which Thebes defeats the Spartans and becomes the dominant Greek city-state.

360 BCE: Crossbow dominates Chinese warfare.

359 BCE: Macedonian King Phillip II begins to extend Macedonian territory.

358 BCE: Artaxerxes III ascends to throne of Persian Empire. After quelling a revolt among his satraps, he massacres his entire family to eliminate rivals.

356 BCE: The Qin kingdom of China begins to dominate its rivals after its king Shang Yan introduces a number of reforms, including a strong central government and a strict penal code.

Birth of Phillip II's son Alexander.

351 BCE: Mausoleum of Maussollos, a marble mausoleum for a Persian satrap, is completed in Halicarnassus (modern-day Turkey). It is one of the seven wonders of the ancient world.

346 BCE: Phillip II of Macedon enters into an uneasy peace with Athens.

342 BCE: Egypt conquered by Persia.

338 BCE: Battle of Chaeronea. Phillip II conquers all of Greece.

Artaxerxes III poisoned to death by his favorite eunuch.

Campania (a nation in southern Italy) annexed by Rome.

336 BCE: Phillip II assassinated, succeeded by his son Alexander.

333 BCE: Battle of Issus. Persian Emperor Darius III defeated by Alexander the Great.

332 BCE: Alexander the Great conquers Egypt, adding it to the Macedonian Empire.

Stoic school of philosophy founded in Athens by Zeno of Cyprus.

331 BCE: Battle of Gaugamela. Crushing defeat of Persian army by Alexander the Great. End of the Achaemenid Persian Empire, the line of kings founded by Cyrus the Great.

Alexander the Great founds the city of Alexandria in Northern Egypt.

330 BCE: Alexander sacks the Persian royal city of Persepolis. Darius III is assassinated by his own people.

327 BCE: Alexander the Great conquers Bactria and Sogdinia.

326 BCE: Alexander reaches Toxila but is forced to put down a rebellion in his own forces.

325 BCE: The king of Qin proclaims himself king of all China.

324 BCE: Alexander the Great arranges for 90 of his Greek and Macedonian followers to marry daughters of Medean and Persian nobility in an effort to secure his conquest of the Persian Empire.

323 BCE: Death of Alexander the Great.

321 BCE: Chandragupta Maurya achieves Indian independence from Alexander's forces following his death and founds the Mauryan Empire. He signs a formal peace treaty with the Seleucid Empire in 302.

318 BCE: The Kingdom of Qin attacks Szechuan.

315 BCE: *The Song of Songs*, also known as *The Song of Solomon* and the *Canticle of Canticles,* appears in Palestine for the first time. It is one of the most celebrated cycles of erotic love poems between a husband and wife ever written, and is included in the Bible as *The Song of Solomon.* The book is one of three books of the Bible attributed to Solomon: *The Song of Songs*, representing the lust of youth; *Proverbs,* representing the wisdom of the adult; and *Ecclesiastes*, representing the cynicism of the old.

312 BCE: Seleucus gains control of Persia and most of Asia Minor, quickly conquers Babylon and founds the Seleucid Dynasty.

310 BCE: Carthage besieges Syracuse. After troops from Sicily land at Carthage in response, the two powers negotiate a peace treaty.

304 BCE: Ptolemy I declares himself ruler of

Adventures in Time: Alexander the Great

Alexander is a man who looms larger than life in the pages of history. To the modern world he is known as "Alexander the Great;" in Persia during his lifetime he was known as "accursed Alexander" because of his conquest of the mighty empire and the destruction of Persepolis; in Hindi he is known as "Sikandar," a word often used as a synonym for "gifted" or "skilled." Before dying at the age of 33, Alexander managed to conquer Greece, Persia, Syria, Phoenicia, Egypt and Babylon in 11 years.

The time historian would no doubt want to witness Alexander and the organization of his army and military affairs. The military machine put in place by Alexander's father Phillip II was undoubtedly formidable, with cavalry, archers, siege engines, and the phalanx all used together in a classical military concept of combined arms. Phillip also instituted army service as a full-time career. This allowed his phalanxes to drill regularly and perform complex maneuvers in the heat of battle—techniques that were beyond those of most of the armies Alexander faced.

For those interested in cultural history, Alexander's accomplishments are also of enormous interest. He brought Greek culture and ideas into Africa, India and Asia and brought those cultures in turn back to Greece, creating a cosmopolitan empire comprised of elements from many disparate cultures. The study of the spread of Greek ideas and the Greek language throughout the world begins with Alexander.

Others might wish to change history by assassinating Alexander before his conquests, though this would be a radical and dangerous alteration to history. Other time travelers might prefer to hold Alexander's empire intact after his death, an achievement that would probably require technology from the future. Even if the rules of time travel used in the campaign do not allow items to pass through time, a savvy time traveler could position himself as an advisor to one of the generals who succeeded Alexander (such as Ptolemy) and use his knowledge of the future to allow that general to hold Alexander's empire together. Such an accomplishment would probably result in the replacement of Rome's influence on Europe with a Greek influence. Since the Roman Empire was largely a reconstitution of Alexander's empire in Asia, the Middle East and North Africa, the time traveler who wished to eliminate Rome from history could do so by preserving Alexander's empire into the Common Era.

Egypt, founding the Ptolemaic Dynasty. His heirs take Egyptian noble titles along the lines of pharaohs and worship Egyptian deities.

301 BCE: Antigonus defeated and killed by Seleucus and Lysimachus at Ipsus. The Empire of Alexander is divided into three separate kingdoms: the Antigonid Empire, centered on Macedon; the Seleucid Empire, centered in Mesopotamia; and the Ptolemaic Empire, centered in Egypt.

300 BCE: Seleucus I founds the city of Antioch.

297 BCE: Having united the Indian sub-continent under his rule, Chandragupta Maurya abdicates the throne in favor of his son Bindusara.

294 BCE: Construction of the Colossus begins in Rhodes.

290 BCE: Euclid, an Alexandrian mathematician, sets out the principles of geometry in *Elements*.

287 BCE: Construction begins on the Great Wall of China.

286 BCE: The Kingdom of Qin begins to expand in China.

285 BCE: Ptolemy I abdicates rule of Egypt in favor of his son.

282 BCE: The Colossus of Rhodes—a 110 foot-high bronze statue of the god Helios—is completed. The statue is mounted on a 50-foot-high marble pedestal (it does not straddle the mouth of the harbor as is commonly portrayed in images and literature about the statue). It is one of the seven wonders of the ancient world.

280 BCE: The Lighthouse of Alexandria is completed during the reign of Ptolemy II on the tiny island of Pharos, just off the coast of Egypt. The lighthouse is over 440 feet tall and is one of the tallest buildings in the world. The light from the tower can be seen 35 miles from shore. The Lighthouse is one of the seven wonders of the ancient world.

280-275 BCE: Pyrrhus sends Greek troops to southern Italy to aid the Greek colonies there against Rome, but is defeated.

273-232 BCE: Ashoka, the first Buddhist monarch in the world, rules over India.

272 BCE: Tarentum, the most important Greek colony in southern Italy, falls to the Romans.

Celts sack Delphi in Greece.

264 BCE: Two Roman legions are sent to the Carthaginian-held seaport of Messana in Sicily. This event is the first time Rome has sent its troops outside the Italian peninsula, and marks the beginning of the First Punic War between Rome and Carthage.

First gladiatorial combat in Rome.

264-241 BCE: First Punic War between Rome and Carthage. Fought for control of the island of Sicily, the First Punic War is mostly a naval war, with both sides attempting to blockade and capture the important ports of Sicily.

Although Hamilcar Barca (father of Hannibal) wins many battles on the ground in Sicily, Rome wins the war due to the development of their navy. The war

ends with Rome in control of Carthage's important island bases in the Mediterranean and a strong navy, making Rome the dominant force in Mediterranean trade and sea power.

The First Punic War also marks a turning point for Rome, as it seizes territory outside of Italy for the first time.

260 BCE: Roman navy defeats Carthaginian navy at Mylae.

256 BCE: Romans victorious over Carthaginians in a huge naval battle off the coast of Ecnomus.

255 BCE: A Roman invasion of Carthage ends in defeat.

250 BCE: Shi Huangdi becomes ruler of the Kingdom of Qin.

237 BCE: Hamilcar Barca departs for Carthaginian holdings in Spain with his 10-year-old son, Hannibal.

226 BCE: An earthquake at Rhodes causes the Colossus to snap off at the knees, falling to the ground. Ptolemy III offers to pay for the statue's repair, but an oracle claims that the cause of the earthquake was Helios' displeasure with the people of Rhodes and warns that attempting to undo his punishment might make the god even more angry. The statue's remains are left where they fell, where they continue to elicit awe and admiration from those who see them.

Naturalist Pliny the Elder remarks that most visitors have trouble wrapping their arms around one of the statue's thumbs and that the fingers are larger than most statues.

221 BCE: Another phase of construction on China's Great Wall.

Shi Huangdi founds the Qin Dynasty, uniting all of China under his rule.

218 BCE: The Siege of Seguntum begins the Second Punic War. Hannibal crosses the Alps and invades Italy with 20,000 footsoldiers, 6,000 cavalry and 38 elephants.

217 BCE: Hannibal defeats the Romans at Lake Trasimene.

216 BCE: Hannibal defeats the Romans at Cannae.

215 BCE: Romans launch a counter-offensive in Spain.

211 BCE: As Hannibal marches on Rome, Capua and Syracuse, Carthaginian allies fall to the Romans. Scipio Africanus defeats the Carthaginian general Hasdrubal in Spain.

210 BCE: The death of Shi Huangdi sparks revolts and unrest in China as factions vie for control and power. The Emperor himself is entombed with a vast army of 7,000 terra cotta warriors.

206 BCE: Fall of Qin Dynasty. Liu Bang declares himself Emperor of all China, founding the Han Dynasty.

204 BCE: Scipio invades Africa; Hannibal is recalled from Italy to defend the Carthaginian homeland.

202 BCE: Battle of Zama. Scipio Africanus defeats Hannibal, Carthage surrenders, and Hannibal goes into exile.

200 BCE: Small communities begin to merge in the Teotihuacán Valley of Mexico, worshipping the rain god Tlaloc.

197 BCE: Rome defeats Macedon, stripping it of control of Greece. The Romans then set Greece free and return home, but take many priceless works of Greek art and literature with them when they leave.

192-189 BCE: Rome at war with the Seleucid Empire, winning victories at Thermopylae and Magnesia.

184 BCE: Marcus Porcius Cato the Elder decries the decadence of Roman society.

183 BCE: On the verge of capture by the Romans, Hannibal commits suicide rather than surrender.

179 BCE: Perseus succeeds Phillip V as king of Macedon and raises a coalition to fight against Rome, including pro-Macedonian factions inside Greece.

172-167 BCE: Third Macedonian War between Rome and Macedon.

168 BCE: Romans decisively defeat Macedonians at Pydna and begin a wave of expansion into the Eastern Mediterranean.

167 BCE: Romans declare the tiny Aegean island of Delos to be a free port; the city becomes a pivotal trade link between the Eastern and Western Mediterranean.

165 BCE: Judas Maccabaeus leads a revolt in Judea, enters Jerusalem and purifies the temple, reestablishing Judaism.

First examinations given for selection of civil servants in China.

149-146 BCE: Third Punic War. Rome becomes entangled in a war between Numidia and Carthage. By the end of this third conflict between Rome and Carthage, the city of Carthage has been destroyed and the possessions of Carthage in North Africa are added to the growing Roman Empire. Rome creates the province of Africa from Carthaginian holdings.

146 BCE: Mithradates the Great begins bringing together the Parthian Empire from the remnants of the fallen Seleucid Empire, gaining control of Media, Babylon and Elam. In time the Parthians will grow to be the greatest rivals of Rome in the Near East.

142 BCE: Jews liberate Jerusalem, making it their capital.

136 BCE: Confucianism becomes the state religion of China.

136-132 BCE: Roman slaves revolt in Sicily.

131-129 BCE: A slave revolt in Pergamum causes the Roman Army to be dispatched; it takes two years for the Romans to regain control. The event leads to the formation of the province of Asia.

110 BCE: Silk Road opens across Central Asia.

101 BCE: A second slave revolt in Sicily is put down by the Roman Army.

100 BCE: Civil unrest among Rome's nobility

Adventures in Time: Spartacus

Spartacus' "revolt" began simply when he and 70 fellow slaves attempted to escape the gladiatorial arena. They managed to seize knives from the kitchen and made their way to freedom. Runaway slaves soon swelled the size of this small band to an army over 90,000 strong. The ratio of slave to citizen was very high in Rome at that time, making Spartacus a serious threat to the empire. The longer he remained free, the more slaves would flock to his cause.

The first attempt to destroy Spartacus' rebellion was by the Praetor Claudius, who attacked with 3,000 green soldiers recruited from the countryside around the rebels. They trapped Spartacus and his followers in the caldera of Vesuvius, intending to starve them out. Spartacus and a group of his soldiers used vines to climb down the rear of the mountain and attacked Claudius from the rear, routing his men.

Spartacus then defeated two more Roman legions before his force bedded down for the winter, using the reprieve to manufacture weapons and armor. By this time the size of Spartacus' force had grown even further, but did not consist of only fighting men; women and children had joined the revolt as well.

When spring came Spartacus and his force began to march north, intending to leave Italy and cross the Alps into Gaul. By this time the Senate was so alarmed that they sent four legions to stop Spartacus, led by two consuls: Publicola and Lentulus. Spartacus divided his forces to deal with this dual threat. The force under the gladiator Crixus was defeated by Publicola, but the force commanded by Spartacus defeated Lentulus' two legions and then defeated Publicola as well. Spartacus then defeated a fifth legion under the command of the governor of Cisalpine Gaul (a Gallic territory on the Roman side of the Alps) before preparing to leave Rome behind.

Spartacus was free to leave Rome at this point, but for unknown reasons decided to turn back. Perhaps he sought more plunder, or perhaps he sought to actually overthrow the empire and install himself as king. At any rate, upon returning to the south Spartacus continued his military success, defeating two legions under the command of Marcus Licinius Crassus. He ended another year's campaigning at the tip of the Italian boot, attempting to negotiate with pirates for passage to Sicily. The situation seemed grim enough that the Senate recalled Rome's two most successful military commanders, Pompey and Lucullus.

But Crassus, one of the richest men in Rome, sought to avenge the defeat by Spartacus on his own terms. He used his tremendous wealth to raise eight legions. These forces managed to kill Spartacus and break the will of his renegade band, who surrendered soon afterwards. A small force of 5,000 escaped capture and fled north, perhaps intending to follow the original plan and escape into Gaul; they were met by Pompey, who was heading south to assist Crassus. Pompey slaughtered them without mercy.

As many as 6,000 of Spartacus' men were crucified and left along the Appian Way. The bodies were never removed and remained there for decades as a grisly message to any who would consider rebellion against Rome.

For the time traveler wishing to alter the history of the Roman Empire, Spartacus provides another powerful opportunity to alter the course of history as we know it. Spartacus was a general of great prowess, able to defeat the Romans time after time. With a little help he could have easily overthrown the Empire.

But this probably would not change history too much, unless Spartacus was a very different type of leader than Rome had historically. A better opportunity to change history lies in Spartacus' original plan of crossing the Alps into Gaul. Had he done so, a Gaul under the control of Spartacus could have proved a much tougher adversary for Julius Caesar during his Gallic War in 20 years' time. This might effectively remove Caesar from history, either through his death or by preventing him from being named dictator for life. In either case, the rise of the true Roman Empire and death of the Roman Republic under Octavian would likely have not been possible, creating a much smaller and possibly more humane Roman Republic.

over a series of social reforms, including a government subsidy reducing the price of corn for Rome's poorest citizens.

Indian influences (including Buddhism) spread to Southeast Asia along trade routes.

The camel is introduced into the Sahara by the Romans.

91-89 BCE: Roman Social Wars. The conflict begins when Marcus Livius Drusus, a liberal advocate of social reforms, is assassinated. The resulting rebellion is put down, but the Romans make many concessions to end the conflict, including a grant of imperial citizenship to all residents of the Italian peninsula. The Social War greatly changes the landscape of Roman politics, creating many new citizens with the right to vote in Roman elections (provided they are physically present in the capital to vote). This leads to the practice of candidates for Roman office paying the expenses of citizens traveling to the city to vote for them.

77 BCE: In an attempt to force through his liberal

social reforms, Marcus Aemilius Lepidus marches on Rome but is defeated by Pompey.

73-71 BCE: Third Servile War (also known as the gladiator war). A slave revolt led by the gladiator Spartacus devastates southern Italy.

67 BCE: Pompey leads a successful campaign against pirates in the Eastern Mediterranean Sea.

66 BCE: Roman general Pompey vanquishes Mithradates II.

63 BCE: Pompey captures Jerusalem and annexes Judea into the Roman Empire.

Cicero is elected consul. His first act is to turn against Catiline, a disaffected Roman noble attempting to overthrow the Republic and make himself king. After much debate, the Roman Senate agrees to execute the defeated Catiline.

61 BCE: Julius Caesar forms a triumvirate with the rich Crassus and the military hero Pompey.

58-50 BCE: Julius Caesar's Gallic conquests increase his fame and add a great deal of territory to the Roman Empire.

55 BCE: Invasion of Britain by Caesar.

52 BCE: Gallic uprising led by Vercingetorix is put down by Caesar, granting him even greater fame.

50 BCE: Teotihuacán is the largest city in the Americas with a population of over 40,000.

49 BCE: Caesar crosses the Rubicon into Italy; Pompey and his allies retreat to Greece.

48 BCE: Following his defeat at Pharsalus in Greece, Pompey flees to Egypt where he is put to death by Egyptian King Ptolemy XIII.

46 BCE: Roman colony of Carthage founded by Julius Caesar on the ruins of the original city.

Caesar appointed dictator.

44 BCE: Cleopatra murders Ptolemy XIV, her brother and co-ruler of Egypt.

Julius Caesar murdered; Marc Antony takes control of Rome.

43 BCE: Octavian appointed consul. A new triumvirate—Octavian, Marc Antony and Lepidus—rises to power in Rome. The alliance is cemented by Antony's marriage to Octavian's sister.

42 BCE: The Republicans (those who assassinated Caesar to prevent his dictatorship) are defeated at the Battle of Philippi. Brutus and Cassius commit suicide.

40 BCE: Herod becomes King of Judea, which remains a loyal client-state of the Roman Empire under his rule.

Parthians invade Judea and capture Jerusalem.

Peace treaty at Brundisium divides rule of Rome between Octavian and Antony.

39-37 BCE: Marc Antony inflicts two crushing defeats on the Parthians, leading to the recapture of Jerusalem.

37 BCE: Antony marries Cleopatra, Queen of Egypt, in Antioch.

32 BCE: Final breach of the treaty between Octavian and Antony; both move to seize control of the empire.

31 BCE: Octavian defeats Antony at the Battle of Actium. Egypt annexed by the Roman Empire.

30 BCE: Antony and Cleopatra commit suicide.

27 BCE: Octavian takes the name Augustus Caesar and becomes the first true Emperor of the Roman Empire.

25 BCE: In Sri Lanka, Buddhist canon is written down for the first time.

19 BCE: Herod rebuilds the Temple in Jerusalem.

14 BCE: Han Dynasty puts down a peasant revolt.

12 BCE: Augustus adds Pontifex Maximus (the highest Roman religious office) to his list of titles and powers. Worship of Augustus as a god spreads through the Roman Empire.

4 BCE: Birth of Jesus Christ.

Death of Herod; Judea divided between his three sons.

4: Augustus Caesar adopts Tiberius and names him his heir.

9: Three Roman legions wiped out by German barbarians. The Roman border in Germany is pulled back to the Rhine.

14: Augustus Caesar dies, replaced as Emperor by Tiberius. Tiberius adopts Germanicus as his heir.

17: Germanicus becomes a hero to Rome after winning a great victory over the German barbarians.

19: Germanicus dies in Syria at the order of Tiberius.

26: Tiberius retires to the island of Capri, leaving control of the Empire to Sejanus, the corrupt captain of the Praetorian Guard. (The Praetorian Guard forms the personal bodyguard of the Roman Emperors.)

29: Crucifixion of Christ.

31: Sejanus is killed.

37-41: Gaius Caligula Emperor of Rome. His reign is one of the most disastrous in Roman history, marked by profligate spending, unheard-of debauchery (a phrase that really means something in the context of the Roman Empire), and the murder of many of Caligula's relatives.

41: Race riots break out in Alexandria between Jewish and Greek residents.

Caligula is murdered by his Praetorian Guard.

41-54: Reign of Claudius as Roman Emperor.

47-57: Journeys of St. Paul.

48: Nobles from Gaul granted permission to run for the Roman Senate.

52: Paul arrives in Greece and begins preaching and ministering to the Greeks.

54: Claudius is poisoned by his wife Agrippina. Her son Nero takes the throne of the Roman Empire.

57: An ambassador from Japan arrives in China. Japan recognized by the government of China.

59: Nero orders his mother's death.

60: Mark, one of the apostles of Jesus, writes an account of the life of Christ.

61: A revolt by Boadicea against Roman rule of

Britain, begun the previous year, is crushed.

62: St. Paul's execution ordered by Nero.

65: Buddhism spreads to China.

66-70: First Jewish revolt against Roman rule.

68: A massive fire sweeps Rome. Nero blames the Christians, sparking a widespread persecution of Christians in the Roman Empire. Partially as a result of the fire but also due to his poor leadership and profligate spending, support for Nero collapses throughout the empire. Uprisings occur in Gaul and Spain. Nero loses all influence over the Senate. He commits suicide later this year.

69: Year of the Four Emperors. Widespread chaos as various contenders fight for the throne of the empire. Galba, Otho and Vitellius all serve as Emperor and are all killed in this year. Finally Vespasian assumes (and holds) the throne.

69-79: Reign of Roman Emperor Vespasian.

70: Jewish revolt crushed in an attack led by Vespasian. Temple of Jerusalem destroyed.

73: Masada, a mountain stronghold and the last holdout of the rebellious Jews, is finally taken by the Romans.

79: Mount Vesuvius erupts, destroying the cities of Pompeii and Herculaneum.

79-81: Reign of Roman Emperor Titus.

80: Luke, an apostle of Jesus, writes an account of the life of Christ.

81-96: Reign of Roman Emperor Domitian. At the end of his rulership Domitian, a widely unpopular ruler, embarks upon a reign of terror in an attempt to maintain power and is assassinated.

96-98: Reign of Roman Emperor Nerva.

98-117: Reign of Roman Emperor Trajan. Trajan is the first non-Italian Roman Emperor, hailing instead from Spain.

100: Alexandria is recognized as a center of Christian scholarship and one of the earliest Christian bishoprics.

Temple of the Sun and Moon under construction in Teotihuacán.

Emergence of several important Amerindian cultures in Southwest America, including the Anasaszi and the Hohokam.

105: Paper invented in China.

113: Trajan completes the magnificent new Forum in Rome.

117-138: Reign of Roman Emperor Hadrian.

122: Hadrian's Wall built in Britain.

132-135: Second Jewish Revolt led by Bar Cochba. After this revolt the city of Jerusalem is razed and Aelia Capitolina, a new Roman city where Jews are forbidden to live, is built in its place. The Roman province of Judea is renamed Syria Palestine.

This is the start of an even more extensive phase of the Jewish Diaspora, with Jews geographically scattered throughout the world after the loss of their homeland. Many are sold into slavery throughout the Roman Empire.

138-161: Reign of Roman Emperor Antonius Pious. First Roman embassies to China.

161-180: Reign of Roman Emperor Marcus Aurelius.

177-180: Marcus Aurelius appoints his son Commodus co-Emperor.

180-192: Reign of Roman Emperor Commodus. Commodus is the biological son of Marcus Aurelius, ending a string of five emperors (the so-called "Five Good Emperors") who were all adopted as heirs by the current emperor as a result of their achievements.

Unfortunately for the empire, Commodus is also insane. He is extremely fond of gladiatorial combat, increases the number and lavishness of the combats, and even competes in the arena himself. After a fire destroys a substantial portion of the city of Rome, Commodus "re-founds" the city and renames it Colonia Commodiana. He also renames the Senate the Commodian Fortunate Senate and the army the Commodian Army. The movie *Gladiator* is (very loosely) based on his reign.

184: Revolt of the Yellow Turbans, a Taoist cult in China. This is the opening event in the Chinese literary-historical classic *Romance of the Three Kingdoms*.

192: Emperor Commodus is strangled in his sleep, plunging Rome into a civil war as four men vie for power.

193-211: Reign of Roman Emperor Septimius Severus.

196: Roman governor of Britain Clodius Albinus is declared emperor by his men and crosses into Gaul.

197: Battle of Lugdunum. Septimius defeats Clodius.

200: End of Chinese occupation of Korea; the Korean kingdoms of Paekche, Koguryo and Silla grow.

The Mayan city of Tikal in Central America rises to importance.

202: Romans issue an edict against Christianity.

220: Collapse of the Han Dynasty. China splits into three kingdoms: Wu, Shu and Wei.

222: An anti-Christian pogrom in Rome results in the murder of Pope Callistus.

235-285: Rome descends into a period of bloody military anarchy that almost results in the disintegration of the empire. During this fifty-year period there are at least 20 Roman Emperors. Historians often refer to this period as "the crisis of the 3rd century."

235: Raids by German barbarians on Roman outposts in the upper Rhine and along the Black Forest.

238: Goths cross the Danube and begin raids in the province of Moesia. Rather than confront them, Rome pays them tribute to dissuade them from further raids.

253: Franks and Alemanni invade Gaul.

258: Alemanni and Seuvi conquer northern Italy.

267: Goths pillage Thrace, Macedonia and Greece.

271: Emperor Aurelian orders Rome's fortifications strengthened. New walls are built to defend the city from attack.

274: The god Mithra is admitted to the pantheon of the Roman Empire. His secretive mystery cult, which bears many similarities to Christianity, is popular among the Roman military of the late empire.

277: Gaul is re-pacified by Emperor Aurelian.

279: Jewish scholars in Tiberius issue a collection of Jewish laws and legends known as the *Talmud.*

285: Upon ascending to the throne of the Roman Empire, Diocletian determines that one element contributing to the widespread chaos that has engulfed the empire is its sheer size. Each past emperor had absorbed into his sphere of personal authority more and more of the powers once held by various offices. These same emperors had also expanded the size of the empire. Diocletian divides the Roman empire in half, decreeing that there will be two co-emperors who would each bear the title Augustus. Diocletian will be Augustus of the Western Roman Empire while his trusted friend Maximian will be Augustus of the Eastern Roman Empire.

293: Establishment of the Roman Tetrarchy (literally "rule of four"). Each Augustus appoints a Caesar below him to aid in the administration of his half of the empire (and also to provide a clear line of succession).

300: Armenia converts to Christianity and becomes the first nation in the world to embrace Christianity as its state religion.

Kama Sutra (literally "Aphorisms of Love") written by Vatsyayana in India.

Settlement of Rapa Nui, also known as Easter Island.

304-439: Sixteen Kingdoms period in China.

305: Abdication of Emperor Diocletian. Maxentius placed on the throne by the Praetorian Guard.

310: In Alexandria, a Greek mathematician named Diophantus introduces the concept of algebra in his *Arithmetika*.

311: Donatist schism in the Christian church in Africa. Donatists hold that anyone who has sacrificed to a Roman god must be expelled from the Christian church and may not be readmitted under any circumstances.

312: Battle of Milvian Bridge. Constantine converts to Christianity on the eve of battle and defeats Maxentius; he becomes Augustus of the Western Roman Empire.

313: Constantine issues the Edict of Milan, granting Romans freedom of religious observance. This ends the long-standing state persecution of Christianity within the Roman Empire.

Licinus named Augustus of the Eastern Roman Empire.

318: Arius, a Christian priest of Alexandria, puts forth his theory that Christ was not completely divine.

320: Gupta Dynasty in India and the beginnings of India's golden age.

323: Beginnings of Christian monasticism in the deserts of Egypt.

324: Constantine defeats Licinus, uniting the Roman Empire once again under a single emperor. The capital of the empire is moved to Byzantium, which is renamed Nova Roma. The capital is popularly known by a different name, Constantinople ("Constantine's city"), the name by which it is remembered today.

325: Constantine assembles the Council of Nicaea, the first ecumenical council of the bishops of the Christian church. The purpose of the council is to resolve long-standing differences among bishops as to the specifics of Christian doctrine, especially doctrines pertaining to the nature of Christ. It establishes an official Christian orthodoxy for the first time.

329: St. Peter's Basilica completed in Rome.

331: Constantine confiscates treasures from pagan temples to pay for construction of new Christian churches throughout the empire. The emperor himself begins to vigorously and vocally promote Christianity.

335: Church of the Holy Sepulcher, Christianity's holiest shrine, consecrated in Jerusalem.

337: Death of Constantine. The Roman Empire is divided between his three sons.

340: Constans defeats his brother Aquileia in northern Italy, uniting the Western Roman Empire under his rule.

350: Constans is murdered by one of his generals, Magnentius, who assumes control over the Western Empire.

Stirrup invented in China.

Ulfilas, the first Gothic Christian bishop, translates the Bible into the tongue of his people.

353: Constantius II becomes sole emperor of the entire Roman Empire.

355: The Alemanni, a Germanic barbarian tribe, wreaks havoc in Gaul.

357: Julian is named Caesar by his brother Constantius. He drives the Alemanni out of Gaul and back into Germania, pushing them past the Rhine.

361: Julian becomes Roman Emperor.

362: Julian, a pagan, attempts to return the empire to paganism. When Julian dies during an invasion of Persia the following year, this brief pagan renaissance comes to an abrupt end.

364: Roman Empire again divided, with Valentinian ruling the west and Valens ruling the east.

368-369: Roman generals conduct a series of successful campaigns against the Alemanni and the Visigoths along the Rhine frontier, forcing them to capitulate and sign unfavorable treaties.

369: Japanese establish a colony in South Korea.

370: Huns begin to invade Eastern Europe.

375: Huns defeat the Ostrogoths in the Ukraine.

376: Goths petition Emperor Valens for permission to settle within the Roman Empire.

378: Visigoths commanded by Alaric defeat Valens at the Battle of Adrianople.

381: Arianism is formally condemned by an ecumenical council at Constantinople.

382: Roman capital moved to Milan.

383: Emperor Theodosius signs a peace treaty with the Goths granting them land and autonomy in return for military service.

384: Buddhism reaches Korea.

387: Foundation of the Northern Wei Dynasty by the Toba (a Mongolian people). Beginnings of the north-south division of China.

Maximus, a Roman governor of Britain, is proclaimed emperor and mounts an invasion of Italy. He is defeated and executed.

391: Theodosius makes Christianity the state religion of the Roman Empire. All pagan religions are banned and their rituals forbidden.

393: Invaders from Japan overrun the Silla and Paekche kingdoms in Korea.

395: Death of Emperor Theodosius. Honorius, still a child, is named Emperor of the Western Roman Empire.

Alaric, leader of the Visigoths, seeks permission to settle his people inside the Roman Empire.

400: Teotihuacán is the fourth largest city in the world, with a population of 250,000.

401: Visigoths, led by Alaric, invade northern Italy.

402: Visigoths forced out of Italy by a Roman military force led by the Vandal general Stilicho.

Roman capital moved to Ravenna.

404: The Latin translation of the Bible, the Vulgate, is completed.

406: On December 31st hordes of Vandals, Alans and Sueves cross a frozen Rhine and enter the Roman Empire.

407: Constantine III, Roman governor of Britain, is declared emperor by his soldiers. He leaves Britain and enters Gaul, which is being ravaged by barbarians.

408: Constantine pushes south; he now controls Britain, Gaul and Spain.

409: Vandals, Sueves and Alans cross the Pyrenees.

410: Visigoths, led by Alaric, capture Rome.

411: Constantine is captured by forces loyal to Emperor Honorius.

414-418: Visigoths establish a new state in Narbonne, expanding into Spain and Aquitaine.

422: Eastern Roman Emperor Theodosius II agrees to pay the Huns an annual tribute in return for peace.

429: Vandals invade North Africa from Spain.

Angles, Saxons and Jutes expel Picts and Scots from southern England, establishing territories for themselves.

430: During a siege of Hippo by the Vandals, St. Augustine is killed.

431: Pope Celestine sends Palladius to Ireland to be its first bishop.

436: Last Roman soldiers leave Britain.

439: Carthage falls to the Vandals, who set up a sovereign state in North Africa.

442: Western Roman Emperor Valentinian III signs a treaty with the Vandals ceding Roman claims to all territories in Africa to them.

444: Taoism named the state religion of the Northern Wei Empire in China.

Attila becomes king of the Huns.

446: Rebellion of Buddhist monks against Taoist reforms. Wei Emperor orders the execution of every Buddhist monk in the empire. Soldiers delay carrying out these orders as long as possible, allowing many monks to escape.

447: Attila crosses the Danube and invades Thrace, forcing Rome to pay him a larger tribute.

450: Nazca culture, famous for drawing enormous lines and figures in the desert, flourishes in the Americas.

451: Attila the Hun invades Gaul. A combined force of Roman and Gothic troops manages to defeat him.

452: Attila invades Italy, attacking the cities of Padua and Verona before being persuaded to withdraw by Pope Leo. Refugees from these attacks found the city of Vienna.

453: Death of Attila. Huns withdraw from Europe.

455: Vandals engage in wanton sacking, raping and pillaging of Rome, giving the word "vandal" its modern meaning.

468: Sicily conquered by the Vandals.

476: Romulus Augustus, child emperor of the Western Roman Empire, is deposed by Odoacer who proclaims himself "King of Italy." This is the traditional date of the end of the Western Roman Empire.

477: Buddhism becomes the state religion of China.

Huneric succeeds his father as king of the Vandals in North Africa. A devout Arian Christian, Huneric embarks on a campaign of bloody persecution against the Catholics.

478: First Shinto shrines in Japan.

492: Conquest of Italy by Ostrogothic king Theodoric.

500: The Hagha Dynasty comes to rule Ghana in Western Africa. They grow rich from trade, using camels to transport salt and gold across the Sahara to sell in North Africa.

The Bantu arrive in Southern Africa.

507: Visigoths defeated by the Franks and driven out of Aquitaine.

526: Dionysius Exiguus proposes the AD system of dating time from the birth of Christ.

527-565: Reign of Eastern Roman Emperor

Justinian.

529: St. Benedict founds a monastery at Monte Cassino and authors the Benedictine Rule to regulate monasticism.

533: The Byzantine Empire, as the Eastern Roman Empire has come to be known, begins its re-conquest of the Italian peninsula.

534: Byzantine forces led by General Belisarius conquer the Vandal kingdom in North Africa.

Justinian releases the final form of his *Codex*, a law code for the entire Roman world.

535: Byzantine general Belisarius invades Italy from the south.

536: Byzantines capture Rome.

537: The Hagia Sophia, the Church of the Holy Wisdom, is remodeled and rededicated by Byzantine Emperor Justinian I. The original was burned during riots five years earlier.)

538: Buddhism spreads to Japan from Korea.

540: Byzantines capture Ravenna.

542: The bubonic plague, which has already killed thousands in Constantinople, spreads to Italy.

550: Belisarius is recalled from Italy. The Ostrogoths immediately retake Rome.

552: Battle of Busta Gallorum. Byzantines defeat the Ostrogoths and kill their king, Totila.

553: Monks smuggle silkworms from China to Constantinople. Beginnings of the Byzantine silk industry.

555: Byzantines complete and solidify their conquest of Italy, repelling a Frankish invasion. They also control southern Spain with a regional capital at Cordoba.

557: Hagia Sophia damaged in an earthquake.

567: Visigoths drive Byzantines from Western Spain.

568: Lombards invade Italy.

570: Birth of the prophet Mohammed in Mecca.

573: Visigoths recapture Cordoba from the Byzantines in Spain.

589: Council of Toledo declares Spain to be a Catholic country.

592: In Japan, conflict between the Soga (who support Buddhism) and the Mononobe (who support native pagan deities) results in the execution of the emperor.

595: First recorded use of the decimal system among Indian mathematicians.

597: Mission of St. Augustine to Britain. After converting the king of Kent, he begins to convert other Anglo-Saxon kings to Roman Christianity.

600: Mayan civilization at its height in South America.

First books printed in China.

602: Following a mutiny of the Byzantine army, the centurion Phocas becomes emperor.

603: Italian Lombards convert to Roman Catholicism.

605: Chinese Emperor Yangdi expands and reorganizes the system of civil service examinations.

610: Mohammed begins to preach in Mecca, calling for an end to idol and demon worship and for the conversion of the people to the one true god, Allah.

Constantinople is attacked and Phocas is executed, bringing the Byzantine Empire to the brink of collapse.

620: Chinese coins have been found in Africa dating to this year, proving that trade and economic activity reached from one side of the known world to the other.

622: The Hegira. Mohammed flees to Medina with his followers, marking the beginning of the Islamic era.

628: Mohammed and his followers make the pilgrimage from Medina to Mecca.

630: Mohammad takes control of Mecca.

632-634: Death of Mohammed. Abu Bakr becomes leader of the Muslims and begins an era of Arabic Muslim expansion.

633: Muslims begin conquest of Syria and Mesopotamia.

634-644: Umar is Caliph of the Muslims.

636: Muslims rout the Byzantine army on the Yarmuk river.

637: Arab conquest of Mesopotamia complete. Arabs defeat the Persians as well, gaining control of Jerusalem.

642: Arabs conquer Egypt, taking Alexandria, the last Byzantine outpost in Egypt. They found a new Islamic capital city, Cairo.

649: Arabs conquer Cyprus.

650: The Koran, the holy scriptures of Islam, established in its current form.

Construction of sacred stone platforms begins on Easter Island.

654: Arabs capture Rhodes and sell the remains of the Colossus to a traveling salesman, who has the massive bronze statue broken down and hauled away on 900 camels. Pieces of the statue appear for sale at markets for many years to come.

655: Arabs conquer Kabul and Kandahar.

Arabs defeat the Byzantine fleet in a major naval engagement. Arabic fleet now controls the Eastern Mediterranean.

657: Indian mathematician Brahmagupta introduces the concept of zero, formulates rules for calculation.

661-750: Umayyad caliphate. Damascus is the center of the Islamic world.

674-678: Arabs besiege Constantinople but are unable to capture the city.

678: During the defense of Constantinople, the Byzantines use a substance known as “Greek fire” to break the siege and force the Arabs to sign a peace treaty and withdraw. The substance is made from sulphur, rock salt, resin and petroleum.

680: Al-Husayn, the son of Ali (Mohammed's son-in-law) is killed in battle. A dissenting group, the Shi'ites, proclaims that the right to interpret the Koran belongs only to the descendants of the Prophet; they proclaim Al-Husayn a martyr.

685: The Umayyad proclaim that the right to interpret the Koran belongs to the caliphate, forming the Sunni doctrine of Muslim belief.

Buddhism becomes the state religion of Japan.

687: Isle of Wight is the last area of Anglo-Saxon Britain to convert to Christianity.

Pepin II unites the Franks under his rule.

692: Dome of the Rock mosque completed in Jerusalem.

694: The Visigothic council ruling Toledo enslaves all Jews living in Spain, confiscating their property.

696: First Arabic coinage. Arabic is the official language of the Umayyad Empire.

697: Venice, which has become one of the world's major centers of trade, elects its first mayor.

698: Arabs take Carthage, the last Byzantine stronghold in North Africa. They found the city of Tunis on the site where Carthage once stood.

700: The official language of the Byzantine Empire is changed from Latin to Greek.

North American tribal culture is transformed by technological innovations such as the bow and arrow (North and South American cultures are still PL 0 cultures, as they will be until the arrival of explorers from the Old World).

Kingdom of Ghana in West Africa becomes more powerful, dominating Saharan gold trade routes.

701: Taiho code issued in Japan covering civil and criminal law.

710-794: Japanese capital is located at Nara.

711: Arab forces cross the Strait of Gibraltar and quickly conquer Visigothic Spain. They free the Jewish slaves there.

712: Arabs control Samarkand, which becomes an important center for Islamic learning.

715: Upon the death of Pepin II, his illegitimate son Charles Martel overcomes other contenders to become ruler of the Franks.

716: Arabs conquer Lisbon.

717: An 80,000-man Arabic army besieges Constantinople.

725: The Chinese empire is one of the most important and powerful empires in the world. Chang'an, the Chinese capital, is the largest city in the world. In addition, state-sponsored stud farms have placed as many as 250,000 horses at the military's disposal.

On the Reckoning of Time published by Northumbrian monk Bede, disseminating the AD system of time reckoning throughout Europe.

726-843: Iconoclasm. In an effort to remove what he sees as idolatry (the worship of images forbidden by the Second Commandment) in the Byzantine Empire, Emperor Leo III orders the removal of conspicuous images of religious worship.

This policy meets with violent opposition from within the Byzantine world as churches are defaced and great works of religious art destroyed in an effort to expunge idolatry from Christian society. This practice is also condemned by the Pope in Rome, leading to a schism between the Eastern and Western churches.

731: *Ecclesiastical History of the English People* published by Bede.

Pope Gregory III excommunicates all supporters of iconoclasm.

732: Battle of Tours. Charles Martel and his Frankish army defeat the Arab forces, halting their conquest of Europe.

733: The imperial court in China employs over

Adventures in Time: Battle of Tours

The Battle of Tours was a watershed event in the history of two major world religions: Islam and Christianity. Prior to their defeat by Charles "the Hammer," the Islamic armies had met little resistance in Europe, nor were they likely to encounter much, judging by their record of victories in North Africa and the Middle East.

Even the mighty Byzantine Empire, arguably one of three major Old World empires in existence at the time (along with China and Arabia), was often defeated by the Muslim armies, despite their superior technological achievements (especially the mysterious substance known as "Greek fire").

Charles Martel and his forces possessed no mysterious flamethrowing cannons like the Byzantines did, nor did he have the superior iron-working techniques and the powerful mounted forces of the Arabs. Yet at the end of the day it was Martel who would stand victorious, and the Arabs would never advance past the Pyrenees into Europe.

For the time traveler, any alterations to this event could reshape history into something unrecognizable, perhaps with Europe transformed into a collection of Muslim rather than Christian countries. With Europe added to the Arabic Empire along with North Africa and the Middle East, the sun might never have set on the golden age of Islam.

An Arabic victory at Tours could in one fell swoop remove Roman Catholicism, the Protestant movement it spawned, and one of history's greatest leaders, Charlemagne, from the pages of history.

17,000 civil servants.

739: Byzantine forces defeat Arabs at Akroinon.

741: Japanese government begins an ambitious program of Buddhist temple construction throughout the nation.

742: Constantinople briefly seized by opponents of iconoclasm. Emperor Constantine V storms the capital and regains control, then intensifies his persecution of image-worshippers.

Pepin III, the son of Charles Martel, has a son who is named after his father. This son will become even more famous than his father and grandfather and will be remembered as Charles the Great or Charlemagne.

745: Arabs and Chinese battle in the Lake Balkhash region.

An outbreak of bubonic plague in Constantinople spreads through Europe.

747-750: Civil war in Arabia as the Abbasid seek to overthrow the Umayyad.

750-1258: Abbasid Caliphate overthrows the Umayyad, establishing the second great Islamic dynasty.

Arabs begin crossing the Sahara in large numbers to trade in gold with Western African nations.

751: Chinese defeated by Arabs at Samarkand and the Talas River. Islamic influence spreads through Central Asia.

Ravenna, the last Byzantine stronghold in Italy, falls to the Lombards.

Pepin III takes the title of King. Although his ancestors were the de facto rulers of the Franks, they kept the title "Mayor of the Palace" while ruling from behind the scenes. Pepin goes to Pope Zacharias and asks if he should have the title of king, since he is the true ruler. The Pope agrees that Pepin should rule in name if he rules in fact. With the Pope's blessing, Pepin calls an assembly of the leading men in France, who vote him king. He is anointed by Archbishop Boniface. In calling himself king, Pepin founds the Carolingian Dynasty. In securing Papal consent for deposing King Childeric, Pepin establishes a powerful precedent which will at times lead to violence between the church and nobility of Europe.

754: Under attack by the Lombards, Pope Stephen II appeals to the Frankish King Pepin for aid. Not desiring war with the Franks, the Lombards withdraw.

756: In response to continued Lombard aggression against the Pope, Pepin invades Italy. He forces the Lombard king to turn over vast holdings of land in southern Italy to the Pope.

756-1031: Abd al-Rahman, an Umayyad prince, refuses to submit to the Abbasid Caliph; he declares his holdings in Spain, including the city of Cordoba, to be an independent emirate.

759: Franks recapture Narbonne, removing Arab forces from southern France.

762: Baghdad becomes the capital of the Abbasid Caliphate.

768: Pepin III adds Aquitaine to his growing kingdom, which he leaves to his sons Charlemagne and Carloman.

771: With the death of Carloman, Charlemagne is the sole king of the Frankish kingdom.

772-802: Charlemagne conquers Saxony and converts its inhabitants to Roman Catholicism, by the sword if necessary.

774: Pope Hadrian requests aid from Charlemagne against the Lombards. Charlemagne conquers northern Italy and adds it to his growing empire.

778: Charlemagne's forces invade Arabic Spain but meet heavy resistance. During a Basque ambush, Charlemagne's general Roland is killed.

780: Sufism, an Islamic form of ascetic mysticism, appears in the Islamic world.

786: Harun al-Rashid becomes caliph and converts Baghdad into a center of arts and learning.

789: First recorded Viking raid on England.

Charlemagne issues his "General Reminder," a decree admonishing all within his empire to do everything in their power to advance learning and education.

790: Earliest recorded Viking raids in Western Europe.

Charlemagne creates a special province or "march" to act as a buffer zone between his lands and those of Saracen Spain.

794-1185: Heian Period in Japan. Japanese culture begins to move gradually away from Chinese influence toward something uniquely Japanese. The Japanese capital moved from Nara to Kyoto.

800: Harun al-Rashid sends an embassy to the court of Charlemagne.

Charlemagne crowned Holy Roman Emperor by the Pope.

First use of bows and arrows in the Mississippi Valley of North America.

807: In an effort to foster friendship between their two empires. Harun al-Rashid agrees to Charlemagne's demand to secure the Christian holy places within his empire (especially Jerusalem) and guarantee the safety of Christian pilgrims.

809: With the death of Harun al-Rashid, the Abbasid empire descends into civil war between his sons al-Amin and al-Ma'mud.

811: After the deaths of two of his brothers, Louis is named Charlemagne's sole heir.

813: Al-Amin killed during a siege of Baghdad; his brother al-Ma'mud becomes caliph.

814: Louis the Pious succeeds Charlemagne as emperor.

832: Caliph al-Ma'mun builds a center of scholarship in Baghdad at which to translate ancient Greek manuscripts into Arabic.

833: Louis the Pious is deserted by his army and imprisoned by his son Lothair. Loyalists rescue Louis the following year and restore him as emperor.

840: Death of Louis the Pious. Lothair ascends to the throne of a troubled empire, spending much of his time putting down internal unrest.

841: Charles the Bald and Louis the German, the younger brothers of Lothair, defeat him in battle.

843: Treaty of Verdun divides Charlemagne's realm between the three heirs of Louis the Pious. Two of the new kingdoms correspond to modern-day France and Germany. The third kingdom consists of northern Italy and is ruled by Louis the German, who also takes the title of Holy Roman Emperor.

845: Vikings sack Paris and exact tribute from the Franks.

850: Beginnings of a second Arabic golden age. Scholars in Baghdad begin translating the works of the great Greek mathematicians and philosophers into Arabic. Arab navigators, aided by a new Arab invention, the astrolabe, travel to the south of China where they trade for rice, tea, porcelain and brandy.

In Africa, the Citadel of Great Zimbabwe is built.

In Central Europe, Yiddish begins to develop among Jews.

858-1160: Fujiwara clan comes to power in Japan.

860: City of Angkor Thom built in Cambodia.

866: Vikings take York, England.

868: First newspaper printed in China.

875: Charles the Bald crowned Holy Roman Emperor.

878-929: Arabic astronomer al-Battani advances the science of astronomy through his celestial observations.

889: Fragmentation of the Frankish empire into smaller political divisions in Western Europe.

900: Greenland discovered by Viking sailors.

The invention of the horse collar and harness in Europe greatly increases the pulling capacity of horses.

918: Foundation of the Kingdom of Koryo (Korea).

919: Henry I elected King of the Eastern Franks (a region hereafter called Germany).

928: The Cordoba emirate claims that his holdings are an independent caliphate, while the Abbasid caliphates of Baghdad fall more and more under the sway of the Persians.

936: Henry I of Germany is succeeded by his son Otto.

938: Mongols invade Northern China and establish a new capital at Yanqing (later known as Peking and then Beijing).

940-1185: Taira revolt in Japan, a long bloody civil war.

945: Persian Buwayhids capture Baghdad and begin to rule the Arab empire. The caliph is allowed to remain in power, but only as a figurehead.

955: Otto I of Germany defeats the Magyars and halts the expansion of Hungary.

959: England united under King Edgar.

960: Major artistic renaissance in China during painting, poetry and drama all reach new heights.

962: Otto I of Germany crowned Holy Roman Emperor; he spends his later years in Italy.

963: The *Book of the Fixed Stars,* an Arabic astronomical text by al-Sufi, contains the first description of a nebula.

969: Gunpowder rockets first used in combat in China.

970: Paper money introduced by the Chinese government.

974: Song Dynasty unites China, with its capital at Luoyang.

975: Arithmetical notation is in widespread use, having spread from Arabic lands.

977: Work begins in China on the *Great Encyclopedia of 1000 Volumes*.

980-983: Emperor Otto I begins an unsuccessful campaign against Arabs in Italy.

983: Canal locks invented in China during construction of the Grand Canal.

986: Erik the Red begins exploration of Greenland. Three trading colonies set up on Greenland.

987: Capetian Dynasty founded in France.

988: Vladimir of Kiev converts to Christianity. Founding of the Orthodox Church in Russia.

990: Al Hakim Mosque built in Cairo.

1000: Arabic merchants set up trading outposts in Ethiopia. Due to extensive trade with Africa, Islam begins to spread south of the Sahara.

Hungary and Poland recognized as Christian states by the Catholic Church. The Christian world—what is becoming known as "Christendom"—continues to grow as the dominant force in Europe while Islam's influence throughout the Middle East and Africa increases.

Leif Ericson, son of Erik the Red, sets sail from Greenland and discovers North America.

Cree Indians in North America trade furs for grain with southern tribes.

The Iroquois, an Indian tribe in the northeast of North America, live in agricultural villages growing beans and corn.

Culture of the Mississippians centered on the Grand Village.

Mayan civilization at its height in the Yucatan peninsula, with a distinctive style of art and architecture as well as sophisticated calendars and timekeeping based on astronomical observations.

First stone statues carved on Easter Island.

1001: *Tale of Genji*, the world's first novel, is written by Japanese noblewoman Murasaki Shikibu.

1002: Umayyad caliphate in Spain disintegrates into small warring states.

1005: Song China becomes subservient to the northern kingdom of Liao, with its capital at Beijing.

1008: Desecration of the Church of the Holy Sepulcher in Jerusalem by Muslims.

1010: The Chinese nobility begins binding the feet of girls.

Chess introduced to Europe from Asia.

Emergence of warrior bands, known as *bushidan,* in Japan.

1014: Henry II becomes Holy Roman Emperor.

1019: Arabs attack Narbonne in Southern France.

1021: Epidemic of St. Vitus' dance.

1027: Conrad II becomes Holy Roman Emperor.

1028: Saracen Castile conquered by Sancho III, King of Navarre.

1031: Beginnings of Christian re-conquest of Spain.

1037: Ferdinand I claims rulership of Christian Spain.

1040-1057: Macbeth murders Duncan and becomes King of Scotland.

1042-1066: Edward the Confessor ascends to throne of England.

1045: Movable type printing invented in China.

1050: Astrolabe in widespread use, having been adopted from its Arabic inventors.

Cahokia, with a population of over 10,000, is the center of Mississippian culture in North America. Settlements in the Mississippi valley begin to expand into true urban centers.

1052: Westminster Abbey built in London.

1057-1058: Malcolm briefly assumes the Scottish throne after murdering Macbeth.

1065: Earliest known stained glass at Augsburg cathedral, Germany.

1066: Battle of Hastings; Norman conquest of England.

1068-1135: Life of Henry I, eventual King of England.

1072: William I, King of England, invades Scotland.

Normans seize control of Amalfi and Palermo, granting them total control over central Mediterranean sea trade routes.

1073: Gregory VII becomes Pope; he declares the absolute authority of the papacy, even over Christian kings. This begins a dispute between European royalty (particularly the Holy Roman Emperor) and the papacy.

1077: Henry IV of Germany deposes the pope. When he and his subjects are subsequently excommunicated, his subjects rebel and Henry is forced to beg Pope Gregory VII for absolution—wearing sackcloth to regain his kingdom.

1079-1142: Life of Abelard, religious scholar and philosopher.

1081: Venetians negotiate a trade treaty with Constantinople.

1083-1084: Henry IV besieges Rome, forcing the installation of an antipope, Clement III. The Normans respond with a full-scale invasion of Italy which, while forcing Henry to withdraw, causes massive devastation.

1085: Christian forces in Spain conquer Toledo, the most powerful Saracen city yet re-conquered.

1086: The Domesday Book, a complete survey of English land holdings and agricultural resources, is completed for William I.

Minamoto clan assumes control of Japan.

1087: St. Paul's Cathedral in London burns down. Reconstruction begins almost immediately.

1090: The Shia Ismailis, better known to history as the Assassins, appear in Syria and emerge as a major force in the politics of northern Persia.

1091: Norman conquest of Sicily complete. Normans establish a powerful and cultured court on the island.

1094: The warlord El-Cid conquers Valencia in Spain for the Christians.

Clement III deposed; Urban II takes the papacy.

1095: Urban II calls for a crusade to the Holy Lands of Christianity, currently controlled by Muslims.

1096: First Crusade. Establishment of Latin kingdoms in the Levant. Persecution of Jews by Christians increases as well.

The introduction of cast iron to Europe is less than a decade away, marking the beginnings of PL 2 technology in Europe (China has been in PL 2 since approximately 500 BCE).

1098: Crusaders take Antioch.

1099: Crusaders take Jerusalem and rebuild the Church of Holy Sepulcher.

1100: Foundation of a Frankish feudal Kingdom of Jerusalem by crusaders.

As a reward for providing free transportation to the crusaders, Genoa, Pisa and Venice are granted exclusive trading privileges with the Latin kingdoms of the Middle East.

Publication of the *Song of Roland*, earliest of the epic poems about Charlemagne.

Craftsmen's guilds begin to spread throughout European towns.

The Anasazi of southwestern North America build fortified cliff dwellings in Mesa Verde and Chaco Canyon.

1100-1135: Reign of Henry I as King of England.

1100-1600: Rise to prominence of Zimbabwe in South Africa, centered on the stone city of Great Zimbabwe.

1109: Crusaders take Tripoli.

1109-1113: War between England and France.

1110: Earliest performance of a miracle play in England. This is one of three medieval European dramatic forms, the other two being the mystery play and the morality play.

1113: Foundation of the Knights of the Hospital of St. John, better known as the Hospitallers, to care for pilgrims traveling to the Holy Land.

1118: Foundation of the Knights of the Temple of Solomon of Jerusalem (better known as the Knights Templar) to protect pilgrims traveling to the Holy Land.

1120: Playing cards invented in China.

1123: A Venetian fleet fighting in support of the crusaders defeats a Saracen fleet off the coast of Ascalon, Egypt.

1124: Port of Tyre captured by crusaders.

1125: Appearance of traveling musicians known as troubadours in France.

1127: Seljuk governors of Syria and Mesopotamia begin a counter-offensive against the crusaders.

1128: A Church council approves the Knights Templar.

1139: Civil war in England over a disputed royal succession.

1147-1148: A Second Crusade is attempted, beginning with the siege of Damascus. This crusade ends in humiliating defeat and the crusaders return home.

1150: University founded in Paris.

1151: Henry II becomes Count of Anjou in France.

1152: Eleanor of Aquitaine's marriage to Louis VII is annulled and she marries Henry II.

In Angkor Wat, the Khmer capital, the largest and most magnificent Hindu temple in Asia is constructed.

1154: Henry II becomes King of England.

1162-1227: Life of Genghis Khan.

1163-1169: Amalric, King of Jerusalem, makes five attempts to capture Egypt.

1167: Oxford University founded.

1169: Saladin becomes Vizier of Cairo.

1170: Thomas Becket, the Archbishop of Canterbury, is killed by four knights at the order of Henry II, the culmination of a long and tumultuous feud between the two.

Lancelot, a poem of courtly love by Chrétien de Troy, is first published.

1171: Saladin overthrows the caliphate of Egypt. As the new Caliph, he restores Sunni Islam to his realm.

King Louis VII of France grants the river-merchants' guild a monopoly on river trade.

1174: Thirteen-year-old Baldwin IV succeeds Amalric as King of Jerusalem.

Nur al-Din is succeeded as ruler of the Saracens by an 11-year-old. Saladin moves into the void created by a struggle for power and occupies Damascus.

Construction of the "leaning tower" in Pisa.

1177: Saladin is defeated by Baldwin at Ramleh.

1179: The ruthless and ambitious Mayapan King Hunac Ceel sacks and burns the Mayan city of Chichen Itza.

1180: Angkor empire in Cambodia at its height.

1183: Saladin becomes Sultan of Syria.

1185-1333: Kamakura Shogunate in Japan.

1187-1188: Saladin recaptures Jerusalem and inflicts massive casualties on crusader armies. The crusader states are soon reduced to small coastal strongholds.

1189-1199: Reign of King Richard Lion-heart. He spends only five years of his reign in England (1194-1199). Of his ten years in power, three are spent fighting Saladin in the Third Crusade and two as a prisoner of war awaiting ransom.

1189-1192: Third Crusade, during which Richard the Lion-hearted of England, with the help of the Knights Templar and the Hospitallers, defeats Saladin on multiple occasions. Rather than attempt to reform the Latin states, Richard and Saladin conclude a treaty that leaves Jerusalem under Saladin's control but allows unarmed pilgrims to safely visit the city.

1190: Teutonic Knights established for the defense of the Holy Land.

1191: Zen Buddhism founded in Japan.

1192-1194: Richard the Lion-hearted held captive by Duke Leopold until a sum of 150,000 marks is paid for his release.

1193: The death of Saladin plunges his empire into civil war. Of Saladin's vast personal fortune, only 1 gold piece and 47 silver pieces remain, the rest having been given to the poor.

1199-1216: Reign of King John of England.

1200: Paris undergoes construction to improve the city. The undertaking includes paving the streets for the first time.

1201: Tartars are crushed by Temujin.

King Phillip of France confiscates England's French holdings but his army is crushed by English forces under King John, who restores the lands to British rule.

1203: Brittany revolts against King John. By the following year, all of Brittany except the Channel Islands is under French control.

1204: Death of Maimonides, Jewish lawyer and philosopher in Cairo.

1206: Mongols united by Temujin, who is proclaimed Genghis Khan. He issues the *Great Yasa*, the Mongol law code, and embarks on a campaign of conquest in Central Asia.

1207-1273: Life of the famed Sufi poet and mystic Jalal ad-Din ar-Rumi, who reaches a state of transcendent ecstasy by performing a circular dance during which he composes his poetry and gains insight into the nature of God and the universe. Because of this curious practice, he and his followers are known as "whirling dervishes."

1208: Genghis Khan conquers Turkestan.

1209: Pope Innocent III excommunicates King John of England over a disputed nomination for the Archbishop of Canterbury.

Cambridge University founded by unhappy Oxford scholars.

1210: Pope Innocent III approves the formation of the Franciscan Friars, led by St. Francis of Assisi.

1211: Mongols begin conquest of Northern China.

1212: The Children's Crusade, led by 12-year-old Stephen of Cloyes, leaves for Jerusalem from the south of France.

1213: Pope Innocent III calls for a fifth crusade.

1214-1294: Life of Roger Bacon, English philosopher and scientist.

1215: King John of England signs the *Magna Carta*.

Mongols capture Beijing.

1216: King John succeeded as King of England by his nine-year-old son, Henry.

1217: Crusaders arrive in Palestine for the Fifth Crusade.

1218: After attacks to the south, Korea declares itself a vassal state to Genghis Khan's Mongol Empire. Mongols conquer Persia.

1219: In Egypt, the port city of Damietta falls to the crusaders.

1220: Fredrick II crowned Holy Roman Emperor after agreeing to assist the Fifth Crusade.

First chapter of Dominican friars.

1221: Saladin's successor Khalil offers the crusaders Jerusalem in return for the port of Damietta.

1223: Mongols invade Russia.

1225: Fredrick II crowned King of Jerusalem.

1226-1502: The Golden Horde emerges as a powerful Mongol nation in southern Russia.

1227: Death of Genghis Khan.

Jousting begins to grow in popularity as a sport among European aristocrats.

1233: Inquisition established in Toulouse.

1235: Mongols construct the walled city of Karakorum, possibly the empire's first fixed capital.

1236: Mongols issue paper money.

1238: Mongols invade Russia, capturing Vladimir, Yaroslavl and Rostov.

1239: Muslims from Central Asia entrusted to collect taxes in Mongol-controlled China.

1240: An anonymous author writes *The Secret History of the Mongols,* which relates the story of Genghis Khan.

Mongols capture Kiev.

1245: The Assassins carry out spectacular murders in their crusade to foment revolt against Islamic orthodoxy. Their headquarters at this time is in Jahal Ansariyah, Syria.

1250: The Mali Empire rises to prominence, taking over Saharan trade in gold, salt and other precious commodities.

1255: Catholic Inquisition authorizes use of torture in cases of heresy.

1258: Mongols sack Baghdad. Fall of the Abbasid Caliphate.

Rebellious English lords, led by Simon de Montfort, extract a series of concessions of royal power from Henry III including the establishment of a parliament, which will meet three times yearly.

1260: Civil war in the Mongol Empire in which Kublai Khan and his brother, the grandsons of Genghis Khan, struggle for rulership.

1264: The Mongol civil war ends with Kublai Khan proclaimed leader of the Golden Horde.

1266: Kublai establishes a new capital in Beijing, which the Mongols call Khanbaliq.

1271-1295: Venetian explorer Marco Polo travels throughout Asia, providing vivid accounts of China and the court of Kublai Khan.

1274: First attempted invasion of Japan by the Mongol Empire fails when the Mongol ships are destroyed in a typhoon.

1275: Marco Polo visits Kublai Khan's summer palace at Xanadu.

1281: Second Mongol invasion of Japan fails when the majority of the Mongol fleet is again sunk by foul weather. This leads to the Japanese legends of the *kamikaze* or "divine wind," which they believe is the gods' refusal to allow an invasion of the holy soil of Japan.

1284: Rebuilding of St. Paul's Cathedral in London

Adventures in Time: Marco Polo and Kublai Khan

In early history, traveling through Asia was often a dangerous undertaking, especially for a foreigner. But by the 13th century, such an undertaking was no longer so difficult. The civil war that had engulfed the Mongol Empire was over and Kublai Khan, the son of Genghis, now enforced such a ruthless peace throughout Asia that it was said a virgin with a pot of gold on her head could cross from one end of Asia to the other without incident.

Into this environment came a brash young explorer, a Venetian named Marco Polo. He became a favorite of Kublai Khan and was sent on diplomatic missions throughout India and Persia. Because of the stability imposed on the region and the reluctance of anyone to harm an envoy of the khan, Marco Polo was allowed to travel throughout Asia for over 20 years. His vivid accounts of the many places he visited and of the court of Kublai Khan spurred further exploration of Asia by the west.

For a time traveler, perhaps the "mother lode" of exploration would be to accompany Polo on his travels. Of course the explorer would have to take care not to impose himself on the expedition in any way, lest he change the history he wishes to record.

For those seeking to change history, being a part of Polo's expedition would provide the perfect cover for a Herculean task: the assassination of Kublai Khan. This would likely render the histories of China, India and Japan unrecognizable.

completed.

First gold ducats minted in Venice.

1290: Jews expelled from England.

1292: Marco Polo escorts a Mongol princess to Hormuz.

1300-1924: Ottoman Empire founded by Osman I.

1303: An earthquake strikes Alexandria, severely damaging the legendary Lighthouse there.

Mongol army defeated in its attempt to conquer Damascus.

English King Edward I completes his conquest of Scotland.

1304: Execution of Scottish nationalist leader William Wallace. Beginning of the Scottish revolt led by Robert Bruce.

1306: Hospitallers conquer the island of Rhodes and make it their headquarters.

1307: Dante begins writing his *Divine Comedy*.

1312: Knights Templar accused of heresy and dissolved by Papal decree. Their property is given to the Hospitallers by the church.

1312-1337: Reign of Mansa Musa, most celebrated King of the Mali Empire. During his reign, Mali is the source of over half the world's gold and becomes famous for his generosity, his patronship of Islam, and his support for education and learning.

1313: First European cannon designed by Berthold Schwarz.

1314: English defeated by the Scottish at Bannockburn.

1315: Habsburgs defeated by the Swiss at the Battle of Morgarten. Although struggles will continue for the next two centuries, this victory marks the beginning of true Swiss independence. It is also where the exploits of the fictional marksman William Tell are set.

1317: Alchemy outlawed by the Roman Catholic Church.

1321: Death of Italian poet Dante.

1322: British parliament decrees that all laws must be approved by parliament and the king.

1323: A second earthquake strikes Alexandria, rendering the Lighthouse building unusable.

1324: Mansa Musa undertakes a pilgrimage to Mecca. He is so generous with his vast personal wealth during this journey that his travels destabilize the economies of entire countries for decades.

1325: Mali captures Timbuktu; its empire controls vast areas of the upper Niger region.

Japanese develop No drama.

Settlement of Tenochtitlan, center of the Aztec Empire.

1327: Murder of British King Edward II.

1330: The English longbow is the most powerful handheld weapon in the world.

1332: British parliament divided into two houses.

1336-1573: Ashikaga Shogunate rules Japan.

1337-1453: Hundred Years' War between England and France.

1338: First cannons mounted on ships.

1340: Black Death (also known as the bubonic plague) breaks out in Asia.

1347: Black Death reaches Baghdad and Constantinople. The Black Death also touches Europe for the first time this year, striking the city of Kaffa.

Boccacchio begins writing his *Decameron.*

1348: Black Death reported in Britain, France, Spain, Greece and North Africa. In some regions up to one-third of the population is killed, with the death toll reaching a staggering 20 million. Europe, which had been suffering from over-population prior to the plague, is now underpopulated and the economic damage alone will take over a century to reverse.

1350: *Sir Gawaine and the Green Knight,* one of the greatest masterpieces of Middle English literature, is composed by an unknown author around this time.

1351: Tennis becomes a popular sport in England.

1352: Black Death reaches Russia.

1353: Black Death returns to China.

1355: British King Edward III and his son Edward, popularly known as the "Black Prince of Wales," step up their prosecution of war with France, scoring several victories.

1356: British defeat the French at the Battle of Poitiers.

1360: The franc is introduced in France.

1361: Black Death returns to England.

1365: Aztec warriors employed as mercenaries by Atzcapotzalco.

1368-1644: Ming Dynasty assumes control of China, taking control of Beijing and driving out the Mongols who had ruled there.

1369: Geoffrey Chaucer writes the *Book of the Duchess*.

1370: Robin Hood emerges as a popular folk hero in England.

1378: The Great Schism: rival popes in Rome and Avignon.

1379: Introduction of the Poll Tax in England to help fund the Hundred Years' War.

1380: John Wycliffe translates the Bible into English for the first time.

1381: Black Death returns to Egypt.

1386: Geoffrey Chaucer begins writing the *Canterbury Tales*.

1387: Medici Bank founded in Florence.

1396: Richard II marries Isabelle of France, sealing a 28-year peace treaty marking a lull in the Hundred Years' War.

1400: Richard II assassinated, Henry IV assumes the throne.

Portuguese develop the three-masted caravel, which quickly becomes the dominant ship for long-distance trade.

1404: Ming China begins to trade with Japan.

1410: Italian inventor Brunelleschi invents the mechanical clock using coiled springs.

The Incan Empire begins to expand and become more socially stratified.

1413-1422: Reign of Henry V as King of England.

1413: Henry V ascends to English throne. He begins building a fleet, marking a return to armed hostilities in the Hundred Years' War.

1414: Medici become bankers for the papacy.

1415: Battle of Agincourt. Henry V achieves a major victory over France largely due to the supremacy of the English longbow.

1419: Henry V captures Rouen and controls most of northern France.

Portuguese Prince Henry establishes his school of navigation in Sagres.

1420: Ming capital moved to Beijing, the largest city in the world.

Henry V marries Catherine of France to seal the Treaty of Troyes.

1421: The patent is introduced in Italy.

1429: Joan of Arc rises to prominence, inspiring French troops in Orleans to break the British siege. She leads a French reversal of English gains during the reign of Henry V.

1430: Plate armor begins to replace chain mail.

1431: Joan of Arc convicted of heresy and burned at the stake.

1441: African slaves sold to Portugal.

1444: Portuguese reach Cape Verde.

1445: Johannes Gutenberg introduces movable type printing in Germany.

1450: Concave lens glasses invented to correct near-sightedness.

Gold used for tooth fillings.

1452-1519: Life of Leonardo da Vinci.

1455-1485: War of the Roses in Britain.

1456-1477: Reign of Vlad the Impaler in Romania.

1462-1505: Reign of Ivan III, commonly known as Ivan the Great, in Russia,.

1467-1477: Warring States period in Japan.

1469: Marriage of Ferdinand II of Aragon and Isabella of Castile. Their kingdoms are merged to form the Kingdom of Spain.

1470: Portuguese trading on the Gold Coast of Africa.

1476: William Caxton begins printing in London.

1476-1541: Life of Francisco Pizarro.

1480: The last remnants of the Lighthouse of Alexandria on the island of Pharos are removed when Qaitbay, the Sultan ruling Egypt, builds a fortress using the marble and stone remnants of the Lighthouse.

Ferdinand and Isabella authorize the church to begin an Inquisition to investigate heresy in Spain.

Leonardo da Vinci begins conducting experiments.

1480-1521: Life of Ferdinand Magellan.

1483-1546: Life of Martin Luther.

1485-1547: Life of Hernan Cortes.

1486: Christopher Columbus convinces Queen Isabella to finance his expedition to discover a western route to the Indies.

The *Malleus Maleficarum,* an encyclopedia of witchcraft, indicates that the burning of witches at the stake is becoming more common, and asserts that the Catholic Church endorses the practice.

1491-1556: Life of St. Ignatius of Loyola, founder of the Jesuits.

1492: Christopher Columbus explores the Bahamas, Cuba and Hispaniola.

1495: Columbus orders the natives of Hispaniola to pay a tribute to the King of Spain.

1496: Columbus establishes the first Spanish settlement in the Western hemisphere.

1498: Vasco de Gama discovers a sea route to India by sailing around the Cape of Good Hope.

During his third voyage to the "New World," Columbus becomes the first European to sight South America.

1499: Amerigo Vespucci explores South America.

Columbus' poor administration of Hispaniola causes the natives as well as the Spanish settlers there to revolt.

1500: During a voyage to India, Pedro Alvares Cabral makes sight of Brazil. He detours to Brazil, then returns to his original route and continues on to India.

Pinzon discovers the mouth of the Amazon.

1502: Beginning of the reign of Montezuma II, last Aztec emperor.

Peter Heinlein, a German locksmith, invents the pocketwatch.

1507: A world map by Waldseemuller gives the name America to the New World for the first time, in honor of Amerigo Vespucci.

1508: Pope Julius II grants Spain the right to build churches in the New World.

Pope Julius II commissions Michelangelo to paint the ceiling of the Sistine Chapel.

1509-1547: Reign of Henry VIII as King of England.

1509: Spanish found San Juan, Puerto Rico, and begin settling mainland Central America.

First Portuguese settlements in Brazil.

1510: Japanese pirates are the terror of the South China seas.

1513: Niccolo Machiavelli writes *The Prince*.

Ponce de Leon explores Florida.

1514: Astronomer Nicolaus Copernicus theorizes that the sun, not the Earth, is the center of the solar system.

Natives in Spanish-held areas of the New World are ordered to convert to Christianity or suffer enslavement or death.

1515: Barbary pirates establish their fleet at Algiers, challenging Spanish control of the seas in the area.

City of Havana founded in Cuba by the Spanish.

1517: Cordoba explores Mexico.

1519: Hernan Cortes lands at Veracruz and marches on the Aztec capital of Tenochtitlan with his force of 500 men. Montezuma surrenders without conflict.

1520: Death of Montezuma.

Portuguese explorer Ferdinand Magellan winters in South America, preparing to embark on a planned circumnavigation of the world. He discovers the Straits of Magellan.

1522: Cortes is named ruler of New Spain (which will eventually include Central America, Mexico and the southwest United States). Under his direction the Spanish build a new capital city, Mexico City, on the ruins of the Aztec city of Tenochtitlan.

1525: Albert von Brandenburg declares Prussia to be a Protestant state.

1526: Dominican friars arrive in Mexico to begin converting the populace to Christianity.

1529: Pope refuses to annul Henry VIII's marriage to Catherine of Aragon.

1533: Henry VIII marries Anne Boleyn and is excommunicated.

Francisco Pizarro captures the Incan capital of Cusco and executes the Incan King Atahualpa.

1534: Henry VIII declares England a Protestant state.

1535: Francisco Pizarro founds the city of Lima.

1536: Henry VIII merges Wales and England with the Act of Union.

Henry VIII crushes a Catholic rebellion.

Anne Boleyn, Queen of England, is beheaded.

1536-1540: Over 550 Catholic monasteries in England are dissolved, their lands and possessions becoming the property of Henry VIII.

1539-1543: Hernando de Soto leads an expedition exploring the southeastern regions of North America.

1539: First printing press in the New World, in Mexico City.

1541: Hernando de Soto reaches the Mississippi River.

Jesuit missionary Francis Xavier begins preaching Christianity in Mozambique.

1542: The Spanish explorer Juan Rodriguez Cabrillo is the first European in California.

Francisco de Orellana, another Spanish explorer, sails the length of the Amazon.

1543: A Portuguese ship wrecks off the coast of Japan.

1544: Fifty-two witches are burned in Denmark.

1545: Discovery of a "mountain of silver" in the Andes by Spanish explorers. One of the largest silver mines in the world is opened at Potosi, and silver is soon the largest Spanish export from South America.

1547: Michelangelo is commissioned to build St. Peter's Basilica in Rome.

1547-1553: Reign of King Edward VI of England. Edward VI is the son of Henry VIII and Jane Seymour, third wife of King Henry VIII.

1547-1584: Reign of Ivan IV, the first Russian ruler to assume the title of Tsar (a Russian translation of the word Caesar). Ivan IV is known in the west as Ivan the Terrible. Russia's first truly autocratic ruler, he terrorizes the populace using a secret police,

Adventures in Time: Queen Elizabeth

One of the most beloved and successful monarchs in history, Queen Elizabeth I (also known as the "Virgin Queen," "Gloriana" and "Good Queen Bess") transformed England from a minor military and economic power to one that outshone the great nations of Europe despite its small size.

Elizabeth's reign saw a rise in English exploratory achievements. Francis Drake became the first Englishman to circumnavigate the globe, and Sir Walter Raleigh initiated the English colonization of the New World. The British colony (and later American state) Virginia was named in honor of Elizabeth, the "virgin queen." On the economic front, Elizabeth granted several important economic charters, the most important of which was to the British East India Company.

Her reign is, if anything, even better known for its cultural achievements, with William Shakespeare, Edmund Spenser, Christopher Marlowe, Ben Jonson and countless others making their cultural contributions during this period. This period also saw the greatest leap forward in drama since the time of the Greater Dionysia some two millennia earlier.

For the historian, this period is a chance to witness the golden age of a culture of people confident that they can achieve *anything* through military, scientific, and cultural superiority. These virtues are still present in English society centuries into the future, as seen in England's defiance of the Nazi war machine alone prior to America's entry into World War II.

Of course for the traveler wishing to leave his mark on history, these cultural traits might be undesirable. Would an England without a "Good Queen Bess" be able to follow a second Queen—Victoria—to forge an empire on which the sun would never set? Would a nation without the cultural legacy of Shakespeare be able to maintain its identity as bombs and rockets rained down on it from the European mainland?

Accomplishments require stability. Only a prosperous people can look to other lands or within themselves to create great works of art. An England ill-led might never achieve greatness, depriving it of the self-confidence it would need later in history.

a tactic that has unfortunately been adopted by numerous Russian rulers since.

1548: Jesuits send missionaries to the Congo.

1549: Jesuit missionary Francis Xavier begins preaching Christianity in Japan.

Henry VIII passes the Act of Uniformity to eliminate the use of alternate (read: Catholic) bibles in English churches. The Protestant Book of Common Prayer is to be used in all English churches.

Portuguese capital of Bahia founded in Brazil.

1550: Slaves are now a more valuable African export than gold.

1552: Jesuit missionary Francis Xavier dies of exhaustion in Canton, China.

1553-1558: Reign of British Queen Mary I. A Catholic, Mary restores Catholic bishops to their posts throughout England, exacerbating the already tense religious situation there. So many are executed for protesting this return to Catholicism during her reign that she was (and still is) popularly known as Bloody Mary.

1558-1603: Reign of British Queen Elizabeth I.

1560: Portuguese begin cultivating sugarcane in Brazil.

1562: Slaves begin to be shipped from Africa to the New World.

1563: Approximately one person in four dies in London from an outbreak of the Black Death.

1564-1593: Life of Christopher Marlowe.

1564-1616: Life of William Shakespeare.

1565: Ivan the Terrible begins his reign of terror in Russia.

Spanish found St. Augustine, the first European colony in what will one day be the United States.

The Portuguese found the city of Rio de Janeiro.

1567: Oda Nobunaga begins to unify Japan under his rule, bringing about an end of the Warring States period.

1570: The area around the Potosi silver mines has a population of 120,000, making it as large as Paris.

Portuguese ships are granted the right to port and trade from the fishing village of Nagasaki in Japan.

Five American Indian tribes join together to form the Iroquois Confederacy based in modern-day New York State. Member nations are the Seneca, Cayuga, Onondaga, Oneida and Mohawk tribes.

1571: Pope Pious V orders the Inquisition to draft a list of books that should be banned for heretical content.

1572: British sea captain Francis Drake begins to attack Spanish ports and shipping in the Caribbean.

1572-1637: Life of Ben Jonson.

1577-1580: Francis Drake circumnavigates the globe.

1579: During his voyage around the globe Francis Drake discovers San Francisco Bay, which he claims for the British. He calls the land beyond the bay "New Albion."

1582: Oda Nobunaga is assassinated by one of his retainers, a ronin named Akechi Mitsuhide.

1583-1584: The British establish colonies in Newfoundland and Virginia in North America.

1586: Francis Drake begins another wave of privateer attacks, forcing the city of Santo Domingo to pay a ransom, and sacks the city of Cartagena in Columbia.

1587: Toyotomi Hideyoshi, one of Nobunaga's generals, avenges his master's murder, then continues the process of unifying the country under one rule.

The worship of Christianity is forbidden in Japan; Christians are ordered to leave the country.

Mary, Queen of Scots (not to be confused with Queen Mary I) is executed by order of Queen Elizabeth for conspiring to assist a Spanish invasion of England and to assassinate the queen.

1589: *Henry VI Parts 1, 2* and *3* are produced on the London stage, the first plays credited to William

Adventures in Time: El Dorado

The New World was a land of plenty, not only in arable land but also in precious metals. Finds like the Potosi silver mine and the wealth of the conquered Aztecs left Europeans hungry for the next "big score." Soon, an ancient South American legend about a land with so much gold that its king was dusted in it daily spurred explorers' imaginations, inspiring them to venture further into this new, uncharted land.

From the 1500s well into the 17th century, explorers scoured South America looking for the lost city of gold, to no avail. To the time traveler motivated by money, this provides a unique opportunity even in campaigns where changes to the timeline are easy to produce. Since El Dorado was never discovered, a time traveler could use any means at his disposal to find the city and secure its treasure for himself. So long as no evidence was left behind for Spanish explorers, history would be left unchanged.

Since the time traveler could follow legends and charts not only through space but time (moving backwards or forwards in the time stream to whenever the city was easiest to find), and since a futuristic explorer would have the best equipment at his disposal, he could make faster, more thorough surveys of the jungle interior than his Spanish counterparts.

All of this assumes the city exists at all. It could be a legend that draws time travelers on dangerous and fruitless explorations of the jungle—just as it did the more primitive Spaniards, drawn to their destruction by a lust for riches.

Shakespeare.

1590: Hideyoshi completes the unification of Japan and establishes the capital of his Shogunate in Edo (modern Tokyo).

1592: Japanese invade Korea.

1592: Shakespeare's *Richard III* and *The Comedy of Errors* written.

Thermometer invented by Galileo.

1593: Shakespeare's *Titus Andronicus* and *The Taming of the Shrew*.

1594: Shakespeare's *Two Gentlemen of Verona*, *Love's Labor's Lost* and *Romeo and Juliet*.

1595: Shakespeare's *Richard II* and *A Midsummer Night's Dream*.

1596: Shakespeare's *King John* and *The Merchant of Venice*.

1597: Hideyoshi orders 26 Christians crucified outside Nagasaki.

Dutch astronomer Tycho Brahe has recorded 777 stars.

Shakespeare's *Henry IV Parts 1 and 2*.

1598: Death of Toyotomi Hideyoshi.

Shakespeare's *Merry Wives of Windsor*, *Much Ado About Nothing*, and *Henry V*.

1599: Shakespeare's *Julius Caesar* and *As You Like It*.

1600: After another round of civil war, Tokugawa Ieyasu emerges as the Shogun of Japan.

British East India Company founded.

Shakespeare's *Hamlet*.

1600-1868: Reign of Tokugawa Shogunate.

1601: Shakespeare's *Twelfth Night* and *Troilus and Cressida*.

1602: Shakespeare's *All's Well That Ends Well*.

Foundation of the Dutch East India Company.

1603: Death of British Queen Elizabeth I. She is succeeded by James VI of Scotland who unites the realms of Scotland and England under his rule.

Tokugawa builds a massive castle in Edo

Beginnings of Kabuki, a new Japanese dramatic tradition.

1604: Shakespeare's *Measure for Measure* and *Othello*.

1605: Flintlock musket invented (this officially begins PL 3 for weaponry and armor).

Shakespeare's *King Lear* and *Macbeth*.

Spanish classic *Don Quixote de la Mancha*, by Miguel Cervantes.

1606: Shakespeare's *Anthony and Cleopatra*.

Continent of Australia discovered by Portuguese explorers.

1607: Shakespeare's *Coriolanus* and *Timon of Athens*.

Jamestown, Virginia founded by John Smith. Later this same year Smith is captured by Chief Powhatan, but is saved by the pleadings of Powhatan's daughter Pocahontas.

1608: Telescope invented.

Shakespeare's *Pericles*.

1609: *Astronomia Nova,* in which Kepler's laws of planetary motion are set forth, is written.

Shakespeare's *Cymbeline*.

1610: Shakespeare's *Winter's Tale*.

1611: Shakespeare's *The Tempest*.

A new edition of the Bible is authorized by King James. This edition is still in print today, and still bears the name of King James.

1612: The British East India Company begins to build factories in India.

Shakespeare's *Henry VIII* and *Two Noble Kinsmen*.

Virginia colonies begin tobacco cultivation.

Over 10,000 African slaves are being exported to the New World yearly by the Portuguese alone.

1613: Systematic colonization of Northern Ireland by Protestants begins.

1614: First logarithmic tables.

Pocahontas marries Virginia settler John Rolfe; her name is changed to Rebecca Rolfe.

1616: Galileo is arrested by the Inquisition.

Death of William Shakespeare.

Death of Miguel Cervantes.

1618: French secretary of state Richelieu is ordered into exile.

Smallpox epidemic in New England.

1619: First African slaves exported to the British colony at Jamestown, Virginia.

1620: The British ship *Mayflower* sets sail for Virginia. Blown off course by foul weather, the settlers decide to abandon their original plans and settle where they are, founding the town of Plymouth and forming a government under the Mayflower Compact. The natives, who are on friendly terms with the colonists, call them yengeeze—possibly an attempt by non-English speakers to say the word "English." The settlers begin using the word themselves and over time these northern settlers are commonly referred to as "yankees."

1621: With half their number dead of smallpox, the Plymouth colonists celebrate a festival of thanksgiving, a holiday still celebrated centuries later in honor of their pioneering spirit.

1623: Establishment of New Hampshire colony in New England.

1626: Salem is selected as the capital of the Massachusetts colony.

1630: *Dialogue on the World Systems*, Galileo's treatise on the movement of the Earth around the sun, is written.

Foundation of the Massachusetts Bay Colony. The colonial capital is moved from Salem to Boston.

1633: Galileo recants his heliocentric writings before the Inquisition to avoid a death sentence.

1634: Lord Baltimore founds the British colony of Maryland.

1635: British found the colony of Connecticut.

1636: Puritan John Harvard establishes the first university in the New World in Cambridge,

Massachusetts.

British colony of Rhode Island founded.

1637: Connecticut colonists kill 500 Pequot Indians as part of a growing conflict between the settlers and the Pequot tribesmen.

1642: After being reprimanded by Parliament, British King Charles declares war on his own parliament, sparking a civil war. The war is fought between those loyal to the King, known as the "Cavaliers," and those loyal to parliament, known as the "Roundheads."

French colonists found Montreal.

1644: Oliver Cromwell, leader of the Roundheads, crushes the Cavaliers at the Battle of Marston Moor.

1644-1646: Conflict between Virginia colonists and native tribesmen. Chief Necotowance is forced to sue for peace and formally acknowledges that all Native American lands are held by the courtesy of the King of England.

1648: King Charles of Britain gains the support of Scotland in his struggle against the Roundheads; Wales, Kent and Essex all rise up in support of the king.

1649: Capture and execution of Charles I by the Roundheads.

1650: Cromwell's army defeats the Scottish at the Battle of Dunbar.

Dutch seize numerous Portuguese ports and become the dominant trading power in Southeast Asia.

1651: Cromwell defeats the royalists at the Battle of Worcester; Charles II flees to France.

1653: Taj Mahal completed.

1653-1658: Oliver Cromwell rules England as Lord Protector.

1654: An Irish archbishop calculates that the creation of the Earth took place in the year 4004 BCE.

1656: Virginia colony extends suffrage to all free men regardless of religion.

1657: Christiaan Huygens, a Dutch scientist, invents the pendulum clock.

1659: War breaks out between Dutch settlers and African tribesmen. The Dutch have allowed their soldiers to set up private farms as *boers* on African land.

1660: Charles II restored to power in England.

1661-1715: Reign of French King Louis XIV.

1662: The Royal Adventurers are given a charter by Charles II to the African trade. One of the chief enterprises of this company is a rapid expansion of the slave trade.

1664: British seize the Dutch colony of New Amsterdam, which they rename New York.

Moliere's play *Tartuffe* marks a golden age of French satiric comedy.

1665: New Jersey colony founded.

Black Death kills 100,000 of London's 400,000 residents.

1666: The Great Fire of London begins in a bakery and soon consumes almost 14,000 buildings over the course of four days.

1667: Hand grenade invented in France.

Virginia colony decrees that slaves cannot gain their freedom by converting to Christianity.

1668: Reflecting telescope invented by Isaac Newton.

1669: Racine's *Britannicus* marks a leap forward for French tragedy.

Ottoman ambassador to Paris introduces coffee to Europe.

1670: British colony of South Carolina founded.

Dom Perignon invents champagne.

British privateer Henry Morgan sacks Panama.

1673: Jolliet and Marquette explore the Mississippi and Illinois rivers.

1675: Haiku poetry developed in Japan.

1679: Habeas Corpus introduced in the British courts, making it illegal to detain anyone without a court hearing.

1682: British astronomer Edmund Halley observes the comet that bears his name, Halley's Comet.

Beginnings of Spanish colonization of Texas.

La Salle claims the coastal regions surrounding the mouth of the Mississippi River for France, calling the area Louisiana.

1682-1725: Reign of Russian Tsar Peter the Great, who expands the size of Russia, turns it into a world power, and moves the capital from Moscow to St. Petersburg.

1685-1688: Reign of British King James II, who attempts to revert the country back to Catholicism.

1685-1750: Life of Johann Sebastian Bach.

1685-1759: Life of George Frideric Handel.

1686: For the first time a war is fought on *both* sides of the Atlantic; the Iroquois and English fight against the French in America as a counterpart to the war between England and France in Europe.

1687: Isaac Newton publishes *Principia Mathematica,* which includes a full explanation of the law of gravity.

1688: James II flees to France. He attempts to invade in 1689 but is killed in battle by William of Orange.

The Mennonites, a Protestant religious sect in America, condemn the practice of slavery.

Beginning of a golden age of Japanese arts, especially the kabuki puppet theater and ukiyo-e painting.

1689-1694: After decreeing that James II has fled England, parliament calls Queen Mary II and her co-ruler of Scotland, William of Orange, to assume the crown of England as well. The two rule England and Scotland as co-regents.

1690: John Locke publishes *Essays Concerning Human Understanding,* which contains the theories of empiricism and liberal democracy.

Johann Christoph Denner invents the clarinet in Germany.

1692: Salem Witch Trials in Salem, Massachusetts.

1694-1702: Following the death of Mary II, William of Orange rules England alone for the rest of his life.

1697-1732: Russia conquers Kamchatka and Siberia.

1698: Isaac Newton calculates the speed of sound.

London Stock Exchange founded.

1700: Golden age of German baroque music, including the musical accomplishments of Handel and Bach.

British pirates establish a base at Madagascar.

Boston emerges as the primary entry port for American slaves.

Judge Samuel Sewall publishes *The Selling of Joseph,* an appeal for the abolition of slavery in America.

1702: Serfdom abolished in Denmark by royal decree of Fredrick IV.

The Daily Courant, the first daily newspaper in London, begins publication.

1702-1713: War between French and English colonists in North America.

1703: St. Petersburg founded in Russia.

British colony of Delaware founded in New England.

1704: Massacre of British colonists at Deerfield, Massachusetts by the French.

Publication of the *Boston Newsletter*, the first weekly newspaper in America, begins.

1706: Spain claims an interior region of America, which it calls Colorado.

1707: The Act of Union permanently unites England and Scotland, forming Great Britain.

1712: Last executions on charges of witchcraft in England.

1714-1727: Reign of British King George I.

1714: The German physicist Gabriel Fahrenheit devises the temperature scale that bears his name.

1717: Handel composes *Water Music* to entertain King George's boating parties.

1718: Machine gun invented in England.

New Orleans founded by the French.

The Collegiate School of America changes its name to Yale University in honor its benefactor Elihu Yale.

1719: Daniel Defoe publishes *Robinson Crusoe*.

1720: Japan relaxes import restrictions, allowing books to be imported from Europe, sparking advances in science and medicine.

1721-1742: Robert Walpole, who serves in the cabinets of British Kings George I and George II, is the first Prime Minister of Britain.

1721: Johann Sebastian Bach composes his *Brandenburg Concertos*.

1725: Antonio Vivaldi composes *The Four Seasons*.

1726: Jonathan Swift writes *Gulliver's Travels*.

1731: An official residence for British Prime Ministers is constructed at 10 Downing Street.

1732: Conscription introduced in Prussia by Fredrick William I, who soon has the fourth largest army in the world.

Georgia, the last of the original 13 British colonies, is founded.

Benjamin Franklin begins publication of the first non-English newspaper in the British colonies, *The Philadelphia Zeitung*.

1732-1809: Life of Joseph Haydn.

1732-1799: Life of George Washington.

1736: Rubber first introduced from Central America.

1740-1786: Reign of Prussian King Fredrick II; beginnings of the Prussian rise to dominance in Central Europe.

1742: The Swedish astronomer Anders Celsius develops the temperature scale that bears his name.

1747: James Lind, a British naval surgeon, proves that citrus fruit prevents scurvy.

1748: Platinum introduced to Europe from South America.

1750: Emergence of Wahhabi, a movement designed to purify Islam, in Arabia.

1752: Lightning conductor invented by Benjamin Franklin.

1753: British museum opens in London.

1754: Carbon dioxide discovered by Joseph Black.

King's College in New York is founded by King George II. Following the break between the British colonies in America and the British Empire, the college is given the name it bears today, Columbia University.

1754-1763: The French and Indian war is fought in America and Canada between French and Indian forces on one side and British colonial forces on the other. A young, ambitious military officer named George Washington first comes to prominence as a leader of British colonial military forces.

1755: Regular transatlantic passenger traffic between Europe and America.

1756-1763: Seven Years' War in Europe. This conflict between Britain and France is another cross-Atlantic conflict, mirroring the French and Indian War in America.

1756-1791: Life of Wolfgang Amadeus Mozart.

1756-1757: After British colonists are massacred in the "Black Hole of Calcutta," the British government gives the East India Company license to conquer India. British colonial forces led by Robert Clive quickly establish British control of Bengal and from there, the rest of India.

1759: The first accurate naval chronometers, invented by John Harrison, allow navigators to correctly calculate longitude.

1760: Britain now controls large portions of

"French America"—today known as Canada—as a result of their success in the French and Indian war.

In revenge for Cherokee attacks on colonial settlements, Cherokee hostages captured during the French and Indian war are executed.

Boers begin settlement of South African interior.

1762: *Du Contrat Social* by Rousseau argues for increased human rights and a more egalitarian society.

1762-1796: Reign of Russian Empress Catherine the Great.

1763: The Treaty of Paris concludes the disastrous Seven Years' War. In the treaty, the French cede all of Canada to the British and all territory west of the Mississippi River to the Spanish. The only American holding they keep is the port of New Orleans. This treaty also cedes Florida to England in return for Cuba (captured the previous year by the British).

A Native American rebellion led by Chief Pontiac overruns many western British forts and settlements.

1764: Mozart composes his first symphony at age eight.

The Sugar Act, imposed at least in part to pay for the Seven Years' War, causes James Otis to condemn British "taxation without representation."

1765: The Stamp Act inspires the slogan "taxation without representation is tyranny" in the British colonies in America.

1766: Bifocal spectacles invented by Benjamin Franklin.

1767: The Townsend Acts tax tea, paper and other imports from the American colonies. Boston begins a boycott of imports from Britain in response.

1769: Spanish settlers in Southern California found the mission of San Diego.

1769-1821: Life of Napoleon Bonaparte.

1770: British parliament repeals all taxes on the colonies except the tea tax.

Five colonial settlers are shot at the Boston Massacre.

1770-1827: Life of Ludwig von Beethoven.

1771: First publication of the *Encyclopedia Britannica*.

1773: The British East India Company gains a monopoly on the opium trade in Bengal.

At the "Boston Tea Party," Boston militants destroy tea shipments in a protest against British tax policies.

1775-1783: Beginnings of the American War of Independence between the British colonies in America and Great Britain.

1775: *Common Sense* by Thomas Paine is published.

An antislavery group is formed in Philadelphia by Benjamin Franklin and Benjamin Rush.

1776: American Declaration of Independence.

Two of the most influential books in history are published: *Rise and Fall of the Roman Empire* by Edward Gibbons and *Wealth of Nations* by Adam Smith.

1777: James Watt builds the first true steam engine (beginnings of PL 4).

1778: France enters the War of Independence as an American ally.

1780: Sumo wrestling becomes a popular sport in Japan.

The Mohawk tribe of the Iroquois Confederacy is brutally suppressed in New York for aiding the British during the War of Independence.

1781: Battle of Yorktown: defeat of the British forces by the American Colonial Army commanded by General George Washington.

1782: James Watt's rotative steam engine revolutionizes factories.

William Herschel discovers the planet Uranus.

1783: The Treaty of Paris concludes the War of Independence between France, Britain and the United States, which is formally recognized by Britain and France for the first time.

First manned hot air balloon flight by the Montgolfier brothers.

A new road surfacing technique using tar and gravel is discovered by John Macadam.

1785: *Marriage of Figaro* by Mozart.

1788: First British settlement of Australia at Sydney and the penal colony at Port Jackson. First arrival of convict settlers to Australia.

1789: The British vessel *Bounty* is seized by mutineers, who settle on Pitcairn Island.

1789-1797: George Washington becomes the first President of the United States. He establishes many important precedents during his tenure of President that still exist today, including the relinquishing of power after eight years (two terms) in office.

1789-1799: French Revolution.

1791: Vermont admitted to the United States.

1792: France declares war on Austria and Prussia.

Kentucky admitted to the United States.

The dollar becomes the official currency of the United States.

The steam-powered loom, invented by Edmund Cartwright, revolutionizes the textile industry.

1793: Louis XVI, King of France, is executed by the forces of the revolution.

The cotton gin, invented by Eli Whitney, begins the industrialization of the cotton industry in the American South.

1794: Battle of Brest: British navy defeats the French.

1796: Smallpox vaccine discovered by Edward Jenner.

1796-1804: White Lotus Rebellion in China.

1798: Battle of the Nile: British fleet under Admiral Nelson defeats the French.

1799: Discovery of the Rosetta stone. The stone contains side-by-side texts in Greek and Egyptian hieroglyphs, allowing the hieroglyphs to be deciphered for the first time.

1799-1804: Napoleon Bonaparte becomes First Consul of the French Republic.

1800: French revolutionary army invades Italy led by Napoleon.

Electric battery invented by Alessandro Volta of Italy.

Washington D.C. becomes the capital of the United States.

1801: Act of Union unites Britain and Ireland.

The British navy commanded by Admiral Nelson defeats the Dutch fleet at Copenhagen.

The Union Jack becomes the flag of Great Britain.

Moonlight Sonata by Beethoven.

1803: Britain declares war on France.

British army adopts the fragmentation artillery shell, invented by Henry Shrapnel.

Louisiana Purchase: France sells territory between the Rocky Mountains and the Mississippi River to the United States.

Ohio admitted to the United States.

1804: Napoleonic Code becomes the basis for the new French legal system.

1804-1814: Dissolution of the French Republic by Napoleon, who declares himself Napoleon I, Emperor of France.

1805: Battle of Trafalgar: a British fleet under Admiral Nelson destroys a combined Spanish and French fleet. Nelson is killed during the fighting.

Explorers Louis and Clark explore the land acquired in the Louisiana Purchase and successfully cross America, reaching the Pacific Ocean.

1805: Japanese surgeon Seishu Hanaoka is the first doctor to use a general anesthetic.

1806: Prussia defeated by Napoleon, who dissolves the Holy Roman Empire and replaces it with the Confederation of the Rhine.

1807: Serfdom abolished in Prussia.

Slavery abolished in Great Britain.

1808: Beethoven's 5th and 6th symphonies.

Faust Part I by Goethe.

Importation of slaves into the Unites States banned.

1810: The Sandwich Islands (today known as Hawaii) are united for the first time by King Kamehameha I.

1810-1876: Widespread revolutions in South America. As this period progresses, more and more Spanish and Portuguese colonies gain independence; by 1876 all are self-governing.

1811: Frenchman Nicholas Appert invents canned food.

1812: Napoleon invades Russia.

Louisiana admitted to the United States.

The Brothers Grimm publish their fairy tales for the first time in Germany.

War of 1812: The United States wins several engagements against the British navy, which is attempting to restrain American naval power. The American army loses several engagements to the British army; after an abortive American attempt to invade Canada, Washington D.C. is sacked by the British.

After sacking Washington, the British army attempts to take Baltimore and is repulsed. During the naval bombardment of Fort McHenry during this battle, American lawyer Francis Scott Key writes a poem that will one day provide the lyrics to the national anthem of the United States, the "Star Spangled Banner."

Cylinder printing press invented in Great Britain.

1813: *Pride and Prejudice* by Jane Austen.

Napoleon defeated at Leipzig by an alliance of British and Prussian forces.

1814: Allies take Paris; Napoleon abdicates and is exiled to Elba.

Andrew Jackson, General of the Tennessee militia, becomes a national hero after his successful defense of New Orleans, a battle that will catapult him into the Presidency.

The War of 1812 ends with the Treaty of Ghent, which effectively returns all lands seized to their original owners. One bone of contention is the freeing by British forces of American slaves captured during the conflict. The British see the slaves as men, while the Americans view them as property to be returned.

1815: Napoleon escapes Elba and begins his "100 day reign." He is defeated later this year by the British and Prussians at Waterloo; exiled to St. Helena, he dies in 1821.

The American economy booms—the end of the Napoleonic War and the War of 1812 have made European markets more open than they have been in years to American cotton exports.

1816: Britain begins recruiting Gurkha soldiers from Nepal for the first time.

Indiana admitted to the United States.

The stethoscope is invented by French doctor Rene Laennec.

1817: War between the United States and the Seminole Indian tribe.

Mississippi admitted to the United States.

Work on the Erie Canal begins.

1818: King Shaka unites the Zulu under his rule.

Illinois admitted to the United States.

A famine in Ireland causes more than 20,000 Irish to immigrate to the United States.

Revolver patented in the United States.

Frankenstein by Mary Shelley is published.

1819: The Zulu, led by Shaka, are the dominant military power in Central Africa.

Alabama admitted to the United States.

The Factory Act limits the hours that children may be required to work in England.

1820: British settlers arrive in great numbers in Cape Town, South Africa.

The Missouri Compromise limits slavery to the South and decrees that there must be an equal number of "free" states and "slave" states in the United

States.

Maine admitted to the United States as a free state, Missouri as a slave state.

Ivanhoe by Sir Walter Scott.

1821: British inventor Faraday invents the electric motor.

Czar Alexander of Russia proclaims the stretch of territory from Alaska to Oregon to be Russian property and closes Alaskan waters to foreign ships.

Venezuela, Peru, Mexico and El Salvador all declare their independence and are recognized by the United States. California joins the Republic of Mexico.

1822: Freed American slaves found the colony of Liberia in Africa.

1822-1895: Life of Louis Pasteur.

1823: Rugby is invented at the Rugby school in England.

1825: Joseph Smith founds the first Mormon church in New York state.

First passenger railroad built in Great Britain.

1827: George Ohm, a German physicist, introduces a new law governing the flow of electric current.

1828: Shaka Zulu is assassinated by his brother, who proclaims himself king of the Zulu.

Andrew Jackson, a candidate for the fledgling Democratic Party, is elected President.

1829: British parliament passes an act authorizing the formation of a metropolitan police force to keep the peace in London.

Louis Braille invents a reading system for the blind in Paris.

1830: Chinese census records a population of almost 395 million.

1831: British naturalist Charles Darwin sails to South America, New Zealand and Australia aboard the *HMS Beagle*.

1832: Battle of Bad Axe River: Chief Black Hawk and his tribe are massacred by US soldiers.

1833: Samuel Colt begins to mass-produce the revolver.

1834: Mechanical reaper built in the United States.

1836: Texas declares itself an independent republic. Five thousand Mexican soldiers lay siege to the Alamo and take it by force.

California declares itself free from Mexican rule.

Arkansas admitted to the United States.

1837-1901: Reign of Queen Victoria of Great Britain.

1837: President Andrew Jackson recognizes the Republic of Texas.

Federal soldiers defeat the Seminole at Lake Okeechobee and seize Chief Osceola.

Peasant uprisings in Japan to protest lack of famine relief.

1838: Electric telegraph invented in Great Britain.

First baseball game is played in Canada.

1838: Lin Zexu is appointed to deal with China's growing opium problem.

Oliver Twist, a serialized novel by Charles Dickens, begins publication.

The daguerreotype, a forerunner to photography, is invented.

1839: Scottish inventor Kirkpatrick Macmillan invents the bicycle.

Lin Zexu forces foreign merchants to surrender their supplies of opium.

Charles Goodyear learns to vulcanize rubber.

1840: Opium War: British naval vessels begin shore bombardment of Chinese cities after almost totally destroying the Chinese military.

1841: Hong Kong is under British control. The British stage an attack on Beijing supported by gunships that have traveled up the Yangtze River.

Edgar Allen Poe publishes *The Murders in the Rue Morgue,* popularizing a completely new brand of fiction: the detective novel.

1842: The Treaty of Nanjing ends the Opium War. China cedes control of Hong Kong to Britain and opens five ports to international trade.

1843: China and Britain sign an agreement opening the port of Shanghai to foreign trade.

Chinese emperor bans opium smoking.

Due to the success of his opera *The Flying Dutchman*, Richard Wagner is given a conducting post in Dresden.

1844: Samuel Morse taps out the first telegraph message between Washington D.C. and Baltimore.

Joseph and Hiram Smith, the leaders of the Mormon Church, are killed during a riot in Carthage, Illinois. Brigham Young becomes the leader of the Mormon church.

The shogun of Japan refuses a demand by the king of the Netherlands to open his country's ports to foreign trade.

1845: Texas admitted to the United States, causing Mexico to sever diplomatic ties.

1846: Mexican War: United States declares war on Mexico.

The United States formally claims California.

The United States drives Mexican forces out of New Mexico.

U.S. soldiers put down pro-Mexican demonstrations in California.

American Commodore Biddle attempts to open trade relations between Japan and the United States, but the shogun refuses.

1847: United States forces gain control of Mexico City, ending the Mexican War.

The Mormons, led by Brigham Young, found a settlement on the shores of the Great Salt Lake.

Liberia declares its independence.

1848: *The Communist Manifesto* by Karl Marx and Friedrich Engels is published.

Discovery of gold at Sutter's Mill in California sparks a wave of immigration from the Unites States as well as Europe, Chile, Australia and China.

Mexico cedes Texas and California to the United States.

1850: British parliament grants Australia self-governance.

The Scarlet Letter by Nathanial Hawthorne is published.

1851: *Moby Dick* by Herman Melville is published.

Sewing machine invented in the United States.

1854: Commodore Matthew Perry convinces the Japanese government to open the ports of Shimoda and Hakodate to American trade. Within a year Britain and Russia are also allowed to trade with Japan, though contact with the populace is extremely limited.

1855: *The Song of Hiawatha* by Henry Wadsworth Longfellow is published.

1856: First commercial refrigeration unit built in the United States.

Sinn Fein founded in Ireland.

Steel mass production becomes possible with the Bessemer furnace, invented in Great Britain.

1857: British seize the Persian port of Bushire.

The first passenger elevator is installed in a New York City department store.

1858: Queen Victoria takes the title Empress of India. The East India Company is dissolved.

1859: *Origin of Species* by Charles Darwin published. The book immediately becomes a source of controversy but is widely regarded as the most important scientific work of the 19th century.

Abolitionist John Brown is hanged in Virginia on charges of treason and conspiring with slaves.

France captures Saigon.

First oil well drilled in the United States.

1861: Abraham Lincoln elected President of the United States.

1861-1863: Apache uprisings in the American southwest.

1861-1865: American Civil War: slave states secede from the United States to form the Confederate States of America (CSA).

1862-1864: Sioux uprisings in Minnesota and North Dakota.

1862: *Les Miserables* by Victor Hugo is published in France.

After a British merchant is killed by a samurai, the Emperor of Japan orders the expulsion of all foreigners from Japan.

1863: British naval vessels bombard the Japanese city of Kagoshima.

First subway train, the British Underground.

1863-1866: Navajo uprisings in Arizona and New Mexico.

Abraham Lincoln designates the last Thursday in November as a national holiday: Thanksgiving Day.

1864: End of the Civil War. All seceding states reenter the Union, and slavery is abolished throughout the re-formed United States.

Abraham Lincoln is assassinated by John Wilkes Booth.

1864: Bombardment of Japanese cities by American, British, French and Dutch naval vessels forces the Japanese emperor to reopen the island to western trade.

1865: Austrian monk Gregor Mendel conducts experiments showing how traits are passed along through generations, formulating the basics of genetics.

1866: *Crime and Punishment* by Fyodor Dostoyevsky is published.

1867: Meiji Restoration: Tokugawa Keiki dissolves the shogunate, restoring power to the emperor.

The United States purchases Alaska from Russia for 7.2 million dollars.

The typewriter invented in the United States.

Das Kapital by Karl Marx is published.

1868: Edo renamed Tokyo.

Little Women by Louisa May Alcott is published.

1869: United States builds world's first transcontinental railroad.

War and Peace by Tolstoy is published.

Discovery of the Star of South Africa sparks a diamond rush in South Africa.

Gold is discovered in South Africa, sparking a wave of immigration.

1871: American reporter Henry Morton Stanley tracks down famed British explorer David Livingstone in Central Africa. He greets him with the famous phrase, "Dr. Livingstone, I presume?"

Descent of Man by Charles Darwin is published.

1872: William "Boss" Tweed is arrested for fraud and corruption in New York City.

1876: Alexander Graham Bell patents the telephone.

War erupts in the Black Hills between the Sioux and gold prospectors.

The Adventures of Tom Sawyer by Mark Twain is published.

1877-1888: Slaughter of the American bison is at its peak.

1877: Thomas Edison invents the phonograph.

1878: Internal combustion engine invented in Germany.

Thomas Edison founds the Edison Electric Light Company after inventing the electric filament lamp.

The world's first electric streetlights are constructed in Britain.

1881: First electric trains in Britain.

American President James Garfield is assassinated.

A massive wave of immigration into America takes place—1.3 million Germans and 400,000 Canadians, along with nationals from many other countries, flock to the United States.

Outlaw William H. Bonny, popularly known as Billy the Kid, is shot.

Chief Sitting Bull, wanted by the authorities since the Little Big Horn, surrenders to the authorities.

The assassination of Czar Alexander II in Russia spark pogroms against Russian Jews.

France declares sovereignty over Viet Nam and occupies Tonkin.

1882: A new law in England marks a major step forward in women's rights: the Married Women's Property Act allows women to own property independent of their husbands after marriage.

Racial tensions escalate in Russia. Jews are expelled from Moscow, St. Petersburg and Kharkov. These racial tensions spark a wave of immigration by Russian Jews to the United States.

1883: France and China, both of whom claim sovereignty of Viet Nam, clash near Hanoi.

Over 30,000 are killed when the volcano of Krakatoa, Java erupts.

The Brooklyn Bridge linking New York and Brooklyn opens to passenger traffic.

1884: Invention of the first practical and effective machine gun.

The Suffragettes, led by Susan B. Anthony, march on Washington.

1885: The Statue of Liberty arrives in America from France.

Daimler and Benz invent the first automobile.

1886: Karl Benz patents his automobile design.

In America, 100,000 workers strike, seeking an eight-hour workday.

Atlanta pharmacist Dr. Pemberton creates a soft drink he names Coca-Cola.

1888: George Eastman creates his first Kodak camera.

1889: Rise of labor in Europe: 30,000 London dockworkers and 90,000 miners in Germany strike for better working conditions.

Eiffel Tower completed in Paris.

Japan adopts a new constitution that establishes a parliament. Governmental power is equally distributed between this new parliament and the emperor.

1890: American soldiers massacre 350 Sioux at the Battle of Wounded Knee, marking the last armed Native American resistance to their forced removal to reservations.

Growing disagreements in the German government lead Kaiser William II to call for the resignation of Chancellor Bismarck.

Japan holds its first general elections.

1891: French soldiers open fire on striking workers, killing nine.

Hedda Gabler by Henrik Ibsen is published.

The Adventures of Sherlock Holmes by Arthur Conan Doyle is published.

1892: An ever-increasing tide of immigration prompts the construction of new facilities in Ellis Island to deal with increased immigration.

1894: Japan seizes control of Korea, sparking war between China and Japan.

1895: An increasingly modernized Japan imposes a humiliating defeat on the Chinese and forces them to sign the treaty of Shimonoseki, recognizing Japan's control over Korea, ceding control of Taiwan and Pescaderos, and paying an indemnity of 200,000,000 Kuping taels. The treaty also opens several Chinese ports to Japanese trading vessels.

Guglielmo Marconi invents the radio.

Motion picture projector invented independently by Louis and Auguste Lumiere in France and Thomas Edison in the United States.

Irish dramatist Oscar Wilde is sentenced to two years' hard labor for sodomy.

1895-1898: Cuban War of Independence. Cuba engages in a bloody armed struggle to free itself from Spain. This war is brought to an end not with a victory for either side, but by the outbreak of war between Spain and the United States.

1896: The discovery of gold in the Klondike region of the Yukon leads 100,000 new residents to immigrate to the Yukon in search of gold.

Revival of the Olympic Games begins in Athens, Greece.

1897: Theodore Herzl convenes the first Zionist conference in Switzerland to discuss the need for a

Adventures in Time: Remember the *Maine*!

The sinking of the *Maine*, an American warship moored at Havana, provided both the spark of the Spanish-American War and its rallying cry, "Remember the *Maine*." Though short, this war is integral to American history as it was actually pursued for several different purposes, including the reduction of Spanish influence (and a corresponding increase in American influence) in the Caribbean. The conflict also fixed the national spotlight on Teddy Roosevelt, a future American President.

For these reasons, the destruction of the *Maine* is a historical event that almost *has* to happen. It is extremely likely that the sinking of the *Maine* was an accident and not the result of sabotage. If this is the case, interloping time travelers could infiltrate the team that builds the warship or its crew and prevent (or ensure) the structural problems that later lead to its untimely (or timely, depending on your point of view) destruction.

When this happens, the PCs might be given a mission fraught with contradiction and more than a little moral ambiguity: sabotaging the *Maine* and consigning 266 men to their deaths at the bottom of Havana Harbor, all to keep the historical timeline on track.

Jewish homeland.

1898: Britain signs a 99-year lease with China for Hong Kong.

Spanish-American War. When the American warship *Maine* explodes in the harbor of Havana, America blames Spanish sabotage. America goes to war with Spain and gains control over all Spanish possessions in the Caribbean. The Treaty of Paris officially ends the war and cedes Guam, the Philippines and Puerto Rico to the United States in return for 20 million dollars. Cuba becomes an independent nation.

The war also brings Theodore Roosevelt, commander of the 1st Volunteer Cavalry (popularly known as the "Rough Riders"), to national prominence.

Brooklyn, the Bronx, Queens, Staten Island and Manhattan merge into Greater New York City.

The Turn of the Screw by Henry James is published.

1899-1902: Boer War between the British and African Boers.

1900: The Boxer Rebellion begins in China in response to increasing Western influence and control over the country that the local government seems unable or unwilling to stop. Christian churches and Western embassies are among the rebels' first targets.

The Interpretation of Dreams by Sigmund Freud is published.

Original *Great Encyclopedia of 1000 Volumes* destroyed during the Boxer Rebellion.

Italy's King Umberto is shot by an anarchist assassin.

1900-1910: Major wave of Italian immigration to the United States. More than 2 million arrive during this period.

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