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AGE of EMPIRES

THE AGE OF KINGS

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Chapter I



Getting Started

Age of Empires® II: The Age of Kings™ is a game of combat and empire-building that spans the time from the fall of Rome through the Middle Ages. You control one of 13 civilizations, which you build into a powerful empire that strives to dominate other civilizations before they conquer you.

What's new in Age of Empires II

Age of Empires II: The Age of Kings includes these new features:

- ⊕ **13 new civilizations** — Each with a unique unit and a team bonus.
- ⊕ **New units** — Including Kings, Heroes, female villagers, knights, cannons, and exploding demolition ships.
- ⊕ **New buildings** — Including impressive castles and gates that automatically open and close for you and your allies.
- ⊕ **New technologies** — Including Conscription (increases military unit creation speed) and Town Watch (increases building line of sight).
- ⊕ **Formations** — Precision control of how your army moves and engages in combat.
- ⊕ **New multimedia campaigns** — Unique music and more than 300 pieces of original art enhance your game as you follow a soldier through battles featuring William Wallace, Joan of Arc, Saladin, Genghis Khan, and Frederick Barbarossa.
- ⊕ **New ways to trade** — Trade with other players over land and by sea; buy or sell resources at the Market.
- ⊕ **Learning campaign** — Master the basics by helping William Wallace rise from his humble beginnings to defeat the British.

- ⊕ **Regicide game** — Defend your King to win the game.
- ⊕ **8 new map types** — Including Arabia, Black Forest, Rivers, and Random, which allows the computer to pick a surprise map type for you.
- ⊕ **Garrisoning** — Station units inside buildings for protection, healing, and surprise attacks.
- ⊕ **New combat features** — Order military units to patrol, guard, or follow and choose their combat stance.
- ⊕ **Record and replay games** — Watch your single-player and multiplayer games later.
- ⊕ **Find idle villagers** — Automatically locate villagers not assigned to a task using the **Idle Villager** button.
- ⊕ **New online tech tree** — See what is available to your civilization and which units and technologies you've researched while in the game.
- ⊕ **Improved multiplayer features** — Save and restore multiplayer games; lock the game speed for all players; lock game teams so players can't change alliance during a game; signal allies.
- ⊕ **Gather points** — New units automatically gather at a location or garrison inside a building.
- ⊕ **Improved interface** — Units behind buildings and trees are visible; the mini-map has Normal, Combat, and Economic modes; chat interface is expanded; Help is integrated into the game.
- ⊕ **User profiles** — Customize options and hotkeys and automatically save them from game to game.
- ⊕ **Online encyclopedia** — Extensive histories of 13 medieval civilizations; background on the Middle Ages, armies, weapons, and warfare.

Installing & starting



To install and start Age of Empires II

Insert the Age of Empires II CD into the CD-ROM drive, and then follow the instructions on the screen.

If Setup does not begin automatically or if you have trouble starting Age of Empires II, refer to the Readme file on the Age of Empires II CD.

How to play

The easiest way to familiarize yourself with Age of Empires II is to start with the William Wallace learning campaign. You'll master the basics of the game and learn about some of the new features in Age of Empires II.



To start the learning campaign

On the main menu, click **Learn to Play**.

If you're a new player, click **Marching and Fighting**, and then play the rest of the scenarios in order. If you're an experienced Age of Empires player, you may want to start with **Forge an Alliance** and **The Battle of Falkirk**, which provide information about the new features in Age of Empires II.

An overview of the basics

In Age of Empires II: The Age of Kings, you command one of 13 medieval civilizations. Each civilization has strengths and weaknesses that you use to your advantage to win. For example, the Byzantines build strong walls and are a good defensive civilization. For more information on choosing a civilization, see Chapter II.

Getting started

Random Map games are a common type of game in Age of Empires II. Every Random Map game is different because the map is never the same.



To start a single-player Random Map game

Click **Single Player** on the main menu, click **Random Map**, and then choose the game settings. For help choosing the Random Map settings, hold your mouse pointer over any item on the screen to display information in the lower-right corner.



In a typical Random Map game, you begin in the Dark Age with a Town Center, a few villagers, and a Scout Cavalry unit. Your goal is to build a powerful empire capable of conquering enemy civilizations. You can see only a small part of the map; most of it is black. You do not know where your opponents are. You build your civilization by gathering natural resources, constructing buildings, creating an army, researching technological improvements, and advancing from the Dark Age through the Feudal Age, the Castle Age, and finally to the Imperial Age.

The first thing you should do is explore the map for sources of food and wood. You can explore the map by moving your villagers and Scout Cavalry into the black area.



To move any unit

Click the unit, and then right-click any location on the map or on the mini-map in the lower-right corner.



Stockpiling resources

As you move your villagers and Scout Cavalry, you discover sources of food (forage bushes, sheep, deer, fish, wild boar — careful, the boar may attack!), wood (trees), stone (stone mines), and gold (gold mines). Your villagers gather resources from these sites so you can pay for improvements to your civilization. For more information about stockpiling resources, see Chapter III.



To gather resources

Click a villager, and then right-click a forage bush or animal, tree, stone mine, or gold mine.

The villager gathers some of the resource and automatically carries it to your Town Center, where it is deposited in your stockpile (the amount is shown in the upper-left corner of the screen).



Creating new villagers

Villagers are a vital investment at the beginning of a game. The more villagers who are gathering resources, the faster your stockpile grows (and the faster you can build a powerful civilization).



To create a villager

Click the Town Center, and then click the **Create Villager** button.

After a few seconds, the villager appears near your Town Center and you can order it to gather resources.

Supporting your population

As your population grows, you must build Houses to support it. Each House supports 5 units. The Town Center also supports 5 units. A Castle supports up to 20 units. Before you can expand your population by creating new villagers, military units, or ships, you must have enough Houses to support them. The population indicator (upper-left corner of the screen) shows your current population in relation to housing (current/supportable population). For more information, see Chapter III.

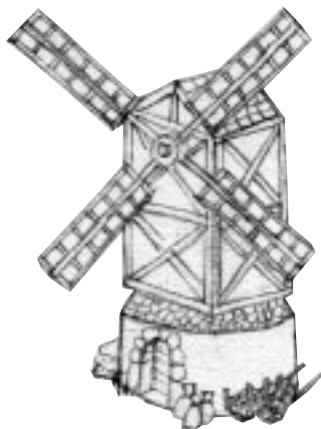


To build a House

Click a villager, click the **Buildings** button, click the **Build House** button, and then click a location on the map. If the building is flashing red, it cannot be built there; try a different spot.

Constructing buildings

Villagers can deposit resources at the Town Center, the Mill, the Lumber Camp, and the Mining Camp. Constructing these buildings near a resource decreases the distance your villagers walk, so your stockpile grows more quickly.



To build a Mill

Click a villager, click the **Buildings** button, click the **Build Mill** button, and then click a location near a forage bush. If the building is flashing red, it cannot be built there; try a different spot.

You assign villagers to construct other buildings in the same way. For more information about constructing buildings, see Chapter III.

Exploring

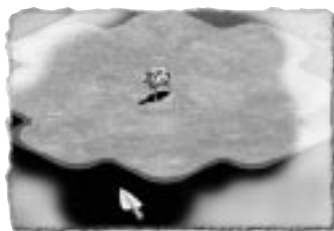
While your villagers are gathering resources, you can use your Scout Cavalry to explore the map. Scouts are ideal for exploring because they see farther and move faster than villagers. Keep an eye out for distant resources, forests, enemy towns, and cliffs you can use to protect yourself. Enemy buildings are not visible until you explore the area of the map where they are located. Beware of wolves, which may attack you and cannot be used for food.



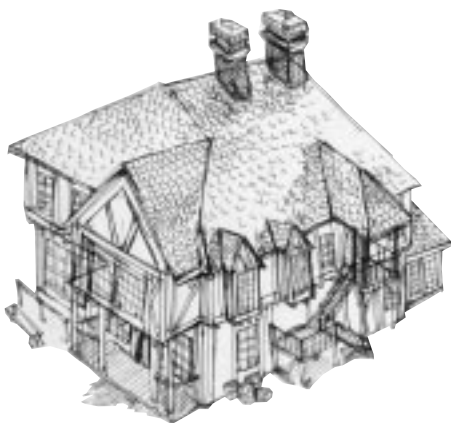
To explore deep into the black area of the map

Click your Scout Cavalry, and then right-click a location on the map or on the mini-map in the lower-right corner of the screen.

Your Scout Cavalry unit will go to the location, revealing part of the map as it moves.



As a unit leaves an area, a semitransparent fog of war falls over the explored area. The fog of war freezes the view of the area until another unit returns to that spot. For example, if your Scout Cavalry unit discovers an enemy building while exploring and then leaves the area, the fog of war will show the building there (in its current state) until another one of your units returns to that spot (even if the building is upgraded or destroyed in the meantime). The fog of war is then lifted and the current terrain is revealed. For more information about reconnaissance and terrain, see Chapter IV.



Creating an army

Before you can create an army, you must construct a Barracks.



To build a Barracks

Click a villager, click the **Military Buildings** button, click the **Barracks** button, and then click a location on the map.

After the Barracks is complete, you can create infantry units there. The first infantry unit you can create is a Militia unit.



To create a Militia unit

Click the Barracks, and then click the **Create Militia** button.

After a few seconds, the Militia unit appears near your Barracks. When you advance to the Feudal Age, you can upgrade your Militia units and build an Archery Range and Stable to create different types of military units. For more information about military tactics, see Chapter IV.



Advancing through the ages

There are four ages: Dark Age, Feudal Age, Castle Age, and Imperial Age. Advancing to the next age lets you build different buildings, create more powerful military units, and research more valuable technologies. When you have 500 food and have built two different Dark Age buildings (Mill, Barracks, Lumber Camp, Mining Camp, or Dock, but not including Houses or your Town Center), you can advance to the Feudal Age.



To advance to the Feudal Age

After you have the required buildings and food, click the Town Center, and then click the **Advance to Feudal Age** button.

After several seconds, your existing buildings change in appearance to Feudal Age buildings. If you click a villager now, you see that additional buildings are available in the lower-left corner of the game screen. For more information about advancing through the ages, see Chapter III.

Upgrading units & researching technology

After you advance to the Feudal Age, you can create different military units and upgrade your existing soldiers to stronger military units. You can also research new technologies.



To upgrade your existing Militia to more powerful Men-at-Arms

Click the Barracks, and then click the **Upgrade to Man-at-Arms** button.

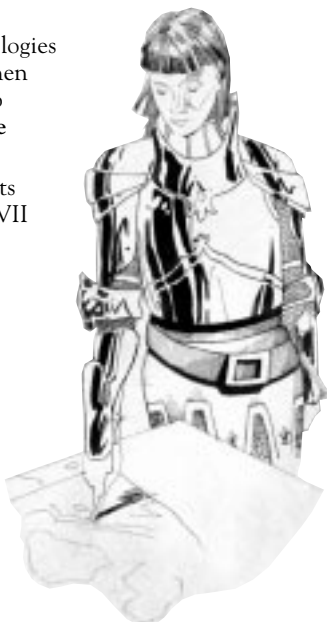
After a few seconds to research the upgrade, all of your existing Militia are replaced with Men-at-Arms and the Create Militia button becomes the Create Man-at-Arms button.



To research technology

Click a building that contains technologies (for example, the Blacksmith), and then click the button for the technology to research (for example, **Research Scale Mail Armor**).

For more information about upgrading units and researching technology, see Chapters VII and VIII.



Engaging in combat

Once you create an army and locate your enemies, you can prepare for battle. Military units engage in combat on land. Warships engage in combat at sea and with land units.



To attack the enemy

Click your military unit (or drag the pointer around multiple units), and then right-click the enemy unit or building to attack.

You can create a Monk to heal your wounded soldiers and to convert enemy soldiers and buildings so you can control them, as explained in Chapter IV. Your villagers can repair damaged buildings, ships, and siege weapons, as explained in Chapter III. For more information about military tactics, see Chapter IV.



Winning a game

In a Random Map game, you win by destroying all enemy military units and buildings, by controlling all relics for a period of time, or by building a Wonder of the World that stands for the required time period. These are the standard victory conditions, and the first player to achieve one of these feats wins the game. For more information about how to win, see Chapter II.

Tips for beginners

Here are some tips for beginners playing a typical Random Map game, where you start in the Dark Age with a few villagers and build a powerful civilization.

- ⊕ Concentrate on gathering food and wood first. Use it to create new villagers and build new Houses to support them. Put the new villagers to work gathering more food and wood. To start, gather only enough wood for Houses to support your villagers and to build the two buildings required to advance to the Feudal Age.
- ⊕ Gather food from the forage bushes near your town. Build your Mill near forage bushes to gather food faster. Similarly, build Lumber Camps near forests and Mining Camps near stone and gold mines.
- ⊕ Build a Mill and a Barracks. You need two buildings to advance to the Feudal Age and the Barracks is required in order to build other important buildings in later ages.
- ⊕ When a sheep enters your line of sight, click a villager, and then right-click the sheep. The villager will herd it near your Mill or Town Center before killing it for food. You can also click a sheep, and then right-click a Town Center or Mill so the sheep will make its own way to a food drop-off point.
- ⊕ Create multiple villagers (at least 10 to 15 in the Dark Age).
- ⊕ Send your Scout Cavalry to explore the map for more resources, locate enemy towns, and find strategic places to build towers and walls. Reveal as much of the map as possible so you can keep an eye on what your enemy is up to.
- ⊕ Wait until the Feudal Age to gather gold and stone, and continue to gather wood.
- ⊕ Build multiple Farms in the Feudal Age. Build the Farms as close as possible to each other and to your Town Center or Mill. This maximizes your real estate, lets villagers deposit food from Farms faster, and centralizes your Farms in one location so you can quickly rebuild them when they become fallow.
- ⊕ Click the **Idle Villager** button near the mini-map in the lower-right corner of the game screen or press the PERIOD (.) key to find villagers who aren't working.
- ⊕ Press the COMMA (,) key to find your idle military units.
- ⊕ Attack in numbers.
- ⊕ Upgrade the armor and attack strength of your military units at the Blacksmith starting in the Feudal Age.
- ⊕ If you're attacked, ring the town bell at the Town Center to garrison your villagers safely inside.
- ⊕ Learn strategies by watching how the computer plays. To observe the computer player, select **All Visible** in the **Reveal Map** list under **Game Settings** on the single-player Random Map screen before you start a game. Then when you start the game, you can see how the computer players are building up their civilizations.
- ⊕ Build walls and towers to protect your town from enemy attack. Look for areas on the map that are easy to wall off (between forests or across shallows).

Options & hotkeys

You can change the music volume, sound effects volume, scroll speed, screen size, mouse interface, and hotkeys to your liking. You can also change, add, or delete a player name. Any options you change are saved under your player name and are automatically in effect when you start the game. For a list of some default hotkeys, see the back of the manual.



To customize the game options

Before you start a game, click **Options** on the main menu. For help changing the options, hold your mouse pointer over any item on the screen to display information in the lower-right corner.

—or—

While you are in a game, click the **Menu** button in the upper-right corner, and then click **Options**.



Saving & exiting

For information about saving and restoring multiplayer games, see Chapter II.



To save a single-player game

Click the **Menu** button in the upper-right corner of the screen, click **Save**, and then type a name for the game or select the game to save.

Games are saved in the Savegame folder where Age of Empires II is installed.



To exit a game

Click the **Menu** button in the upper-right corner of the screen, and then click **Quit Current Game**.

Chapter II



Setting Up a Game

Game types

After you're comfortable with the basics of Age of Empires II, you can play any of the following types of games. Many players start with the campaigns and then play single-player or multiplayer Random Map games. In a single-player game, you compete against players controlled by the computer. In a multiplayer game, you compete against other human players across a local area network or the Internet.

Campaign game

Join Joan of Arc, Genghis Khan, Saladin, or Frederick Barbarossa in a series of historically based scenarios. You must win each game before you can progress to the next one in the campaign.



To play a campaign

Click **Single Player** on the main menu, click **Campaigns**, and then click the name of the campaign you want to play

If you are learning to play Age of Empires II, you may want to start with the William Wallace learning campaign. Just click **Learn to Play** on the main menu.

Random Map game

In a Random Map game, you play a different game every time because the map is never the same. You can use the standard game settings or choose your own, including the number of players and their civilizations, map type and size, population limit, quantity of starting resources, starting age, and victory condition.



To play a single-player Random Map game

Click **Single Player** on the main menu, click **Random Map**, and then choose the game settings. For help choosing these settings, hold your mouse pointer over any item on the screen to display information in the lower-right corner.

To play a multiplayer Random Map game, see “Multiplayer games” later in this chapter.

Regicide game

In a Regicide game, your King must be the last to survive. If your King is killed, you're eliminated from the game. All players start the game with a King, a Town Center, a Castle, and several villagers. Your King has low hit points and no attack, so keep him highly protected. You cannot create a new King, and a King is available only in a Regicide game.

In a Regicide game, the Spies technology (at the Castle) is called Treason and works in a unique way (for normal Spies benefits, see Chapter VIII). Each time you research Treason in a Regicide game, a signal indicates where the enemy Kings are and you hear a notification sound. The location is revealed temporarily, so to keep track of a King's location you may need to research Treason multiple times. In a Regicide game, the technology cost is incurred each time you research Treason.



To play a single-player Regicide game

Click **Single Player** on the main menu, click **Regicide**, and then choose the game settings. For help choosing these settings, hold your mouse pointer over any item on the screen to display information in the lower-right corner.

To play a multiplayer Regicide game, see “Multiplayer games” later in this chapter.

Death Match game

In a Death Match, all players start the game with huge stockpiles of wood, food, gold, and stone — and then fight to the death.



To play a single-player Death Match game

Click **Single Player** on the main menu, click **Death Match**, and then choose the game settings. For help choosing these settings, hold your mouse pointer over any item on the screen to display information in the lower-right corner.

To play a multiplayer Death Match, see “Multiplayer games” later in this chapter.

Custom scenarios & campaigns

A custom scenario or campaign is a game or series of related games that you or your friends have created. For information about custom scenarios, see “Creating custom scenarios & campaigns” later in this chapter.



To play a custom scenario or campaign

Click **Single Player** on the main menu, and then click **Custom Scenario** or **Custom Campaign**.

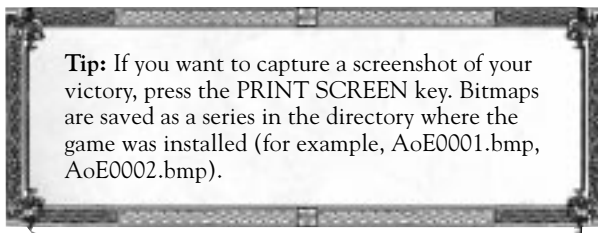
Recording & replaying games

You can record single-player and multiplayer games and watch them later.

To record and replay games

- 1 Before starting a game, select **Record Game** on the pregame settings screen.
- 2 Play a game as you normally would. The game is automatically saved with a generic name and contains the date and time the game was played.
- 3 To watch a recorded game, click **Saved Game** on the main menu. Select the game you want to watch from the **Select Saved Game** list.

You can use the controls in the lower-left corner to determine the player's point of view and to replay the game in a demo loop. You can also rewind, pause, and fast forward.



Choosing a civilization

When playing a Random Map, Regicide, or Death Match game, you can select which of 13 great medieval civilizations you want to battle or guide to glory. Each civilization has particular abilities, a unique military unit that can be created starting in the Castle Age, a special bonus that applies during team games, and access to certain units and technologies.

You can choose your civilization and your computer opponents' civilizations. When choosing a civilization, consider the map type, victory conditions, and strengths and weaknesses of your opponents. For information about each civilization's capabilities, see the foldout provided with the game and the technology trees in the Appendix or in the game. You can also choose a random civilization, to let the computer choose civilizations for you and all other players.

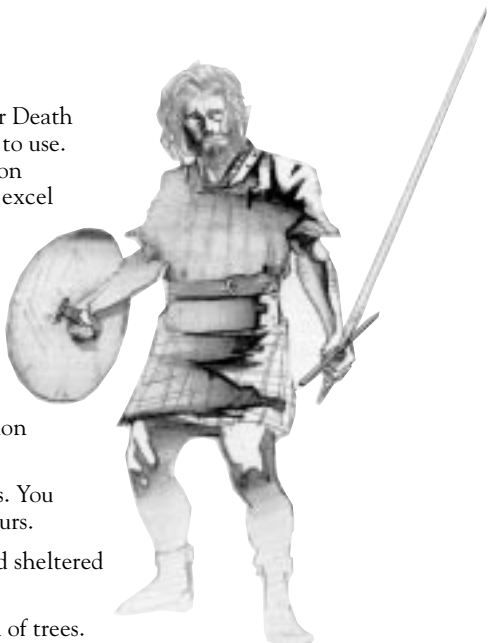
More than one player can choose the same civilization. In a multiplayer cooperative game, two or more players can choose the same player number and share control of a single civilization.

Team bonuses apply to all team members and are calculated after the game starts. If a team member changes teams or is eliminated from the game, the team bonuses at the start of the game remain in effect.

Choosing a map

Before you start a Random Map, Regicide, or Death Match game, you can select the type of map to use. Some civilizations have combat advantages on certain map types. For example, the Vikings excel at naval warfare and have an advantage on maps with expanses of water.

If the map type is set to Random, the map type is chosen for you (excluding Crater Lake, Gold Rush, Black Forest, or Fortress).



- ⊗ **Arabia** — Arid desert with strategic elevations and cliffs, but sparse vegetation and water.
- ⊗ **Archipelago** — A group of large islands. You might not be the only inhabitant on yours.
- ⊗ **Baltic** — An ocean with peninsulas and sheltered bays.
- ⊗ **Black Forest** — Islands of grass in a sea of trees. Follow the paths through the forest to find your allies and enemies.
- ⊗ **Coastal** — Where the land meets the ocean, with plenty of water and a large landmass for battles by land or by sea.
- ⊗ **Continental** — A large body of land surrounded by the sea; rivers may separate players and teams.
- ⊗ **Crater Lake** — (Multiplayer only.) An island brimming with gold in the center of a caldera lake. Steep elevation and lack of trees make it hard to build there.
- ⊗ **Fortress** — A walled city with gates and all the buildings you need to build up your forces quickly.
- ⊗ **Gold Rush** — A whole heap of gold and a few wolves in the middle of a desert.
- ⊗ **Highland** — Far from the ocean and heavily forested but with plenty of rivers and open space for maneuvers.
- ⊗ **Islands** — Each player starts alone on an island; uninhabited islands may be rich with resources, so be prepared to rule the sea.
- ⊗ **Mediterranean** — An inland sea surrounded by land; sounds deceptively peaceful.
- ⊗ **Migration** — (Multiplayer only.) A tiny island that can't support you for long before you must move to the mainland, where the fighting is fierce.
- ⊗ **Rivers** — Swampy lowlands full of shallows; rivers separate players.
- ⊗ **Team Islands** — One island shared by you and your allies, and another inhabited by your enemies. The islands are not connected by shallows, so beware of enemy Transport Ships.

How to win

How you win a game depends on its victory conditions. If you're playing a Random Map or Death Match game, you can choose the victory condition before the game starts. If you're playing any other type of game, you win by achieving the objective(s) displayed at the beginning of the game, which may also include victory condition(s) required to win the game. You can display the objectives again during a game by clicking the **Objectives** button at the top of the screen.

Standard victory

You can win any Random Map or Death Match game by being the first player or team to defeat your enemies in military conquest, control all relics, or build a Wonder. You and your opponents do not have to pursue the same victory condition. For example, you may try to win by conquest while your opponent tries to win by building a Wonder.

⊕ Conquest victory

The first player (or team) to defeat all opponents wins. To defeat a player, you must destroy all units and buildings but the following: towers, walls, gates, relics, Fishing Ships, Fish Traps, Transport Ships, Trade Cogs, Trade Carts, Farms, and sheep.

⊕ Wonder victory

The first player to build a Wonder that stands for the required time period wins. Before you can build a Wonder, you must advance to the Imperial Age and gather many resources. When a civilization begins to build a Wonder, the other civilizations are notified and shown its location on the mini-map in the lower-right corner of the screen. When the Wonder is completed, all civilizations are notified and a countdown clock appears in the upper-right corner of the screen. The color of the clock indicates which civilization owns the Wonder. If a Wonder is destroyed before the required time period, the countdown is terminated. The map size determines how long a Wonder must stand to win the game.

⊕ Relics victory

The first player or team to control all relics for the required time period wins. Relics are special objects (similar to trophies) that are placed randomly on the map. There are multiple relics on a map. They can only be moved if carried by a Monk (see Chapter IV), and they must be garrisoned inside a Monastery in order to be controlled by your civilization. Relics cannot be destroyed. For example, if a Transport Ship sinks with a Monk carrying a relic on board, the relic appears on a nearby shore. When a civilization owns all relics, all civilizations are notified and a countdown clock appears in the upper-right corner of the screen. The color of the clock indicates which civilization controls the relics. The first player to control all relics for the required time period (until the clock reaches 0) wins the game. If any relic changes ownership before the required time period has passed, the countdown is terminated. The map size determines how long you must control the relics to win the game.

Other victory conditions

If you do not want to play the standard victory conditions (Conquest, Wonder, or Relics victory), you can choose one of these alternative victory conditions before you start a game.



Timed victory

The player or team with the highest score when the timer expires wins. You can also win by military conquest regardless of the time remaining. When you select this victory condition, you choose the time limit. A countdown clock is displayed in the upper-right corner of the screen. When the clock reaches 0, the game ends and the player (or team) with the highest score wins. A team score is the average of all team members' scores.



To display the score

Click the **Advanced Commands** button near the mini-map in the lower-right corner of the screen, and then click the **Statistics** button above it and to the left.

The Statistics button displays different information depending on the mini-map mode you have selected. If you have the Normal mini-map mode selected, the score for each player appears. If you have the Combat or Economic mode selected, different information appears. To learn more about the different mini-map modes, hold your mouse pointer over the mini-map buttons to display information in the lower-left corner.

Score victory

The first player or team to achieve the required score wins. Players earn points for various achievements, as explained below in the score calculation. You can also win by military conquest regardless of the score. When you select this victory condition, you choose the score. A team score is the average of all team members' scores.

The score is calculated as follows. The Achievements screen following the game provides details on your accomplishments.

- ⊕ Resources in stockpile = 1/10 point per unit — For example, each time a villager deposits 10 food in your stockpile, you receive 1 point. Receiving a tribute of 500 gold is worth 50 points, and so on. The player sending the tribute loses the point value of those resources.
- ⊕ Constructing buildings, creating units, and researching technologies doubles the point value of resources — For example, gathering 30 wood provides 3 points but building a House (which costs 30 wood) provides 6 points. Thus, researching a technology that costs 50 food and 10 gold provides 12 points. The resources used to build or research are subtracted from your score, so the 12 points in this example actually only result in a net 6-point score increase.
- ⊕ The value of any units that are killed or converted is added to the score of the player who kills them and subtracted from the score of the player who owns them — For example, if creating a unit costs 50 food (5 points), it is worth 10 points after being created. If you kill or convert the unit, 10 points are added to your score and 10 points are deducted from your opponent's score.
- ⊕ Each 1% of the map explored = 10 points.

Multiplayer games

In a multiplayer game, you play with or against human players connected across a network, the Internet, a modem, or a serial connection. Up to eight players can connect to a game across a network or the Internet. Two players can connect to a game across a modem or serial connection.



Creating or joining a multiplayer game

You can create a game that other players can join. The player with the fastest computer should create the game.

To create or join a multiplayer game

- 1 If you are connecting across a network or the Internet, establish your connection before you start Age of Empires II.
If you are using the Zone to connect across the Internet, see “Playing Age of Empires II on the MSN Gaming Zone” later in this chapter.
- 2 Click **Multiplayer** on the main menu.
- 3 Select your connection type. The connection types listed depend on the hardware, software, and services you are using. If you are on a network and do not know which protocol it uses, check with your network administrator. Common connection types include:
 - ⊕ **IPX Connection for DirectPlay** — Connect across a network that uses the IPX protocol.
 - ⊕ **Internet TCP/IP Connection for DirectPlay** — Connect across the Internet or a network that uses the TCP/IP protocol.
 - ⊕ **Local (LAN) TCP/IP Connection** — Connect across a network that uses the TCP/IP protocol. If you choose this connection type, games automatically appear in the games list; you don’t have to click **Show Games**.
 - ⊕ **Modem Connection for DirectPlay** — Connect two computers using a 28.8-Kbps (or faster) modem.
 - ⊕ **Serial Connection for DirectPlay** — Connect two computers using a null-modem cable.
- 4 To join a game, click the **Show Games** button, click the game to join, and then click the **Join** button. Only games created with the same Age of Empires game you are using appear in the games list. For example, if you are using Age of Empires II, the games list does not display games created with Age of Empires or Rise of Rome Expansion. Also, games must be the same version; if one player has a patch version, all players must have it.

–or–

To create a game, click the **Create** button. Follow the instructions that appear on the screen for the connection type you are using. Select the game settings. For help on the settings, hold your mouse pointer over any item on the screen to display information in the lower-right corner. To discuss the game settings with the other players, type in the **Chat** box, and then press ENTER to send the message.

- 5 If you are joining a game, you can select your **Civilization**, **Player**, and **Team**.

—or—

If you are the game creator, you can select all of the settings:

- ⊕ **Name** — Shows the player names. If you are creating a game, close some of the positions in the **Name** list to limit a game to fewer than eight players. Closing a position occupied by a player ejects the player from the game. Selecting **Computer** allows computer opponents to play in the game.
- ⊕ **Civilization** — Shows each player's civilization. Each civilization has special skills and can research different technologies. For more information about each civilization's attributes, see the foldout provided with the game or the technology trees in the Appendix or in the game. More than one player can choose the same civilization.
- ⊕ **Player** — Shows the starting position on the map and color of the civilization. To change the setting, click the player number. To play a cooperative game, two or more players must select the same player number and share control of a single civilization. Each player can give unrestricted (and even conflicting) orders to all units.
- ⊕ **Team** — Shows the players who want to start the game as allies. You can select a team by clicking the **Team** number. A dash (-) in the **Team** box indicates no team. Players on the same team automatically have their diplomatic stance set to **Ally**, and **Allied Victory** is selected. If you want to prevent players from changing teams after the game starts, select the **Lock Teams** check box (in the pregame settings). Also, if this option is set, you can pay tribute only to allied players. If game teams are not locked, players can change alliances during the game by clicking the **Diplomacy** button in the upper-right corner of the screen.



- 6 When you are ready to begin the game, click **I'm Ready!**

All players must click **I'm Ready!** before the host can start the game. The names of players who are ready are shown in green. If you change your mind before the game starts, click the check box again. The game does not begin until all players are ready and the game creator starts it.

If you are the game creator, click the **Start Game** button.

Multiplayer game speed

Multiplayer games run only as fast as the slowest computer in the game. If the game seems jerky or responds slowly while you are playing, one or more players may have latency or frame rate problems.

A turtle icon appears beside the name of the player with the slowest frame rate. (To see the icon, turn on Advanced Commands by clicking the **Advanced Commands** button in the lower-right corner of the screen. Then click the **Statistics** button to show player names.) The player can drop out of the game or can try to improve performance as explained in the Readme file on the Age of Empires II CD.

A yellow or red dot appears beside the name of players with a slow Internet connection. A yellow dot indicates latency of 300 milliseconds to 1 second. A red dot indicates latency greater than 1 second. If the game is so slow that it's difficult to play, you may want to save and then restore the game (see "Restoring a saved multiplayer game" later in this chapter).

If you lose your connection during a multiplayer game, you cannot rejoin the game, but you can restore a saved game.

Saving a multiplayer game



To save a multiplayer game

Click the **Menu** button in the upper-right corner of the screen, click **Save**, and then type a name for the game or select the game to save.

Games are saved in the Savegame folder where Age of Empires II is installed.

Restoring a saved multiplayer game

Before you can restore a saved multiplayer game, at least two opposing players must be connected (this prevents cheating). To restore a multiplayer game with computer players, the original game host must host the restored game.

To restore a multiplayer game

- 1 If you are connecting across the Internet, establish your network connection before you start Age of Empires II.
- 2 On the main menu, click **Multiplayer**.
- 3 Select your connection type, as explained in "Creating or joining a multiplayer game" earlier.
- 4 If you are hosting the game, click the **Restore** button, and then choose the saved game to restore.
—or—
If you are joining the game, select the game from the games list.
- 5 Follow the instructions that appear on the screen for the connection type you are using.

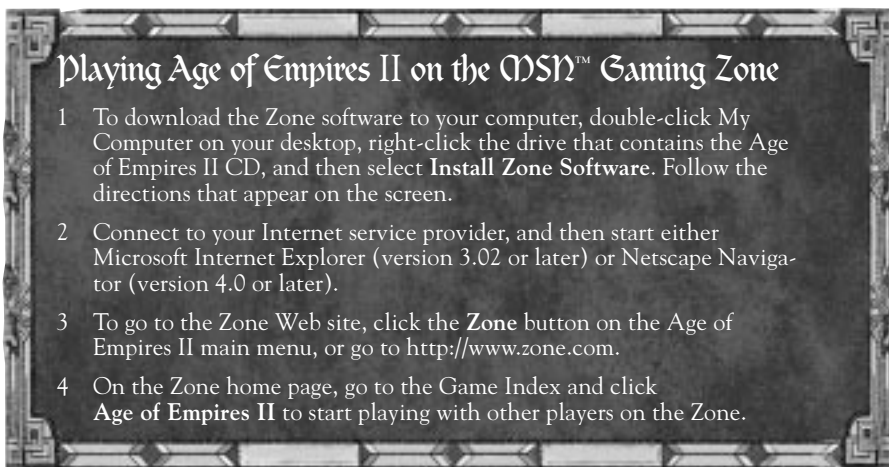
Resigning from a multiplayer game

When you resign from a multiplayer game, all units on the map become visible so you can observe the game, but you can no longer issue commands or chat with other players.



To resign from a multiplayer game

Click the **Menu** button in the upper-right corner of the screen, and then click **Resign**.



Creating custom scenarios & campaigns

Important: Age of Empires II allows you to create your own custom campaigns, scenarios, and computer player scripts. You may share these custom campaigns, scenarios, and computer player scripts for the purposes of gameplay but you may not sell or make other commercial uses of the custom campaigns, scenarios, and computer player scripts. Microsoft reserves all other rights to the editors and files.

Creating or editing scenarios

You can create your own scenarios and campaigns. When you create a scenario, you control all aspects of the game, from placing buildings, military units, and grass on the map to choosing the victory condition or conditions and writing the hints for how to win.

To create or edit a scenario

- 1 Click **Map Editor** on the main menu, and then click **Create Scenario** or **Edit Scenario**.
- 2 Click the buttons (**Map**, **Terrain**, **Players**, and so on) at the top of the Map Editor to display the settings you can customize, and then select your scenario settings.
For help using the Map Editor, hold your mouse pointer over any item on the screen to display information at the bottom of the map.
- 3 To save your scenario, click **Menu**, and then click **Save** or **Save As**.
- 4 To playtest your scenario without leaving the Map Editor, click **Menu**, and then click **Test**.
- 5 To return to the Map Editor after testing your scenario, click **Menu**, and then click **Quit Current Game**.

Creating your own campaigns

If you have created your own scenarios, you may want to put them into a campaign to share with your friends. A campaign is a group of scenarios that are played in a particular order. When you create a campaign, you control which scenarios a campaign contains and the order your friends play them. In your own campaigns, you will not be able to include the multimedia components (art, music, and text) that Age of Empires II includes between scenarios and campaigns.

To create your own campaign

- 1 Click **Map Editor** on the main menu, and then click **Campaign Editor**.
- 2 Type a new name in the **Campaign Filename** box, or select one from the list.
- 3 Select a scenario in the **Campaign Scenarios** box, and then click **Add** to include it in the campaign.
The Campaign Scenarios box lists the scenarios (in the order they will be played) in the campaign.
- 4 To change the scenario order, click a scenario in the **Campaign Scenarios** box, and then click the **Up** or **Down** button.
To remove a scenario from the campaign, select it in the **Campaign Scenarios** box, and then click **Remove**.
- 5 To save the campaign, click **Save**.

Creating computer player scripts

You can create your own computer player scripts that tell the computer what to build, how to behave, and so on. To learn more about how to do this, see the Computer Player Strategy Builder Guide (CPSB.doc) in the Docs folder on the Age of Empires II CD.



Building Your Empire

Putting your villagers to work

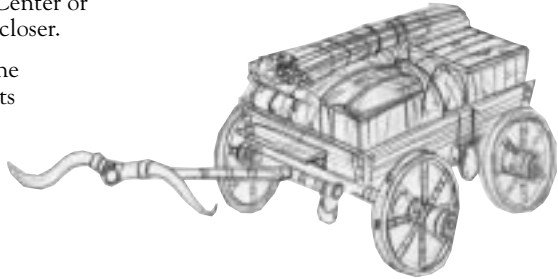
Villagers are invaluable to your civilization. Their primary function is to gather wood, food, gold, and stone from the land and deposit it in your stockpile. They also construct buildings and repair damaged buildings, boats, and siege weapons. In a pinch, they can even engage in combat. Fishing Ships also contribute to population count because their sole purpose is to fish for food.

The more villagers you have, the faster you can build up your civilization. Researching the Wheelbarrow (at the Town Center) makes villagers work faster.

When you put a villager to work, its name in the status area at the bottom of the screen indicates its current task:

- ⊕ **Farmer** — Gathers food from Farms and deposits it at the Town Center or Mill. Researching technologies at the Mill increases Farm production. Click a villager, and then right-click an expired Farm to order the villager to automatically rebuild it.
- ⊕ **Fisherman** — Gathers food from fish near the shore and deposits it at the Town Center or Mill. Fishing Ships also fish for food and deposit it at the Dock.
- ⊕ **Forager** — Gathers food from forage bushes and deposits it at the Town Center or Mill, whichever is closer.
- ⊕ **Hunter** — Kills deer and wild boar (use more than one villager because boar can be dangerous) for food and deposits it at the Town Center or Mill. Military units can also kill animals, but no food can be gathered from the carcass.

- ⊕ **Lumberjack** — Chops trees for wood. Wood is deposited at the Town Center or Lumber Camp, whichever is closer.
- ⊕ **Builder** — Constructs buildings. The more villagers assigned to a building, the faster it is built.
- ⊕ **Repairer** — Repairs buildings, ships, and siege weapons damaged in combat. To repair a building, ship, or siege weapon, click a villager, and then right-click the unit to repair.
- ⊕ **Shepherd** — Gathers food from sheep and deposits it at the Town Center or Mill. Sheep start the game neutral (gray) and unowned. As soon as a sheep enters the line of sight of a unit, the sheep is under control of that player. You can steal ownership of another player's sheep if it comes within your unit's line of sight and there are no other players' units near the sheep. Once you own the sheep, you can move it near your food drop-off location to collect food from it. If you assign a villager to gather food from a sheep, the villager will herd the sheep to the nearest food drop-off point and then kill it to collect food.
- ⊕ **Gold Miner** — Gathers gold from gold mines and deposits it at the Town Center or Mining Camp, whichever is closer.
- ⊕ **Stone Miner** — Gathers stone from stone mines and deposits it at the Town Center or Mining Camp, whichever is closer.



Stockpiling resources

Resources (wood, food, gold, and stone) are the building blocks of your civilization. Villagers gather these resources from the land and deposit them in your stockpile (shown in the upper-left corner of the screen). You use the resources in your stockpile to pay for new villagers, soldiers, buildings, and technologies as you build your empire.

- ⊕ Food is an important resource used primarily to create villagers, create soldiers, research some technologies, and advance to the next age.
- ⊕ Wood is used primarily to construct buildings, ships, and some siege weapons. It is also used to create archers and to research some technologies.
- ⊕ Stone is used primarily to build and upgrade walls and towers, Castles, and Wonders.
- ⊕ Gold is used primarily to create advanced military units and to research technologies in the later ages. You can also increase your stockpile of gold by trading with other players (see Chapter V) or garrisoning relics inside a Monastery (see Chapter IV).

You can also increase your stockpile of wood, food, gold, or stone by selling resources at the Market. In addition, other players can pay tribute to you in gold (see Chapter V).



To gather wood, food, gold, or stone

Click a villager, and then right-click a tree, forage bush (or other food source), gold mine, stone mine, or other work site.

If you select a forage bush, for example, the villager gathers as much food as he or she can carry, takes it to the Town Center and deposits it in your stockpile, and then returns to the forage bush to gather more.

The more villagers at work gathering resources, the faster your stockpile grows. Villagers can deposit the resources more quickly if you build Mills near sources of food, Lumber Camps near forests, and Mining Camps near stone and gold mines.

Researching the following technologies improves your villagers' gathering abilities: Wheelbarrow, Hand Cart (Town Center); Heavy Plow (Mill); Double-Bit Axe, Bow Saw, Two-Man Saw (Lumber Camp); Stone Mining, Gold Mining, Stone Shaft Mining, Gold Shaft Mining (Mining Camp).

Resources are gradually depleted and eventually disappear. When this happens, the villager goes to the same type of site if one is nearby or stands idle until you give new orders.



To find idle villagers

Click the **Idle Villager** button near the mini-map. Each time you click the button, your screen centers on the next idle villager, Fishing Ship, Trade Cart, Trade Cog, Transport Ship, or building with garrisoned units.

To display the resources at a work site

Click a forage bush, tree, stone mine, gold mine, or other work site. The amount of resources it contains is shown in the status area at the bottom of the screen.

Farms & Fish Traps

Farms and Fish Traps are the only renewable sources of food. A villager builds a Farm (or a Fishing Ship builds a Fish Trap) and then gathers food from it and deposits it at the Town Center or Mill (or Dock). Only one farmer can work a Farm, and only one Fishing Ship can work a Fish Trap.



To gather food from a Farm or Fish Trap

After building a Mill, click a villager, click the **Buildings** button, and then click the **Build Farm** button.

—or—

After advancing to the Feudal Age, click a Fishing Ship, and then click the **Build Fish Trap** button.

When all of the food has been collected from a Farm or Fish Trap, it expires and the villager or Fishing Ship that was working there stands idle on it. Gradually, the Farm or Fish Trap begins to disappear.



To rebuild a Farm or Fish Trap

Click a villager or Fishing Ship, and then right-click an expired Farm or Fish Trap.

Rebuilding a Farm or Fish Trap costs the same as building a new one but is more efficient because you don't need to use the Build Farm or Build Fish Trap button. When a Farm or Fish Trap expires, you hear a notification sound. To go to the location, click the **Idle Villager** button. A Farm or Fish Trap remains expired for a brief period then disappears and must be rebuilt using the Build buttons.

Constructing buildings

Constructing buildings costs wood or stone. You can build more than one of each building. For example, you might build two Lumber Camps or three Mining Camps. As you advance through the ages, the appearance of each building evolves and new military units, upgrades, technologies, and buildings become available. Allied civilizations cannot help each other construct buildings (except by paying tribute in needed wood or stone to one another).

Researching Masonry and Architecture (at the University) increases the hit points of your buildings and walls. Researching Treadmill Crane (at the University) decreases construction time. You can upgrade your Castle hit points by researching Hoardings (at the Castle). You can upgrade your Town Center, Castle, and tower range and attack by researching Fletching, Bodkin Arrow, and Bracer (at the Blacksmith).

For descriptions of the buildings you can construct, see Chapter VI.

To construct a building

- 1 Click a villager (or select a group). The more villagers assigned to a building, the faster it is built.
- 2 Click the **Buildings** button or **Military Buildings** button.
- 3 Click the button of the building to build. For example, to build a House, click the **Build House** button. To display additional buildings your villagers can construct, click the **More Buildings** button.
- 4 Click a location on the map. The building is shown in flashing red if you cannot build in a particular location.

To build more than one of the same building, hold down the SHIFT key, and then click multiple locations on the map. To build multiple walls, click a location, and then drag the pointer where you want to build walls.



To build a Gate

Advance to the Feudal Age, click a villager, click the **Military Buildings** button, click the **Build Gate** button, and then click a location on or next to an existing wall where you want to build the Gate.

Repairing buildings, ships & siege weapons

Buildings, ships, and siege weapons catch fire when they have been damaged in combat. Your villagers can repair them to their full hit points. Repairs cost a percentage of the original cost to build the ship, building, or siege weapon and are completed in a fraction of the time. Like building, repairs take less time if you use several villagers. You can also repair allies' buildings, ships, and siege weapons. The cost of repairs is deducted from the owner's stockpile. Garrisoned villagers cannot repair from inside a building.

Buildings show damage when they are attacked and their hit points are reduced. They flame when moderately damaged, automatically eject all garrisoned units when heavily damaged, and collapse when destroyed. The status area at the bottom of the screen shows how much damage a building or unit has taken. The more green in the hit point bar, the healthier your building or unit.



To repair a building, ship, or siege weapon

Click a villager (or select a group), and then right-click the building, ship, or siege weapon to repair.



Increasing your population

Before you can create new villagers, military units, and ships, you must have enough housing to support the new population. One House supports five units. The Town Center also supports five units. The Castle supports 20 units. If a House, Town Center, or Castle supporting units is destroyed, you do not lose the units it supported, but you must build new housing before you can create any new units.

The population limit set at the beginning of the game determines how many villagers, military units, or ships your civilization can support. The default population limit for most games is 75. You can increase or decrease the population limit before you start a game by changing it in the **Population** box in the pregame settings. For descriptions of the villagers, military units, and ships you can build, see Chapter VII.

Creating villagers

Villagers are created at the Town Center.



To create a villager

Click the Town Center, and then click **Create Villager**. After a few seconds, the villager appears near the Town Center.

Creating military units

Before you can create military units, you must build the appropriate military building. The Barracks is used to create infantry and is required before you can build other military buildings. The Archery Range is used to create archers, the Stable to create cavalry, and the Siege Workshop to build siege weapons. The Castle is used to create Trebuchets and the unit unique to your civilization, and the Monastery is used to create Monks.



To create a military unit

Click the Barracks, Archery Range, Stable, Siege Workshop, Castle, or Monastery, and then click the military unit to create. For example, to create a Militia unit, click the Barracks, and then click the **Create Militia** button.

After a few seconds, the military unit appears near the building or goes to the gather point you have set for it (see “Choosing where new units gather” later in this chapter).

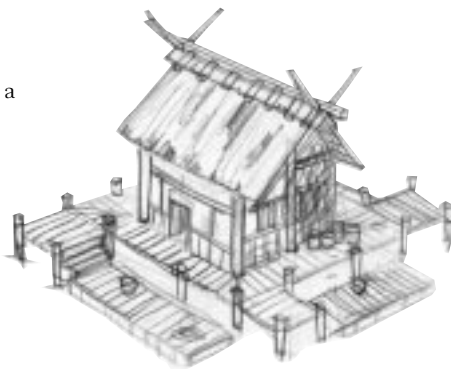
Building ships

Before you can build ships, you must build a Dock (for information about constructing buildings, see “Constructing buildings” earlier in this chapter). Docks must be built on the water near a shoreline.



To build a ship

Click the Dock, and then click the ship to build. For example, to build a Fishing Ship, click the **Build Fishing Ship** button.



After a few seconds, the ship appears near the Dock.

Creating multiple units

You can easily create multiple units.



To create multiple units

Click any unit button to add one of that unit to the production queue (shown in the status area at the bottom of the screen). Click a unit in the queue to remove it from the queue.

You can also press and hold the SHIFT key while clicking the unit's **Create** button to queue multiple units at once.

You can train different units at the same building at the same time (for example, archers and skirmishers at the Archery Range). You can queue up to 15 units. Units are created in the order they are queued. The resources are deducted from your stockpile at the time a unit is added to the queue. If you remove a unit from the queue, the resources are returned to your stockpile.

Choosing where new units gather

All buildings used to create units allow you to choose where the newly created units gather. For example, if you are creating villagers at the Town Center, you might set a gather point at a forage bush so the villagers automatically forage for food as soon as they are created. Or you can set a gather point on a military building to garrison newly created units inside that building. This feature is useful for generating a defensive army when your town is under attack, so the new units don't perish as you create them. Units garrisoned at the following buildings using gather points cannot reenter that building once you ungarrison them: Dock, Barracks, Archery Range, Stable, Siege Workshop, and Monastery.



To set a gather point

Click a building where you can create units, and then right-click where you want to set the gather point (a work site, building, or other location on the map). To move a gather point, simply set a new one.

To display the gather point for a building

Click a building where you set a gather point. A flag appears on the game map and a white X appears on the mini-map.

Deleting your units and buildings

You can delete your own units if you reach the population limit and your buildings if you need space to build other buildings. If you delete a completed building or unit, no resources are returned to your stockpile.



To delete a villager, military unit, building, or ship

Click a unit or building that belongs to you, and then press the DELETE key.

If you delete a building while it is under construction, the resources from the unbuilt portion of the building are returned to your stockpile.

Advancing to the next age

Most games begin in the Dark Age and you strive to advance through the Feudal, Castle, and Imperial Ages to improve the strength of your civilization. Advancing to the next age lets you build different types of buildings, create more powerful military units, and research more advanced technologies. Each civilization has a unique unit that can only be created starting in the Castle Age. Before you can advance to the next age, you must have enough resources to pay for the advancement and two different buildings from the current age. The buildings must be those used to create units or research technology (not Houses, Farms, towers, walls, or Gates). For example, to advance from the Dark Age to the Feudal Age, you might have a Mill and Barracks. To advance to the Imperial Age, you need two different buildings or one Castle.

Dark Age



Following the final collapse of the Western Roman Empire in the fifth century, Western Europe plunged into an extended period of barbarity, lawlessness, and economic retreat that has come to be known as the Dark Age. The infrastructure of the Romans, including public works, courts, law enforcement, education, written records, coinage, and trade, largely disappeared. Germanic invaders from north of the Rhine and Danube Rivers substituted a tribal political structure based on loyalty to local strong warriors. A gradual recovery was fostered by three main influences: exceptional leaders who stabilized large areas, the Christian Church (operating from Rome and Ireland), which preserved and spread a modicum of learning, and revitalized economies based on agriculture (especially the wool and cloth trade).

Feudal Age



The Frankish Empire assembled by Charlemagne in the ninth century can be considered the end of the Dark Age in Europe and the beginning of the Feudal Age. Barbarian tribal groups that overran much of Western Europe were giving way to better-organized regional powers. The church in Rome was providing a unifying social fabric. Charlemagne attempted to revive learning and encouraged a new interest in the arts. His empire fractured after his death, however, and new waves of barbarians undid much of his work. Political and economic power shifted away from kings to local lords who ruled within a shifting hierarchy of vassalage. The common people worked the land to support the hierarchy of nobles and churchmen above them.

Castle Age



Castles began appearing across the landscape of Europe in the ninth century as local lords sought to solidify their power. Castles protected them from neighbors and provided a safe haven from which mounted warriors could ride out and control the nearby country. Typical of the Castle Age was the conquest of Wales by Edward I of England. By placing a series of massive castles at strategic points throughout Wales, Edward accomplished his conquest with a minimum of fighting. The castles were impregnable to the scattered warriors of Wales. English soldiers inside could ride out at their leisure and control the conduct of trade, gathering of crops, and collection of taxes. The Castle Age witnessed a rise in population, economic growth, increased trade, the Crusades to the Holy Land, a new interest in the arts, the rise of knights, and the formation of great kingdoms.

Imperial Age



The rise of great kings and their quest for empire brought about the final segment of the Middle Ages that can be called the Imperial Age. The feudal system was being replaced by kings at the head of nations in England, France, Spain, and Scandinavia. Trade was booming and cities were growing in size and power. The Renaissance was underway in Italy and spreading across Europe. Technology and learning surpassed that of the ancient world. Firearms and other innovations brought an end to the military dominance of knights and castles. This end of the Middle Ages can be marked by several important events, including the Turkish capture of Constantinople, the discovery of the New World, trading contact by sea with Asia, and Martin Luther's Reformation.



To advance to the next age

Click the Town Center, and then click the **Advance to Feudal Age**, **Advance to Castle Age**, or **Advance to Imperial Age** button.

Upgrading your units

As you advance through the ages, you can pay to upgrade your existing military units, ships, walls, and towers to ones with better attack strength, defense, and speed. When you upgrade, all of your existing structures, units, or ships of a certain type are replaced with the more powerful upgrade. Any new structures you build or units you create will be the upgraded version. For example, if you create 10 Militia in the Dark Age, once you advance to the Feudal Age you can upgrade your 10 existing Militia to Men-at-Arms, which are stronger. Units that a Monk has converted cannot be upgraded; they retain the attributes they had at the time they were converted.

To upgrade military units, ships, towers, and walls

- 1 To upgrade military units, click the building where they are created (Barracks, Archery Range, Stable, Monastery, Siege Workshop, or Castle).

–or–

To upgrade ships, click the Dock.

–or–

To upgrade walls and towers, click the University.

- 2 Click the button of the unit you want to upgrade.

For example, to upgrade your Militia to Men-at-Arms, click the Barracks, and then click the **Upgrade to Man-at-Arms** button. All of your existing Militia become Men-at-Arms and the Create Militia button is replaced with the Create Man-at-Arms button.



For more information about units and the technologies that can improve them, see Chapter VII.

Researching technology

As you advance through the ages, you can research technologies to improve your civilization. For example, researching the Loom (at the Town Center) makes your villagers harder to kill. After you advance to the next age, you can research additional technologies to make your villagers work more efficiently and improve your military units. Researching technology takes time and costs resources, but after you have researched a technology your civilization immediately begins reaping its benefits.

Some technologies are related and build on each other from one age to the next. For example, in the Feudal Age, you can research Scale Barding Armor to give your cavalry units more protection from attack. In the Castle Age, you can research Chain Barding Armor, which provides your cavalry units with even more protection, and in the Imperial Age, you can make the ultimate improvement by researching Plate Barding Armor (all are researched at the Blacksmith).

For information about all of the technologies in the game, see Chapter VIII and the “Technology Costs & Benefits” table in the Appendix. For information about which technologies your civilization can research, see the foldout provided with the game or the technology trees in the Appendix or in the game.



Military Tactics

Reconnaissance

You can engage in combat on land and at sea. You can win most games by defeating your enemies in military conquest, which you achieve if you are the first player to eliminate the offensive (attack) capability of your opponents. You must destroy all units and buildings but the following: towers, walls, gates, relics, Fishing Ships, Fish Traps, Transport Ships, Trade Cogs, Trade Carts, Farms, and sheep.

Your military units, warships, and towers automatically attack enemy units within their line of sight unless you order them to attack a different unit or they are set to No Attack.

Enemy buildings and walls are not visible until you explore the area of the map where they are located. Once an area has been explored, buildings and walls remain visible. However, changes to the buildings, such as age upgrades, damage, and destruction are not visible unless the building or wall is within the sight of a villager, military unit, or ship from your civilization. Enemy villagers, military units, and ships are visible only when they attack or are within the sight of a unit from your civilization. You cannot explore beyond the edge of the map.

Researching Cartography lets allies share exploration so they can see what the others have explored. For more information about Cartography, see Chapter VIII.

Terrain

In addition to providing resources, terrain has tactical and strategic uses in combat. The types of terrain include:

- ⊕ **Water** — Impassable by land units.
- ⊕ **Shallows** — Water passable by land units and ships.
- ⊕ **Forest** — Impassable. Use villagers, Siege Onagers, and Trebuchets to cut paths through the forests.
- ⊕ **Cliffs** — Impassable by villagers and military units, who must find a different path. Units firing from above receive an attack bonus; units below incur an attack penalty.

Moving units

When you select two or more units and order them to move or attack, they automatically maneuver into logical positions to create a formation. Units with high hit points and armor are placed at the front of the formation. Ranged units are placed behind them. Weak units, such as Monks or packed Trebuchets, are then placed behind the ranged units. The entire formation moves at the speed of the slowest unit.

When you order a group to attack, it falls into a line formation. The units then break formation to attack. For example, if you order a group of archers and swordsmen to attack a target, the archers initiate the attack from a distance while the swordsmen close on the target.



To move a villager, military unit, or ship

Click a villager, military unit, or ship (or select a group), and then right-click a location.

How quickly villagers, military units, and ships move depends on the speed of the unit, the game speed (within the game, click the **Menu** button, and then click **Options**), and other units in the formation (if any) as described above.

Grouping units

Grouping lets you command several villagers, military units, or ships at the same time.



To select multiple units

Drag the pointer around the villagers, military units, or ships you want to group.

—or—

Hold down the CTRL key, and then click individual units.



To select all units of the same type that are visible on the screen

Double-click a unit. For example, to select all Skirmishers, double-click a Skirmisher.

To create a group

- 1 Drag the pointer around the units you want to group.
- 2 Hold down the CTRL key and press the number you want to assign to the group. For example, to assign the number 2 to a group, press CTRL+2. The number appears on each unit in the group.

Once a group has been assigned a number, you can just press that number to select it. For example, to select group 2, press the 2 key.



To add units to a group

Select the unit or units you want to add to the group.

Hold down the SHIFT key and press the number of the group you want to add the unit or units to (this causes both the group and the new units to be selected). Then hold down the CTRL key and press the number of the group you want to add the unit or units to.

Moving units using waypoints

You can use waypoints to order your units to go to a location using a specific path. Any mobile unit (villagers, military units, ships, and so on) can be moved with waypoints.

To move a unit with waypoints

- 1 Click a unit (or select a group).
- 2 Hold down SHIFT, and then right-click each point along the path. A waypoint marker appears at each point.
- 3 Release the SHIFT key, and then right-click the last point in the path. The unit (or group) moves along the path.



Transporting units across water

You can transport units across water by loading them on a Transport Ship. You can build a Transport Ship at the Dock. Any mobile unit (except sheep and other ships) can be loaded aboard a Transport Ship. Allied players can transport each other's units. Each Transport Ship can carry a limited number of units per trip.



To see how many units a Transport Ship can carry

Click the Transport Ship. The status area at the bottom of the screen shows how many units the Transport Ship can carry (current/maximum).

To load a Transport Ship

Click a unit, and then right-click the Transport Ship to load. The units board the Transport Ship.

To unload a Transport Ship

Click a loaded Transport Ship, click the **Unload** button, and then click a location on shore or in shallows.

Attacks

Ordering an attack



To order a military unit, villager, or ship to attack

Click a military unit, villager, or ship (or select a group), and then right-click the enemy villager, military unit, ship, or building to attack.

Attack notification

A horn notification sounds when your military units come under attack (or you initiate an attack). A bell notification sounds when your non-military units or buildings come under attack (or you initiate an attack). The horn or bell sounds once for every attack by a specific enemy within the area of the initial attack. After a brief period, the attack area is reset, and the horn or bell sounds again if the area is still under attack. Attacks outside the original area (or by different players) generate additional notifications.

Garrisoning units & relics inside buildings

You can garrison units inside buildings to protect and heal them as well as to launch surprise attacks. Garrisoned units are not damaged if the building is attacked, but they are ejected if the building suffers heavy damage or is destroyed. Garrisoned units heal automatically. You can set a gather point inside any building while its units are being created. For certain buildings, units cannot reenter the building once you ungarrison them (see Chapter III).

Units can be garrisoned in the following buildings:

- ⊕ **Town Center** — Capacity: 15 foot units. Units can be garrisoned at any time. You can garrison villagers by setting a gather point while the villagers are being created.
- ⊕ **Towers** — Capacity: 5 foot units. Units can be garrisoned at any time.
- ⊕ **Castle** — Capacity: 20 units of any type (except siege weapons). Units can be garrisoned at any time. You can garrison unique units by setting a gather point while the units are being created. Units garrisoned in the Castle heal more quickly than units garrisoned in other buildings.
- ⊕ **Barracks** — Capacity: 10 Barracks units. Units can be garrisoned only if you set a gather point there while the units are being created.
- ⊕ **Archery Range** — Capacity: 10 Archery Range units. Units can be garrisoned only if you set a gather point there while the units are being created.
- ⊕ **Stable** — Capacity: 10 Stable units. Units can be garrisoned only if you set a gather point there while the units are being created.

- ⊕ **Siege Workshop** — Capacity: 10 siege weapons. Units can be garrisoned only if you set a gather point there while the units are being created.
- ⊕ **Dock** — Capacity: 10 ships. Ships can be garrisoned only if you set a gather point there while the ships are being created.
- ⊕ **Monastery** — Capacity: 10 Monks. You can also garrison relics inside the Monastery. Monks can be garrisoned only if you set a gather point there while the Monks are being created.

A flag appears on buildings with garrisoned units. You and your allies can see the flags. Allied players can garrison units inside each other's buildings (and ungarrison them at will). Units are automatically ejected if allied players change their diplomatic stance.

Ranged units and villagers can attack while garrisoned. To see the additional attack strength of a Castle or tower with garrisoned units, click it and look in the status area at the bottom of the screen. The number in parentheses after the attack strength is the bonus for garrisoned units. Castles and towers have a minimum range from which they can attack. To eliminate the minimum range, you can research Murder Holes (at the University). Barracks, Archery Ranges, Stables, Siege Workshops, Docks, and Monasteries never attack, even when units are garrisoned inside them.



To garrison units

Click a unit (or select a group), hold down the ALT key, and then right-click a Castle, Town Center, or tower.

To garrison relics

Click a Monk holding a relic, and then right-click the Monastery.

To ungarrison all units or relics

Click a building, and then click the **Ungarrison** button.

To ungarrison a particular unit

Click the unit in the status area at the bottom of the screen.

To eject all units except one

Hold down CTRL, and then click the unit to remain garrisoned.

To eject all units of the same type (for example, all villagers)

Hold down SHIFT, and then click the type of unit to ungarrison.

To eject all units of a different type (and leave only one type of unit in the building)

Hold down CTRL+SHIFT, and then click the type of unit to remain garrisoned.

Ringing the town bell

Ringing the town bell (at the Town Center) causes all of your villagers to garrison inside the nearest available building for protection. If there is not enough room for all the villagers, the remaining villagers continue what they were doing when the bell rang.



To ring the town bell

Click the Town Center, and then click the **Ring Town Bell** button.

To sound the “all clear,” click the **Ring Town Bell** button again.

All villagers garrisoned by the original town bell are ungarrisoned and return to what they were doing before the bell rang. If this is not possible (for example, if a villager was constructing a building that was destroyed in combat), the villager returns to the location and stands idle.

Converting enemy units & buildings

You can use Monks to convert enemy units and buildings to your civilization (player color) so you can control them. For example, if you convert enemy villagers, you can gather wood using them. If you convert an enemy Barracks, you can create infantry there. Non-upgraded Monks can convert enemy villagers, ships, and nonsiege military units. If you research technology at the Monastery, they can also convert most buildings, all siege units, and enemy Monks. Units that you convert count toward your population.



To convert an enemy unit or building

Click a Monk, and then right-click the enemy unit or building to convert.

Monks can convert most enemy units from a distance; however, they must stand adjacent to buildings, rams, and Trebuchets to convert them. There is a random chance that the conversion will fail. After a successful conversion, Monks must rest before attempting another conversion. Monks cannot convert Town Centers, Castles, Monasteries, Farms, Fish Traps, walls, Gates, or Wonders or allied units or buildings.

For more information about improving your Monks' powers, see Chapter VII.

Monks do not automatically convert units within their sight unless they are attacked. You must order a Monk to convert a unit. The Monk then attempts to convert the unit as soon as it is within range. When the Monk has converted a unit, he stands idle until given another command. There is a random chance that the Monk will fail to convert a unit. Monks must rejuvenate their strength after a successful conversion. The rejuvenation percentage is shown in the status area at the bottom of the screen.

You can convert and use a building you have not constructed, but converted units and buildings maintain their attributes (attack, range, and so on) at conversion; they cannot be upgraded. A Monk ordered to convert an enemy unit in a formation will convert only that unit and not the entire formation.

Healing friendly units

You can use Monks or garrisoning to heal your units, which restores their original hit points.



To heal a villager or military unit

Click a Monk, and then right-click the friendly unit to heal.

Monks can heal the hit points of wounded villagers and military units from their own and allied civilizations. Monks near wounded units automatically start healing them. Multiple Monks heal faster than a single Monk. They do not need to rejuvenate after healing as they do after conversions. Monks cannot heal buildings, ships, or siege units, but villagers can repair them (see Chapter III). You can also heal units by garrisoning them inside buildings. For more about garrisoning, see “Garrisoning units and relics inside buildings” earlier in this chapter.

When a Monk is part of a formation, it automatically starts healing all of the injured units in the formation when the formation is idle.

Ordering units to patrol, guard, or follow

You can order your military units to patrol an area, guard a unit or building, or follow a friendly or enemy unit. How the units respond to the enemy while performing these activities is determined by the combat stance you choose.

Patrol

Patrol units protect an area that you designate. Patrol units attack enemy units that enter their sight, but they do not stray farther from the patrol route than their sight. They return to their patrol route after engaging the enemy.



To order a unit to patrol

Turn on advanced commands by clicking the **Advanced Commands** button in the lower-right corner of the screen. Then click a unit, click the **Patrol** button, and then click the area to patrol. The unit will patrol back and forth from its starting point to the patrol point you select.

To order a unit to patrol in a pattern

Click a unit, click the **Patrol** button, and then hold down the SHIFT key while clicking the waypoints to patrol. Release the SHIFT key to set the last waypoint. If you set the last waypoint on the patrolling unit, the unit travels in a loop; if you set the last waypoint on the ground, the unit retraces its steps, patrolling back and forth. For more information about waypoints, see “Moving units using waypoints” earlier in this chapter.

Guard

Guard units position themselves so the unit or building they are protecting is within their sight. Guards attack any units that attack or enter the sight of the unit or building they are protecting. However, they only attack if they can do so without losing sight of the unit or building they are protecting.



To order a unit to guard

Turn on advanced commands by clicking the **Advanced Commands** button in the lower-right corner of the screen. Then click a unit, click the **Guard** button, and then click the unit or building to guard.

Follow

Following units follow an allied or enemy unit by trailing it at the maximum distance allowed by their sight. For example, you might set a Scout Cavalry unit, which has a long line of sight, to follow a foot soldier, which has a short line of sight, so you can spot an enemy unit sooner.



To order a unit to follow

Turn on advanced commands by clicking the **Advanced Commands** button in the lower-right corner of the screen. Then click a unit, click the **Follow** button, and then click the unit to follow.



Combat stances

You can decide how a military unit responds in combat situations.

To use the following stances, turn on advanced commands by clicking the **Advanced Commands** button in the lower-right corner of the screen.

- ⊕ **Aggressive Stance** — Most newly created units have this stance by default. Aggressive units attack any enemy unit or building within their sight and do not retreat until they or the enemy have been destroyed. There is no limit to how far aggressive units pursue the enemy.
- ⊕ **Defensive Stance** — Units attack enemy units within their sight but pursue them only a short distance. When a defensive unit can no longer engage enemy units from within its boundaries, it returns to its original location or resumes the task it was performing. If a defensive unit is attacked by a ranged unit from outside its sight, the defensive unit takes damage without responding or fleeing. Defensive units also ignore enemy attacks while moving to a player-assigned location.

- ⊕ **Stand Ground Stance** — Units attack enemy units that enter their range but do not move from their location, even if attacked. If they are on patrol and sight an enemy, they continue to patrol. If they are guarding a unit that is attacked, they engage the attacker only if they can do so without moving from their position.
- ⊕ **No Attack Stance** — Units do not move and do not attack, even if they are attacked.



To set the combat stance

Click a unit, and then click the **Aggressive** button, **Defensive** button, **Stand Ground** button, or **No Attack** button.

Formations

Ordinarily, when you select a group of military units and command them to move, they automatically form into a line or column depending on the distance they are traveling. When you order a group to attack, they fall into a line formation. The units then break formation to attack. For example, if you order a group of archers and swordsmen to attack a target, the archers initiate the attack from a distance while the swordsmen close on the target.

If you prefer, you can choose locked formations for your group to use.



Creating Formations



To create a locked formation

Click the **Advanced Commands** button in the lower-right corner of the screen, select two or more military units, and then select the type of formation to create.

Once you select a locked formation, the selected units will stay in that formation until you disband the formation or choose a different formation to use.

Units with high hit points and armor are placed at the front of the formation. Ranged units are placed behind them. Weak units are placed behind the ranged units. The entire formation moves at the speed of the slowest unit.

Formations and combat stances

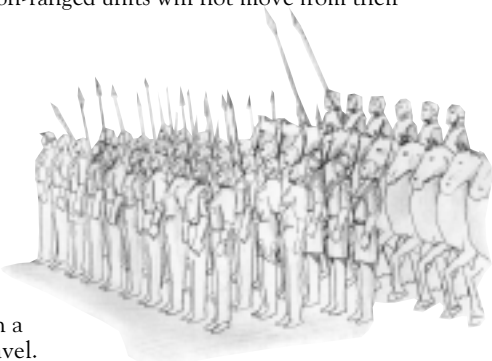
In a locked formation, the combat stance you choose affects how the formation acts. When a formation contains ranged and non-ranged units, the primary purpose of the non-ranged units is to protect the ranged units.

- ⊕ **Aggressive** — When the units reach their target they all move into range and attack.
- ⊕ **Defensive** — In a formation with ranged and non-ranged units, non-ranged units will not attack their target unless they are very close to the enemy and will return to protect ranged units. In a formation containing only non-ranged units, they will all attack.
- ⊕ **Stand Ground or No Attack** — Non-ranged units will not move from their position.

Formation types

Units can be placed into the following locked formations:

- ⊕ **Line** — Units are placed shoulder to shoulder; the formation is wider than it is long. If attacked, the line turns to face the threat. If at rest (without current orders), units form a line facing the direction of their travel. This formation works well when you have a group of swordsmen and archers. The archers fall in line behind the swordsmen for protection.
- ⊕ **Box** — Units form a square. Weak units are protected in the middle of the box. This formation works well for protecting Monks or siege weapons in the center of the box with swordsmen or cavalry surrounding them.
- ⊕ **Staggered** — A spread version of a Line formation, where the units have space between them to mitigate damage by siege units that may be caused when units are too close together.
- ⊕ **Flank** — Units divide into two subgroups with distance between them and attempt to surround the enemy when attacking.





Diplomacy & Trading

Choosing your allies & enemies

You can choose your diplomatic stance toward other players. Changing your diplomatic stance does not change other players' stances. For example, if you set your stance toward another player to **Ally**, he may still have his diplomatic stance toward you set to **Enemy**. He will attack; your units will not. In general, if you change your stance to **Enemy** against a computer player, the computer player will do the same thing.

Players can change their diplomatic stances during the game unless they are locked.

To choose your diplomatic stance toward others

- 1 Click the **Diplomacy** button in the upper-right corner of the screen.
- 2 Select how you regard each player:
 - ⊕ **Ally** — Your units defend the units and buildings of allied players as if they were your own. You cannot attack allied units or buildings.
 - ⊕ **Neutral** — Your units ignore the units and buildings of neutral players unless you order them to attack. If your units are attacked by neutral units, your units defend themselves.
 - ⊕ **Enemy** — Your units attack the units and buildings of enemy players who enter their sight. Scouts and Monks do not attack on sight.

Team games

In a team game, you and other players can join forces to win the game. If any of the allied players achieve the victory condition or conditions, the entire team wins the game. Playing a team game has several advantages. Allies can garrison units inside each other's buildings, open and close each other's gates, send signals, and share exploration (by researching Cartography at the Market). Also, each civilization has the advantage of its unique team bonus. When any player advances to the next age, other players are notified with an on-screen message.



Choosing your allies

You can choose your allies before you start a game or while you are playing. If you choose your allies before starting a game, the game automatically sets your diplomacy settings and sets the chat interface to send messages to all allies, and allied Town Centers are visible on the map when you start the game.



To choose your allies before you start a game

Click the **Team** button to select the same team number as your allies.

The game automatically sets your diplomatic stance to Ally and selects Allied Victory. If you want to prevent players from changing teams after the game starts, select the **Lock Teams** option under Game Settings. Also, if this option is selected, you can only pay tributes of resources to allied players.

To choose your allies after you start a game

- 1 Click the **Diplomacy** button in the upper-right corner of the screen.
- 2 Click the **Ally** button for each civilization on your team. All players who want to be allies must do this.
- 3 Click **Allied Victory**. All players who want to pursue an allied victory must do this.

Signaling allies

In a multiplayer game, you and your allies can send each other signals to show where you've discovered resources or need reinforcements.



To signal allies

Click the **Signal Allies** button, and then click a location on the map or on the mini-map.

Your allies see an X on the mini-map in the location you clicked and hear a notification sound.

Sending tribute to other players

If you build a Market, you can instantly transfer a tribute of wood, food, gold, or stone from your stockpile to another player. This is a good way to encourage a player to join forces with you, help an ally who needs more resources to advance to the next age or to build a Wonder, or try to buy off an impending attack.

There is a 30 percent fee to send tribute to other players. For example, if you send a tribute of 100 gold, 130 gold is deducted from your stockpile (100 goes to the player and 30 is lost). You can reduce this fee by researching Coinage and Banking (at the Market).



To send tribute to other players

- 1 Click the **Diplomacy** button in the upper-right corner of the screen.
- 2 Click the **Wood, Food, Gold, or Stone** button beside the name of the player who is to receive the tribute.
Each time you click the resource button, 100 is added to the tribute amount (shown on the button). The amount in your stockpile (after the tribute) is shown at the top of the column. If you click the button when you have less than 100 of any resource, the amount in your stockpile (minus the transaction fee) is added to the tribute.
To cancel the tribute without sending it, click **Clear Tributes**.
- 3 To send the resources to the other player, click **OK**.

Trading

There are two ways to trade — buying and selling resources for gold and establishing trade routes with other players.

Buying & selling resources

Commodity trade lets you buy and sell wood, food, and stone in your stockpile for gold. You trade commodities at the Market as if it were a bank. For example, if you have a lot of stone in your stockpile, but you need gold to advance to the Imperial Age, you can sell some of your stone for gold. Or if you have a lot of gold, but you really need wood to rebuild your navy, you can use the gold to buy some wood.

You buy and sell commodities in lots of 100 at the current exchange rate. The price to buy or sell each commodity fluctuates according to which resources all players in the game are buying and selling the most. For example, wood costs less if players are selling a

lot of it and costs more if players are buying a lot of it. The exchange rate is updated following each transaction. You can reduce your commodity transaction fee, and thus increase Market vigor, by researching Guilds (at the Market).

To buy or sell commodities for gold

- 1 Build a Market.

- 2 Click the Market.

The buttons in the lower-left corner of the screen show the current exchange rate to buy or sell a commodity. For example, if the **Sell Wood** button displays 70, you can sell 100 wood to gain 70 gold. The price on the button reflects the current rate (in gold) minus the transaction fee.

- 3 Click the button of the resource to buy or sell.

The wood, food, gold, or stone is automatically deducted from or added to your stockpile.

Establishing trade routes

You can establish trade routes with other players to generate gold. You can trade across land using Trade Carts and Markets or by sea using Trade Cogs and Docks. Trade Carts can only trade at Markets and Trade Cogs can only trade at Docks. You can trade with any player (allied, neutral, or enemy), but if you trade with your enemies your trade units are likely to be attacked. The longer the trade route, the more gold you receive.

Trading with other players generates gold as profit from establishing and maintaining a trade route. No resources are actually traded from your stockpile.

Trade also works with gather points: If you set a gather point from a Dock or Market on a foreign Dock or Market, trade units will start trading automatically when produced. For more information about gather points, see Chapter III.

If enemy units attack a trade unit, it retreats temporarily and then attempts to continue along its route. If the foreign Market or Dock on the trade route is destroyed, the Trade Cart or Trade Cog returns to the Market or Dock where it received its trade goods and awaits orders. Trade units can only return gold to locations owned by their player, not allies.

The gold a trade unit is carrying back from a foreign Market or Dock is shown in the status area at the bottom of the screen when that trade unit is selected.

To establish a trade route

- 1 Build a Trade Cart at the Market, or build a Trade Cog at the Dock.

- 2 Click the Trade Cart or Trade Cog, and then right-click a foreign Market or Dock to trade with.

The Trade Cart or Trade Cog travels to the foreign Market or Dock with a load of trade goods, picks up a load of gold (profit from the trade goods), and returns to your Market or Dock to deposit the gold in your stockpile. The trade unit continues to travel back and forth along the trade route unless you send it to a different location or it is destroyed or converted by the enemy.

Chapter VI



Buildings

The buildings you construct determine the types of soldiers you can create and which technologies you can research to improve your civilization. For example, you need a Barracks to create and upgrade infantry units and a Blacksmith to improve their attack strength and armor. Economic buildings, such as the Town Center and Mill, support your civilization and improve your economy. For example, you use the Mill to deposit food and to research technologies that improve your Farms' food production.

You can improve the line of sight of all of your buildings by researching Town Watch and Town Patrol (at the Town Center) and strength by researching Masonry and Architecture (at the University). Towers and some other buildings also have other technologies that improve them.

For more information about constructing buildings, see Chapter III. For information about technologies to improve your buildings, see Chapter VIII.

Economic buildings

Economic buildings support your civilization and improve your economy.



Town Center

The Town Center is the hub of your civilization. It lets you do the following (for more information, see Chapters III and IV):

- ⊕ Create new villagers.
- ⊕ Deposit all resources (wood, food, gold, and stone) into your stockpile.
- ⊕ Advance to the next age.
- ⊕ Research technology that improves your villagers and buildings.
- ⊕ Ring the town bell to garrison villagers safely inside during enemy attack.

Each Town Center supports 5 population units and can garrison 15 villagers or soldiers inside for protection and healing. Town Centers with garrisoned units also fire arrows at enemy soldiers. After you advance to the Castle Age, you can build additional Town Centers near remote resources to expand your civilization. Town Centers cannot be converted by enemy Monks.

You can improve the damage and range of your Town Centers by researching Fletching, Bodkin Arrow, and Bracer (at the Blacksmith); line of sight by researching Town Watch and Town Patrol (at the Town Center); and hit points, armor, and accuracy by researching Masonry, Architecture, and Ballistics (at the University).

All villages and towns had an administrative center that was the seat of governmental power and leadership. During the Dark Ages this might have been the local leader's home. Later it might have been the town hall or local lord's manor house. The town center was often the place where important supplies were stored, especially food surpluses. The destruction of the town center usually meant the loss of the town's governmental infrastructure. If this could not be restored, the town or village ceased to function.

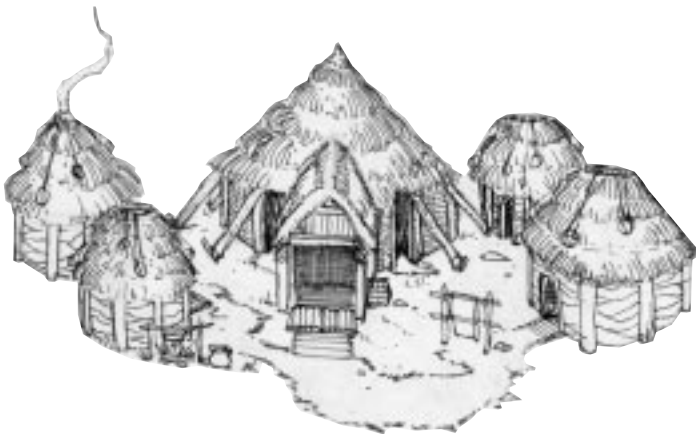


House

Houses support the population of your civilization. The more Houses you have, the larger your population can grow. Each House supports 5 population units. Before you can create new villagers, military units, ships, or Trade Carts, you must have enough Houses to support them.

The population indicator (top of the screen) shows your current/supportable population. It flashes when you need to build more Houses. For more information about population, see Chapter III.

During the Middle Ages in Europe, peasants often kept farm animals in a separate room or on the ground floor of their houses. Merchants and craftsmen also used ground floors as a place of business with living areas above. Lords lived in larger manor houses with kitchens separated to reduce the risk of fire. The homes of lords in the Dark Ages were fortified before the advent of castles.





Mill

The Mill is used to deposit food and research technology that improves the food production of your Farms. Build Mills near sources of food to gather food faster. You must have a Mill before you can build Farms or a Market.

One of the early industrial enterprises of the Middle Ages was the grinding Mill. Handed down from antiquity, this technology greatly sped the otherwise backbreaking process of grinding wheat and other grains into flour. Mills used water, wind, and animal power to turn the grinding stone. Grain was converted into flour and the mill owner kept a percentage of the flour as compensation. Mills might be owned by a local lord, a monastery, or a local entrepreneur. The profits of mills led to conflict and competition, and the right to grind grain for a community had to be paid for and defended. Millers could become modestly wealthy. They became part of the rising middle class of merchants and craftsmen that grew in importance as the Middle Ages progressed.



Farm

Farms provide a renewable source of food. Farms are built by villagers, who then gather food from them. Each Farm provides a limited amount of food before it goes fallow and must be rebuilt. To rebuild a Farm, select a villager, and then right-click the expired Farm. Only one villager can work each Farm. Before you can build Farms, you must build a Mill. Farms cannot be converted by enemy Monks. You can farm enemy Farms that have been abandoned.

You can increase the production of your Farms by researching Horse Collar, Heavy Plow, and Crop Rotation (at the Mill).

The technology of farming was carried forward into the Middle Ages and improved. Northern European soils were often rich glacial deposits hidden under dense forests. Over the course of the Middle Ages, much of this land was cleared and converted into farms. Key technology improvements in farming were the improved horse harness, the heavy plow, and crop rotation. The new horse harness did not choke the animal and increased pulling power. The heavy plow could cut into the dense soils. Farms in Europe were largely communal affairs where each family received the produce of several rows in the field. The production of some rows went directly to the local lord as his rent



Mining Camp

The Mining Camp is used to deposit stone and gold and research your stone and gold mining. Build Mining Camps near stone or gold mines to gather these resources faster.

Mining continued throughout the Middle Ages, especially for iron, salt, copper, tin, gold, coal, and silver. The invention of gunpowder greatly increased demand for

sulfur and saltpeter. By 500 AD, valuable surface deposits were rare and mines had to be driven into the earth. The desire to improve mining productivity and safety led to many important technology improvements. Early tramways for pulling ore carts out of mines foreshadowed railroads of the future. The demand for more powerful mine shaft pumps to pull out water and push in fresh air eventually led to steam engines.



Lumber Camp

The Lumber Camp is used to deposit wood and research wood-gathering improvements. Build Lumber Camps near forests to gather wood faster.

The great forests of Dark Age Europe were an important natural resource that was converted into wood for building and firewood for fuel. Lumber was cut from tree logs at a lumber camp. The early lumber camps were highly labor-intensive. A log was laid perpendicular to the ground above a pit. With one man above ground and one in the pit, a long iron saw was used to rip boards from the log. In the Middle Ages, better technology was developed to use water or animal power to drive iron saws and increase productivity.



Dock

The Dock is used to build ships, research naval technology, and trade with other civilizations. It is also where Fishing Ships deposit food. Dock units can be garrisoned inside the Dock if you set a gather point there while the units are being created. They cannot reenter once ungarrisoned. For more information about the ships you can build, see Chapter VII. For more information about trading, see Chapter V.

The emergence of deep-draft merchant ships led to the construction of docks where these ships could tie up and unload. Ships of this new design could not be dragged ashore easily for unloading. Associated with docks were the shipyards where ships were built.



Fish Trap

Fish Traps provide a renewable source of food. Fish Traps are available in the Feudal Age, after you build a Fishing Ship. Fish Traps are built in the water by Fishing Ships, which then gather food from them. Only one Fishing Ship can gather from a Fish Trap at a time. Each Fish Trap provides a limited amount of food before it collapses and must be rebuilt. When a Fish Trap collapses, the Fishing Ship assigned to it moves to the Fish Trap and becomes idle. To rebuild the Fish Trap, select the Fishing Ship, and then right-click the expired Fish Trap.

Dried and salted fish were valuable commodities in the Middle Ages because they were a source of protein that could be transported and stored. Cod caught off Iceland and Norway was an especially valuable resource. Fishing technology improvements included the fish trap that allowed the netting of fish migrating up rivers and in coastal areas.



Market

The Market lets you trade by land with other players, buy and sell resources, and offer resources to other players as tribute. It is also used to research technology that improves your communication with allies and decreases the cost of commodity trading and tributes. You must have a Mill before you can build a Market. For more information about the Market, see Chapter V.

As the Dark Ages gave way to better economic conditions, the exchange of produce and craft goods increased. Towns of all sizes set aside an area for a market where farmers and tradesmen could set up stalls for selling their merchandise. One or more days each week were designated market days and became the social highlight of the typical workweek. The market was also a place for the exchange of ideas, entertainment (bards, acrobats, musicians), and the spreading of news.



Blacksmith

The Blacksmith lets you improve the attack strength and armor of your infantry, archers, cavalry, and

towers. You must have a Blacksmith before you can build a Siege Workshop.

Iron-working technology had been learned by the barbarian tribes of Europe prior to the fall of Rome and was carried forward into the Dark Ages. Iron working was done at the blacksmith, named partially for the black iron worked there and for the black soot that covered the workers each day. At the blacksmith iron was forged and hammered into tools, weapons, shields, and armor. The ability to make superior weapons and armor became a highly prized and well-rewarded skill. Blacksmiths, armorers, and weapon makers moved into the rising middle class.



Monastery

Monasteries let you create Monks and improve their ability to heal the wounded and convert the enemy. Monasteries cannot be converted by enemy Monks. Relics garrisoned inside a Monastery provide a continuous supply of gold for your stockpile, as explained in Chapter IV. Gathering all relics is one way to win a game (see Chapter II). Monks can be garrisoned inside the Monastery if you

set a gather point there while the Monks are being created. They cannot reenter once ungarrisoned.

Monasteries were closed religious communities to which particularly devout priests, scholars, and believers withdrew for a life of prayer, study, and service. Monastic life was embraced by several religions, including Christianity and Buddhism. Residents of monasteries became known as monks. In parts of Dark Age Europe, monasteries were the only remaining centers of learning. Irish monks, for example, were instrumental in preserving much ancient knowledge and spreading it back into Europe as the Dark Ages waned. Over time monasteries grew rich in donated land. They became very important local institutions as a source of educated men who could serve as administrators. They also provided health care and emergency relief from their stockpiles of food.



University

The University lets you research technology that improves your buildings, towers, walls, and missile weapons.

During the bleakest days of the Dark Ages, learning was all but extinguished in much of Europe. A scattering of priests and monks in isolated monasteries carried forward the ability to read and write and kept books alive by copying old manuscripts. Charlemagne attempted to reverse this trend by creating a school to train men who could help him control his empire, but this experiment largely disappeared under a new wave of barbarian invasions from the north and east. The first centers of higher learning were associated with great cathedral towns such as Cambridge, Oxford, Padua, and Paris. Future priests and church leaders received training in Latin, the Bible, Christian philosophy, and other Christian writings. Medicine, science, and mathematics did not enter the curricula until much later. Graduates of these first universities led the Church and provided a pool of educated men who served generations of European kings as advisors and administrators.



Wonder

Building a Wonder of the World demonstrates the superiority of your civilization. A Wonder is expensive and requires a lot of time to build. In most games, constructing a Wonder that stands for a certain period of time wins the game.

One distinguishing cultural characteristic of the great Middle Age civilizations was architecture. Buildings in Japan, Scandinavia, Britain, Constantinople, and Arabia looked quite different and employed different construction techniques. In many cases, particularly noteworthy buildings stand as icons for the building civilization, marking it for all time as a culture that achieved greatness, if only temporarily. Examples of such Middle Age cultural icons are the Cathedral at Chartres, Charlemagne's Palace, and the Hagia Sophia at Constantinople.

Military buildings

Military buildings are used to create, upgrade, and improve your military units.



Barracks

The Barracks is used to create and improve infantry. Barracks units can be garrisoned inside the Barracks if you set a gather point there while the units are being created. They cannot reenter once ungarrisoned. You must have a Barracks to build an Archery Range or Stable.

Weapons were made and stored and soldiers drilled in the barracks. During the late Middle Ages, the barracks was incorporated within a castle complex. It became also the part of the castle where professional soldiers lived, ready to help defend the castle or maintain order in the surrounding countryside.



Stable

The Stable is used to create and improve cavalry. Stable units can be garrisoned inside the Stable if you set a gather

point there while the units are being created. They cannot reenter once ungarrisoned. You must have a Barracks before you can build a Stable.



As the Middle Ages continued, the rise in importance of mounted warriors created demand for large numbers of horses, which were bred and maintained at the stable. A variety of horses were bred, including horses for long-distance travel, fast horses for quick movement, and the heavy charger. Scout and light cavalry units needed quick horses with lots of stamina. Heavy chargers of great strength were required to carry fully armored knights into a charge. Mounted warriors trained at the stable as well, learning the skills of fighting from horseback with spear, lance, sword, flail, mace, and hammer. In other parts of the world, camels and elephants were bred and maintained for mounted combat.



Archery Range

The Archery Range is used to create archers. Archery Range units can be garrisoned inside the Archery Range if you set a gather point there while the units are being created. They cannot reenter once ungarrisoned. You must have a Barracks before you can build an Archery Range.

Missile weapons like the bow carried over into the Middle Ages from ancient times in most areas of the world. Northern Europe was an exception for many centuries because the dense forests of the region nullified the range advantage of bows. Throwing weapons like axes, javelins, and knives were more popular there. As the forests were cleared, use of the bow spread. Training with missile weapons took place at the archery range. The training of bowmen was especially favored in England, where every town had an archery range and competitions were held each week to encourage practice. From its large pool of archers, England could easily recruit several thousand expert longbowmen for armies going to France. As crossbows and early firearms came into use, men were trained to operate these weapons at a modified archery range.



Castle

Costly and time-consuming to construct, the Castle is the strongest defensive structure. At the Castle you can create and upgrade your civilization's unique unit and create the powerful Trebuchet siege engine. Several important military technologies can also be researched at the Castle.

A Castle supports 20 population units and can garrison 20 villagers or military units (except siege weapons). Units can be garrisoned at any time. You can garrison unique units by setting a gather point while the units are being created. Units garrisoned in the Castle heal more quickly than units garrisoned in other buildings.

The first castles appeared in Europe in the ninth century as an improvement of the local lord's stronghold. Castles were tactically defensive but strategically offensive. Because they were so difficult to capture if adequately defended, they provided a secure base from which a mobile force of warriors could extend political control. A local lord installed himself inside with a professional force of fighting men to serve him. Castles spread across Europe in the tenth and eleventh centuries in response to weak central authority and barbarian raids from the north and east. Kings spent the rest of the Middle Ages trying to take back control of castles raised by local lords. The development of dependable mobile heavy artillery in the fifteenth century finally made castles obsolete.



Siege Workshop

The Siege Workshop is used to build siege weapons. Siege Workshop units can be garrisoned inside the Siege Workshop if you set a gather point there while the units are being created. They cannot reenter once ungarrisoned. You must have a Blacksmith before you can build a Siege Workshop.

The construction of castles and fortified towns created demand for artillery engines that could knock down walls and open the fortification to assault by troops. Without such artillery weapons, the taking of a castle required a long and costly siege that eventually starved the defenders into surrender. The ability to lay siege was constrained by the length of the campaigning season, the cost of providing supplies to a besieging army, the losses from disease in camp, and weather. Battering rams, trebuchets, and other siege engines were used to break into the fortification quickly and decide the issue. Siege engines were built at a siege workshop.



Gate

Gates allow your units to pass through walls. You can build Gates over existing walls, and you can lock or unlock your Gates. You might lock a Gate during an attack to prevent it from opening accidentally when a friendly unit approaches. Gates automatically open and close for you and your allies unless they are locked.



To lock and unlock Gates

Click a Gate, and then click the **Lock Gate** or **Unlock Gate** button in the lower-left corner of the screen.

Gates were built into walls to allow access to a fortification. Because gates could be the most vulnerable part of a defensive position, extra care was taken to make them strong. A common type of gate was the portcullis, a heavy metal grid that was raised by a winch. The portcullis was in place by grooves in the stonework of the gateway and by its own weight. A long narrow passage, open from above, was usually placed behind the portcullis. Attackers who managed to get past the gate would then remain vulnerable to fire from soldiers in the narrow passage.



Palisade Wall

Palisade Walls are wooden walls that are cheap and fast to build. You can construct them on the battlefield as temporary barriers to slow down your enemies and warn you of their approach.

Barbarian tribes were migrating across Europe during the Dark Ages, being displaced by other migrations from the East and searching for land to settle. Warrior bands roamed the landscape seeking plunder. In these turbulent times, defensive precautions were taken. Villages were fortified with palisades — walls built of wood. Although stone walls were preferable, wood was abundant and easy to use, and a palisade could be erected in a fraction of the time a stone wall would take. At night the villagers would bring all their livestock, goods, and tools inside the palisade for protection.



Stone Wall

Stone Walls are stronger than Palisade Walls but more expensive. They slow down your enemies and give you the chance to fend them off. You can upgrade your Stone Walls to Fortified Walls at the University.

Larger and more advanced civilizations upgraded their defenses to stone walls when they could. A well-built stone wall offered protection against raiders because it could be broken down only by a determined effort. To capture a walled town or castle might require a long siege or a battering by powerful siege engines. Stone walls were expensive and time-consuming to build but worth the cost when guarding valuable locations. One famous set of stone walls from the Middle Ages were those guarding the land approaches to Constantinople. These walls withstood intermittent assault over a period of a thousand years. They were partly responsible for

deflecting barbarian tribes from the north and east toward Rome, even though Constantinople may have been a more attractive prize. The other famous stone wall of the Middle Ages was the Great Wall of China. Originally constructed in ancient times, it was extended and rebuilt in places by several dynasties. The frontier of China was so long that the Great Wall could not be defended sufficiently to be a shield. It did serve to provide warning of Mongol attack. Most importantly, it slowed the advance and withdrawal of raiders across the frontier, giving the imperial armies a chance to intercept.



Fortified Wall

Fortified Walls are stronger than Stone Walls but expensive to upgrade and slow to build. In Age of Empires II, Fortified Walls do not shoot at enemies. However, the reinforced stone is difficult to breach without siege weapons.

The fortified wall was an upgrade of the stone wall accomplished by building fighting positions into the wall so that defenders could be more effective in repulsing assaults. Strong points and bastions allowed defenders to shoot at enemies at the base of wall, where they might otherwise be safe. The three lines of stone walls outside Constantinople were fortified with hundreds of towers, helping to make the defenses impregnable until the advent of cannon.



Outpost

Outposts are stationary watch points that give you advance warning of enemy activity nearby. They have a long line of sight, which can be made longer by researching technologies at the Town Center. Unlike the other towers, Outposts do not attack or allow you to garrison units inside.

The world of 500 AD was far less populated than the world of today, and there were great expanses of empty and desolate land. To keep watch at the frontier, lords established outposts that would provide early warning of attack and report movements of settlers and trade caravans. As the land became more populated and more settled, outposts were replaced by establishing castles and communities on borders.



Watch Tower

The Watch Tower is a simple stone tower that automatically attacks enemy units and buildings within its range. Units can garrison inside for protection and to add additional attack strength to the tower. You can upgrade your Watch Towers to Guard Towers at the University.

Some of the earliest fortified stone structures were simple watch towers. From the watch tower a local lord could keep a large area in view. The stone structure made it impregnable to assault except by a major force. The lord could withdraw into the tower, putting his animals on the bottom, stores and treasure on a second floor, living on upper floors, and fighting from the top. The Normans were famous for building stone watch towers across their lands in Normandy and England to provide military and political control.



Guard Tower

The Guard Tower is an upgrade of the Watch Tower. It is stronger and has greater fighting ability. Units can garrison inside for protection and to add additional attack strength to the tower. You can upgrade your Guard Towers to Keeps at the University.

The defensive tower continued to evolve during the Middle Ages by getting stronger, taller, and better designed for fighting defense. Whereas some earlier watch towers had been square, guard towers were usually round to eliminate a sharp corner that could be knocked off. Fighting positions at the top of a guard tower were improved to protect defenders. Hoardings extended out from the top, allowing defenders to reach the bottom of the guard tower with missiles. Entrances to guard towers were made more elaborate and more easily defensible.



Keep

The Keep is an upgrade of the Guard Tower. It is stronger and has greater fighting capability. Units can garrison inside for protection and to add additional attack strength to the tower.

The central and strongest building inside a castle was called the keep. This was the last bastion of defense inside if the walls and outside towers were taken. The remaining defenders withdrew into the keep for the final defense. The keep was a mini-castle often constructed in place of a castle to cut expenses. Although much smaller than castles, keeps could perform the same function on a smaller scale. They were very difficult to capture except by a large and well-equipped army.



Bombard Tower

The Bombard Tower has extensive sight to track down enemies. You must research Chemistry and Bombard Tower (at the University) before you can build Bombard Towers. Because of the new architecture involved, preexisting towers do not upgrade to Bombard Towers. Acquiring this technology only allows you to build Bombard Towers.

By the end of the Middle Ages the development of cannon had changed military engineering by making standard castles obsolete. Their high vertical walls were particularly susceptible to direct cannon fire aimed at their base. Military engineers responded by building new structures that were less susceptible to cannon fire and by mounting cannon within these structures to augment their defensive positions along coasts, at important river crossings, and at other strategic points. These new bombard towers swept the approaches to harbors and towns, making them more difficult to attack.

Chapter VII



Units

Infantry

Infantry are foot soldiers used for hand-to-hand combat. They are relatively cheap and quick to create. They are typically effective against buildings and cavalry archers but weak against towers and siege weapons. You can create and upgrade infantry units at the Barracks and improve their attack strength and armor at the Blacksmith.



Militia

Most basic infantry unit; cheap and quick to create. Only soldier created in Dark Age.

- Created at** Barracks
Strong vs. skirmishers, camels, Light Cavalry
Weak vs. archers, scorpions, cavalry archers, mangonels, Cataphracts
Upgrades **Attack** — Forging, Iron Casting, Blast Furnace (Blacksmith)
Armor — Scale Mail Armor, Chain Mail Armor, Plate Mail Armor (Blacksmith)
Sight — Tracking (Barracks)
Speed — Squires (Barracks)
Unit creation speed — Conscription (Castle)
Your units resistant to other Monks — Faith (Monastery)

Local peasants and workers called up for military duty in times of emergency made up the militia. These temporary soldiers were usually equipped with second-rate weapons and armor. They returned to their normal occupations when the emergency had passed. Levies of militia were often used as second-line troops when great lords assembled their vassals for a campaign. The militia was available for less demanding fighting and other tasks in support of the main army. England's Harold Godwinson stood his ground in 1066 at Hastings with only his vassals. If he had fallen back and called up the Anglo-Saxon militia, known as the furd, some historians believe he would not have lost his kingdom to William the Conqueror. For much of the Dark Ages there were only small professional armies in the West. Militia led by strong leaders and their few retainers carried on much of the Dark Age fighting.



Man-at-Arms

Stronger than Militia; cheap and quick to create.

Created at
Strong vs.
Weak vs.
Upgrades

Barracks
skirmishers, camels, Light Cavalry
archers, scorpions, cavalry archers, mangonels, Cataphracts
Attack — Forging, Iron Casting, Blast Furnace (Blacksmith)
Armor — Scale Mail Armor, Chain Mail Armor, Plate Mail Armor (Blacksmith)
Sight — Tracking (Barracks)
Speed — Squires (Barracks)
Unit creation speed — Conscription (Castle)
Your units resistant to other Monks — Faith (Monastery)

Men who had received weapons training and wore armor of some sort in battle were referred to as men-at-arms. By definition, all knights were men-at-arms, but not all men-at-arms were knights. The class of men-at-arms also included professional fighting men of no nobility called sergeants and knights in training called squires. The armies of feudal lords were divided into two distinct groups, the men-at-arms of all classes and the peasant militia. The trained fighting men provided the principal fighting power of the army. Men-at-arms on foot fought with swords. This was an effective weapon and helped distinguish the men-at-arms from soldiers of lower social standing like spearmen, skirmishers, and missile troops. Men-at-arms wore armor, usually from head to toe, and were highly trained. They were especially effective against spearmen if they could close under the spear points. They fought beside dismounted knights under certain conditions, such as castle assaults. During the Hundred Years War, the English often fought dismounted because the French knights usually outnumbered them by a large margin. On the open battlefield, a man-at-arms was at a great disadvantage against a mounted knight. Knights kept a body of men-at-arms on retainer to help maintain local order within the local fief and to accompany the knight when called up for military service.



Long Swordsman

Stronger than Man-at-Arms; cheap and quick to create.

Created at
Strong vs.
Weak vs.
Upgrades

Barracks
skirmishers, camels, Light Cavalry
archers, scorpions, cavalry archers, mangonels, Cataphracts
Attack — Forging, Iron Casting, Blast Furnace (Blacksmith)
Armor — Scale Mail Armor, Chain Mail Armor, Plate Mail Armor (Blacksmith)
Sight — Tracking (Barracks)
Speed — Squires (Barracks)
Unit creation speed — Conscription (Castle)
Your units resistant to other Monks — Faith (Monastery)

The weapon of choice for noble warriors was the long sword. Being skilled with a sword was a social distinction because good swords were expensive and difficult to make. Men-at-arms of lower classes trained with shorter swords and less expensive weapons. Long swords were reserved for the nobility. The ceremony of becoming a knight involved being dubbed with a long sword by the new knight's lord.



Two-Handed Swordsman

Stronger than Long Swordsman; cheap and quick to create.

Created at	Barracks
Strong vs.	skirmishers, camels, Light Cavalry
Weak vs.	archers, scorpions, cavalry archers, mangonels, Cataphracts
Upgrades	Attack — Forging, Iron Casting, Blast Furnace (Blacksmith) Armor — Scale Mail Armor, Chain Mail Armor, Plate Mail Armor (Blacksmith) Sight — Tracking (Barracks) Speed — Squires (Barracks) Unit creation speed — Conscription (Castle) Your units resistant to other Monks — Faith (Monastery)

As armor improved, so did weapons. The two-handed sword was an innovation that allowed a man to swing with the power of both arms, not just one. This was a long and heavy sword, and it required a strong and well-trained man. The two-handed swordsman was a formidable adversary in hand-to-hand combat. Two-handed swordsmen used no shield and relied on the power of their attack to overcome an opponent's shield and armor. Although he struck fewer times, each swing had the potential of being a mortal blow, regardless of the armor and weapons of the defender.



Champion

Strongest infantry unit (aside from some civilizations' unique units); cheap and quick to create.

Created at	Barracks
Strong vs.	skirmishers, camels, Light Cavalry
Weak vs.	archers, scorpions, cavalry archers, mangonels, Cataphracts
Upgrades	Attack — Forging, Iron Casting, Blast Furnace (Blacksmith) Armor — Scale Mail Armor, Chain Mail Armor, Plate Mail Armor (Blacksmith) Sight — Tracking (Barracks) Speed — Squires (Barracks) Unit creation speed — Conscription (Castle) Your units resistant to other Monks — Faith (Monastery)

Among the best swordsmen there were a few who, through their renown on the battlefield and in tournaments, achieved the status of champion. Such men became war leaders and rose in social standing thanks to abilities

so highly regarded at the time. Lords kept champions on retainer for status and because staged fights between elite warriors were used on occasion to resolve disputes. Having a great champion in your pay or as a vassal was the Middle Age equivalent to having a good lawyer. Champions were professional warriors who might also be members of the nobility. A successful champion might gain a noble title through tournament victory, battle honors, or marriage. A minor knight in England named John Marshal was so successful in tournaments that he rose to become a high-ranking noble of great wealth thanks to prizes and successive marriages to admiring women of means.



Spearman

Medium infantry unit. Exceptional vs. cavalry.

Created at	Barracks
Strong vs.	skirmishers, Stable units
Weak vs.	swordsmen, archers, scorpions, mangonels
Upgrades	Attack — Forging, Iron Casting, Blast Furnace (Blacksmith) Armor — Scale Mail Armor, Chain Mail Armor, Plate Mail Armor (Blacksmith) Sight — Tracking (Barracks) Speed — Squires (Barracks) Unit creation speed — Conscription (Castle) Your units resistant to other Monks — Faith (Monastery)

The medium infantry of medieval armies were often spearmen wearing half-armor, usually a helmet and armor on the upper body. As the Middle Ages advanced, the role of the spearman became more important. Armies learned to employ large formations of spearmen as a counter to heavy cavalry attacks because horses would not charge home against a bristling wall of spear points. Spearmen were most effective when emulating the ancient Greek phalanx, a dense box of men that could extend several spear points in a chosen direction. As towns grew in importance toward the end of the period, they fielded large contingents of trained spearmen. These were very effective in battle for the cost of their equipment and training. Spearmen were originally deployed in a defensive posture, but the best of the spearman armies, such as the Swiss, Scots, and Flemish, learned to maneuver and take the offensive.



Pikeman

Stronger than Spearman. Exceptional vs. cavalry.

Created at	Barracks
Strong vs.	skirmishers, Stable units
Weak vs.	swordsmen, archers, scorpions, mangonels
Upgrades	Attack — Forging, Iron Casting, Blast Furnace (Blacksmith) Armor — Scale Mail Armor, Chain Mail Armor, Plate Mail Armor (Blacksmith) Sight — Tracking (Barracks)

Speed — Squires (Barracks)

Unit creation speed — Conscription (Castle)

Your units resistant to other Monks — Faith (Monastery)

The success of spearmen against cavalry led to innovation in the equipment and tactics they used. Pikemen were an innovation of towns and communities that did not have the resources to field large armies of heavy cavalry. Pikes were cheap and could be quite effective with training. One important change was the lengthening of the weapon shaft. Where the spear had been 6 to 8 feet long, the pike had a shaft up to 18 feet long. The longer weapon meant that more spear points could be extended beyond the bodies of the men in the front rank. Pikemen combined with crossbowmen or hand cannons to make a useful combined arms unit. The pikemen prevented cavalry from overrunning the group, while the missile troops caused casualties to the enemy at range. Working together, this combination dominated battlefields at the end of the age. As firearms improved after the Middle Ages, the pikeman component became less necessary. The bayonet made the pike component obsolete and allowed the musketeer to defend himself against cavalry.



Berserk & Elite Berserk

Viking unique unit created in Castle Age. Infantry unit that slowly heals itself. (The Vikings are the only civilization with two unique units. The Vikings also receive a Longboat, which may be built at the Dock once a Viking Castle has been built.)

Created at

Castle

Strong vs.

skirmishers, camels, Light Cavalry

Weak vs.

archers, scorpions, cavalry archers, mangonels, Cataphracts

Upgrades

Attack — Forging, Iron Casting, Blast Furnace (Blacksmith)

Armor — Scale Mail Armor, Chain Mail Armor, Plate Mail Armor (Blacksmith)

Sight — Tracking (Barracks)

Speed — Squires (Barracks)

Unit creation speed — Conscription (Castle)

Your units resistant to other Monks — Faith (Monastery)

Late in the eighth century Viking sea raiders from Scandinavia appeared suddenly in Northern Europe. They raided and plundered coastal communities for the next 150 years. Most of the progress made by Charlemagne in uniting Northern Europe and beginning a rebirth of civilization was erased by the turmoil they caused. The Vikings were known for their great seamanship and ferocity in battle. Witnesses claimed that Viking warriors would occasionally go “berserk” and attack with nearly inhuman zeal, oblivious to all danger. Such behavior was terrifying to behold and very difficult to withstand. The ability to go mad with battle lust was a powerful attribute during a period of widespread superstition.



Huskarl & Elite Huskarl

Gothic unique unit created in Castle Age. Infantry with substantial pierce armor; virtually immune to archer fire.

Created at Castle

Strong vs. archers

Weak vs. swordsmen

Upgrades

Attack — Forging, Iron Casting, Blast Furnace (Blacksmith)

Armor — Scale Mail Armor, Chain Mail Armor, Plate Mail Armor (Blacksmith)

Sight — Tracking (Barracks)

Speed — Squires (Barracks)

Unit creation speed — Conscription (Castle)

Your units resistant to other Monks — Faith (Monastery)

Within the Germanic tribes that overran the Western Roman Empire and brought in the Dark Ages, including the Goths, tribal leaders kept a personal retinue of warriors known as huskarls. These men served their chiefs fanatically in return for a large share in any plunder the tribe could grab. Huskarls trained for battle continuously and had few other duties. A chief had to be successful in acquiring plunder, however, or risk being removed or abandoned. As the Dark Ages progressed, huskarls were absorbed into the feudal system as vassals of lords. They remained a lord's or king's personal fighting force but often became responsible for their own support on lands given to them by their chief. This system replaced much of the sharing of plunder.



Samurai & Elite Samurai

Japanese unique unit created in Castle Age. Infantry unit with fast attack.

Created at Castle

Strong vs. infantry, unique units

Weak vs. archers

Upgrades

Attack — Forging, Iron Casting, Blast Furnace (Blacksmith)

Armor — Scale Mail Armor, Chain Mail Armor, Plate Mail Armor (Blacksmith)

Sight — Tracking (Barracks)

Speed — Squires (Barracks)

Unit creation speed — Conscription (Castle)

Your units resistant to other Monks — Faith (Monastery)

When knights were coming into dominance as lords and warriors in Europe, a similar social and military change was taking place simultaneously in Japan. A weak central government and a scramble for control of land gave rise in Japan to a local military ruling class called the samurai. These men of noble birth trained continuously in the military arts, as well as various cultural arts. They put great emphasis on honor and tradition, as did European knights with the code of chivalry. Samurai fought with a variety of weapons, including the bow and their unique curved swords made of the strongest steel. They sought out high-ranking enemies on the battlefield for personal duels and were trained to seek death in battle to increase their aggression and avoid hesitancy.



Teutonic Knight & Elite Teutonic Knight

Teutonic unique unit created in Castle Age. Powerful armor; slow but difficult to destroy. Receives benefits of infantry armor.

Created at	Castle
Strong vs.	swordsmen, skirmishers, Stable units
Weak vs.	archers, scorpions, cavalry archers, mangonels, Monks
Upgrades	Attack — Forging, Iron Casting, Blast Furnace (Blacksmith) Armor — Scale Mail Armor, Chain Mail Armor, Plate Mail Armor (Blacksmith) Sight — Tracking (Barracks) Speed — Squires (Barracks) Unit creation speed — Conscription (Castle) Your units resistant to other Monks — Faith (Monastery)

At the height of the Christian Crusades into the Holy Land, German crusaders formed an order of warrior monks called the Teutonic Knights. This order gave up crusading in the Eastern Mediterranean and turned its attention to Eastern Europe. Through conquest they brought Christianity to the Baltic region and forests of what became Prussia. They built castles from which they could control the surrounding countryside. The Teutonic Knights were committed warriors who carved out an empire that lasted into the twentieth century.



Throwing Axeman & Elite Throwing Axeman

Frank unique unit created in Castle Age. Ranged attack.

Created at	Castle
Strong vs.	Barracks units, skirmishers
Weak vs.	archers
Upgrades	Attack — Forging, Iron Casting, Blast Furnace (Blacksmith) Armor — Scale Mail Armor, Chain Mail Armor, Plate Mail Armor (Blacksmith) Sight — Tracking (Barracks) Speed — Squires (Barracks) Unit creation speed — Conscription (Castle) Your units resistant to other Monks — Faith (Monastery)

The Franks took their name from the axe that was their preferred weapon in ancient times. They continued to use the axe into the Dark Ages and their warriors were especially noted for their ability to throw this axe in battle. The axe was well balanced and could be hurled a good distance by a strong man. Franks carried several axes into battle, holding on to one for hand-to-hand combat. As they advanced they could pick up axes thrown previously to replenish their supply of missiles. Throwing axemen were especially good against light troops wearing little armor. Carrying axes was also useful for dismantling fortifications.



Woad Raider & Elite Woad Raider

Celtic unique unit created in Castle Age. Exceptionally quick infantry unit.

Created at

Castle

Strong vs.

skirmishers, camels, Light Cavalry

Weak vs.

archers, scorpions, cavalry archers, mangonels, Cataphracts

Upgrades

Attack — Forging, Iron Casting, Blast Furnace (Blacksmith)

Armor — Scale Mail Armor, Chain Mail Armor, Plate Mail Armor (Blacksmith)

Sight — Tracking (Barracks)

Speed — Squires (Barracks)

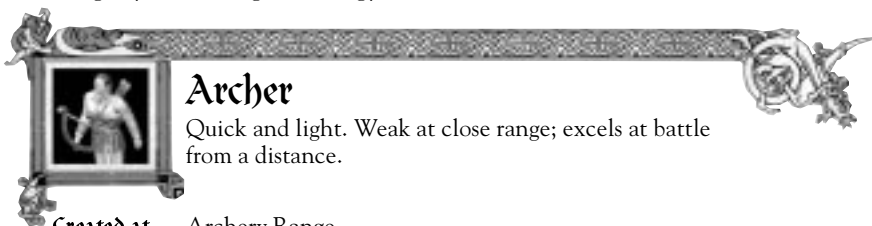
Unit creation speed — Conscription (Castle)

Your units resistant to other Monks — Faith (Monastery)

Woad is a plant found in the British Isles from which a blue pigment can be extracted. Celtic warriors painted themselves with this pigment prior to battle to look more fearsome and unnerv their enemies. Celtic warriors had been raiding more developed areas of Britain and Europe since ancient times. The Scots, for example, were originally Irish raiders who took lands from the Picts in north Britain that became Scotland. When the English sought to conquer the Celts inhabiting Ireland, Wales, and Scotland during the Middle Ages, the Celts were at a great disadvantage against the English mounted knights. The Celts often turned to guerrilla tactics, raiding English settlements and withdrawing before English armies. Raiders painted with woad devastated the borderlands. A renowned woad raider was William Wallace of Scotland who rampaged through Northern England for a decade.

Archers

Archers attack enemy units within range by firing arrows at them. They have a small, randomly determined chance of missing their intended target. All are **Weak vs.** buildings and walls. You can create archers at the Archery Range and improve their attack strength and range by researching technology at the Blacksmith.



Archer

Quick and light. Weak at close range; excels at battle from a distance.

Created at

Archery Range

Strong vs.

Barracks units, cavalry archers, Monks, Teutonic Knights, War Elephants

Weak vs.

skirmishers, knights, mangonels, Woad Raiders, Huskarls

Upgrades

Attack — Chemistry (University)

Attack, Range — Fletching, Bodkin Arrow, Bracer (Blacksmith)

Armor — Padded Archer Armor, Leather Archer Armor, Ring Archer Armor (Blacksmith)

Targeting — Ballistics (University)

Unit creation speed — Conscription (Castle)

Your units resistant to other Monks — Faith (Monastery)

The bow remained an important military weapon after the fall of Rome, although less so in areas of Europe covered by dense forests. Archers could fight from a distance, from behind walls or other cover, and from ambush. They were usually not decisive in battle on the attack because they could not physically take ground from the enemy like infantry could. They acted mainly as defensive troops and as light troops that disrupted enemy formations prior to the decisive moment when the armies clashed hand-to-hand. If barrages of arrows could cause casualties and drain the fighting spirit of the enemy prior to the clash, friendly troops had a better chance of breaking the will of the enemy and being victorious. Archers were also very useful when both defending and attacking a castle.



Crossbowman

Quick and light. Weak at close range; excels at battle from a distance.

Created at
Strong vs.

Archery Range
Barracks units, cavalry archers, Monks, Teutonic Knights, War Elephants

Weak vs.
Upgrades

skirmishers, knights, mangonels, Woad Raiders, Huskarls
Attack — Chemistry (University)
Attack, Range — Fletching, Bodkin Arrow, Bracer (Blacksmith)
Armor — Padded Archer Armor, Leather Archer Armor, Ring Archer Armor (Blacksmith)
Targeting — Ballistics (University)
Unit creation speed — Conscription (Castle)
Your units resistant to other Monks — Faith (Monastery)

The crossbow was a missile weapon consisting of a bow on its side attached to the end of a wood stock. The stock was held against the shoulder like a modern rifle and a trigger fired the weapon. The crossbow had been invented in ancient China but was not used widely in Europe until the Middle Ages. It fired short quarrels, stones, or metal balls rather than arrows. It was a powerful weapon but limited to a shorter range than the best bows. It was simple to use, relatively cheap to make, and deadly. A peasant with only a few hours of crossbow practice could easily kill an elite knight encased in armor worth a fortune who had trained for war throughout his life. The knights in Europe at one point attempted to get the Church to ban the weapon. Richard the Lionhearted, King of England, died from a crossbow quarrel wound received during a siege.



Arbalest

Quick and light. Weak at close range; excels at battle from a distance.

- Created at** Archery Range
Strong vs. Barracks units, cavalry archers, Monks, Teutonic Knights, War Elephants
Weak vs. skirmishers, knights, mangonels, Woad Raiders, Huskarls
Upgrades **Attack** — Chemistry (University)
Attack, Range — Fletching, Bodkin Arrow, Bracer (Blacksmith)
Armor — Padded Archer Armor, Leather Archer Armor, Ring Archer Armor (Blacksmith)
Targeting — Ballistics (University)
Unit creation speed — Conscription (Castle)
Your units resistant to other Monks — Faith (Monastery)

The arbalest was an advanced crossbow made of steel. The greater tensile strength of steel gave the weapon greater power.



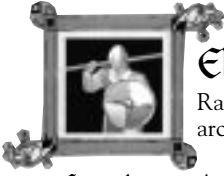
Skirmisher

Ranged unit equipped with armor vs. archer attacks. Exceptional vs. archers.

- Created at** Archery Range
Strong vs. archers, Monks, cavalry archers
Weak vs. Barracks units, mangonels
Upgrades **Attack** — Chemistry (University)
Attack, Range — Fletching, Bodkin Arrow, Bracer (Blacksmith)
Armor — Padded Archer Armor, Leather Archer Armor, Ring Archer Armor (Blacksmith)
Targeting — Ballistics (University)
Unit creation speed — Conscription (Castle)
Your units resistant to other Monks — Faith (Monastery)



Many armies of the Middle Ages used lightly armored skirmishers in support of the main fighting force of armored fighting men. They could be difficult to control and of little value on the battlefield, but some armies used them effectively. Skirmishers were deployed in front of the main battle line and engaged the enemy with bows, slings, and javelins. The intent was to disrupt the enemy force and cause casualties before the main battle lines clashed. The skirmishers would retire to the side of the main battle and harass the enemy as practical. They could also be useful in pursuit of a beaten enemy because they could move more quickly than men wearing armor. If caught in battle against men-at-arms, however, they could not stand and routed quickly.



Elite Skirmisher

Ranged unit equipped with armor vs. archer attacks. Exceptional vs. archers.

Created at Archery Range

Strong vs. archers, Monks, cavalry archers

Weak vs. Barracks units, mangonels

Upgrades **Attack** — Chemistry (University)

Attack, Range — Fletching, Bodkin Arrow, Bracer (Blacksmith)

Armor — Padded Archer Armor, Leather Archer Armor, Ring Archer Armor (Blacksmith)

Targeting — Ballistics (University)

Unit creation speed — Conscription (Castle)

Your units resistant to other Monks — Faith (Monastery)

In many Middle Age armies skirmishers were the rabble that was thrown in at the start of a battle and then often overrun by the heavy cavalry of both sides. A few armies trained elite skirmishers who could disrupt enemy formations, fall back, and support the main friendly fighting force from the sides. An army that could put elite skirmishers in the field to support its main army had an advantage over an army that did not. The Swiss, for example, often employed up to a quarter of their force in a skirmish role. Elite Swiss skirmishers supported the dense phalanxes of Swiss pikemen by disrupting enemy troops before the pikes made their attack. In an emergency, the skirmishers could take cover under the rows of pointed pikes and then stand up once more to engage a withdrawing enemy.



Cavalry Archer

Fast, with ranged attack. Ideal for hit-and-run attacks.

Created at Archery Range

Strong vs. swordsmen, Monks, Teutonic Knights, War Elephants

Weak vs. archers, skirmishers, Light Cavalry

Upgrades **Attack** — Chemistry (University)

Attack, Range — Fletching, Bodkin Arrow, Bracer (Blacksmith)

Armor — Padded Archer Armor, Leather Archer Armor, Ring Archer Armor (Blacksmith)

Targeting — Ballistics (University)

Speed — Husbandry (Stable)

Unit creation speed — Conscription (Castle)

Your units resistant to other Monks — Faith (Monastery)

Archers mounted on horses originated in ancient times on the great plains of Asia and continued to make up the bulk of the armies from this region throughout the Middle Ages. The Mongol armies that conquered most of Asia, the Middle East, and much of Europe were predominately cavalry archers. For the time they were a unique combination of firepower and speed. They could cross almost any kind of terrain quickly, strike

unexpectedly, and withdraw if necessary before heavy cavalry or infantry units could react. The Mongols especially mastered the tactics of hitting, running, and ambushing, avoiding hand-to-hand fighting until the enemy was completely demoralized. Cavalry archers were most effective on open ground with plenty of maneuvering room. They were least effective against fortified positions that could not be starved out and required a hand-to-hand assault.



Heavy Cavalry Archer

Fast, with ranged attack. Ideal for hit-and-run attacks.

Created at	Archery Range
Strong vs.	swordsmen, Monks, Teutonic Knights, War Elephants
Weak vs.	archers, skirmishers, Light Cavalry
Upgrades	Attack, Range — Fletching, Bodkin Arrow, Bracer (Blacksmith) Attack — Chemistry (University) Targeting — Ballistics (University) Armor — Padded Archer Armor, Leather Archer Armor, Ring Archer Armor (Blacksmith) Speed — Husbandry (Stable) Unit creation speed — Conscription (Castle) Your units resistant to other Monks — Faith (Monastery)

Cavalry archers could be a devastating force when skilled and properly used, but they were as susceptible to archery fire as their enemies. One innovation intended to make them less vulnerable was to equip them with helmets and chest armor. This created the heavy cavalry archer, which was less nimble than its unarmored counterparts but able to engage in combat while taking fewer casualties. The Byzantines made extensive use of heavy cavalry archers in the engagements with horsemen from Persia and great plains to their north.



Hand Cannoneer

Powerful close attack; inaccurate at range. Keeps non-ranged units from closing on other units. Requires Chemistry.

Created at	Archery Range
Strong vs.	Barracks units, Monks, Teutonic Knights
Weak vs.	archers, mangonels
Upgrades	Armor — Padded Archer Armor, Leather Archer Armor, Ring Archer Armor (Blacksmith) Unit creation speed — Conscription (Castle) Your units resistant to other Monks — Faith (Monastery)

Following the development of cannons, small hand-operated gunpowder weapons began appearing in Europe in the fourteenth century. These early firearms were small iron tubes mounted on a wooden stock. They were inaccurate and slow to load. In the early fifteenth century the hand cannon was made smaller, the stock was

redesigned so it could be held against the chest, and a mechanism was added for inserting the slow-burning match into the chamber. This weapon was effective only in volleys at close range. In the middle of the fifteenth century the first recognizably modern firearm, the arquebus, was developed. This employed a wheel lock to bring the slow match in contact with a powder pan connected by a tube to the chamber. Lead and cast iron balls fired from the arquebus were lethal. Firearms of the Middle Ages had an inferior range and rate of fire in comparison to the best bows and crossbows. Firearms improved gradually, however, and became more and more popular, despite their high cost. They became status symbols. Important lords engaged in an arms race, attempting to field more firearms of more modern design than their competitors.



Chu Ko Nu & Elite Chu Ko Nu

Chinese unique unit created in Castle Age. Archer with mediocre range that causes great damage. Can fire arrows very quickly.

Created at
Strong vs.

Castle
Barracks units, cavalry archers, Monks, Teutonic Knights, War Elephants

Weak vs.
Upgrades

skirmishers, knights, mangonels, Woad Raiders, Huskarls
Attack — Chemistry (University)
Attack, Range — Fletching, Bodkin Arrow, Bracer (Blacksmith)
Armor — Padded Archer Armor, Leather Archer Armor, Ring Archer Armor (Blacksmith)
Targeting — Ballistics (University)
Unit creation speed — Conscription (Castle)
Your units resistant to other Monks — Faith (Monastery)

The crossbow was invented in China in ancient times and the chu ko nu was an improved crossbow invented there during European Middle Ages. The chu ko nu was something like a semi-automatic crossbow. It was fitted with a magazine of bolts. When the operator pulled back the bowstring, a new bolt was automatically loaded. When the bowstring reached its limit, the weapon fired automatically. The operator pulled back as quickly as he could to maintain a rapid fire. The weaknesses of the weapon were a short range and weaker power compared to larger single-shot crossbows.



Janissary & Elite Janissary

Turk unique unit created in Castle Age. Hand Cannoneer with longer and no minimum range. Powerful close attack; inaccurate at range. Keeps non-ranged units from closing on other units.

Created at
Strong vs.
Weak vs.
Upgrades

Castle
Barracks units, Monks, Teutonic Knights
archers, mangonels
Armor — Padded Archer Armor, Leather Archer Armor, Ring Archer Armor (Blacksmith)
Unit creation speed — Conscription (Castle)
Your units resistant to other Monks — Faith (Monastery)

Some of the best units in the Turkish armies were the janissaries. These men were slaves captured as children and raised under Islam to be fanatical warriors. They wore distinctive white headgear and marched into battle accompanied by music. They fought on foot with a variety of weapons, including early firearms when these weapons reached the Middle East. The military was their entire life and they took great pride in their ability. They led the successful assault into Constantinople and the unsuccessful Turkish attacks against Malta and Vienna.



Longbowman & Elite Longbowman

Britain unique unit created in Castle Age. Powerful with long range.

Created at
Strong vs.

Castle
Barracks units, cavalry archers, Monks, Teutonic Knights, War Elephants

Weak vs.
Upgrades

skirmishers, knights, mangonels, Woad Raiders, Huskarls
Attack — Chemistry (University)
Attack, Range — Fletching, Bodkin Arrow, Bracer (Blacksmith)
Armor — Padded Archer Armor, Leather Archer Armor, Ring Archer Armor (Blacksmith)
Targeting — Ballistics (University)
Unit creation speed — Conscription (Castle)
Your units resistant to other Monks — Faith (Monastery)

The longbow was very tall, 5 or 6 feet long, and crafted from a single piece of wood, commonly yew. It fired 3-foot-long arrows at a great range and, in the hands of an expert, could be extremely accurate. Edward I (Longshanks) of England grasped the value of this weapon and the English thereafter employed large contingents of longbowmen in their Middle Age armies. All sports other than archery were banned on Sundays in Britain to ensure that archers practiced. The long bow was used effectively in long-range barrages against massed troops, firing thin pointed arrows called bodkins that could pierce armor. Arrows were fired simultaneously by thousands of archers and aimed at a distant area rather than a specific target. Enemy troops within the area were forced to receive the barrage with no cover but their armor and shields. The barrage caused casualties and reduced enemy morale. The most famous examples of this tactic were the great English victories at Crécy, Poitiers, and Agincourt during the Hundred Years War. French knights recalled with horror the awful sound of thousands of arrows in flight and the sky turning dark from their shafts.



Mangudai & Elite Mangudai

Mongol unique unit created in Castle Age. Cavalry archer with attack bonus vs. siege weapons.

Created at
Strong vs.

Castle
swordsmen, Monks, Teutonic Knights, War Elephants, siege weapons

Weak vs.
Upgrades

archers, skirmishers, Light Cavalry
Attack — Chemistry (University)
Attack, Range — Fletching, Bodkin Arrow, Bracer (Blacksmith)

Armor — Padded Archer Armor, Leather Archer Armor, Ring Archer Armor (Blacksmith)

Targeting — Ballistics (University)

Speed — Husbandry (Stable)

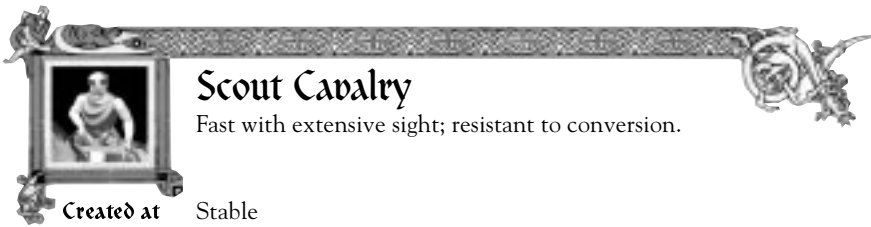
Unit creation speed — Conscription (Castle)

Your units resistant to other Monks — Faith (Monastery)

The Mongols were united by Genghis Khan, who took them off on a campaign of conquest that reached from the Pacific to the Mediterranean to Central Europe. The Mongols were superb horsemen and each warrior kept a stable of ponies so that fresh mounts were always available. The strength of the Mongol armies was the horse archer firing a composite bow from the saddle. The best of these archers, called the mangudai, used great tactics to catch enemies at a disadvantage. They used feints and traps to wear out enemy cavalry and shoot it to pieces. Slower troops could be shot to pieces at range with little risk. Enemy armies were exhausted and shattered without ever coming to grips with the elusive mangudai. The main weakness of the Mongol army was that only great leaders could keep it together. When the great Khan or later leaders died, the army dissolved into factions bickering for primacy.

Cavalry

Cavalry units are used for scouting and combat. You can create cavalry units at the Stable and improve them by researching technology at the Blacksmith.



Scout Cavalry

Fast with extensive sight; resistant to conversion.

Created at

Stable

Strong vs.

archers, mangonels, cavalry archers, Bombard Cannons, Monks

Weak vs.

Pikemen, knights, camels

Upgrades

Attack — Forging, Iron Casting, Metallurgy (Blacksmith)

Armor — Scale Barding Armor, Chain Barding Armor, Plate Barding Armor (Blacksmith)

Speed — Husbandry (Stable)

Unit creation speed — Conscription (Castle)

Your units resistant to other Monks — Faith (Monastery)

In a Random Map game, each player begins with one Scout Cavalry unit that can be used to explore the map. Additional Scout Cavalry units may be produced at the Stable beginning in the Feudal Age.

The importance of fast horse units for scouting had been learned in ancient times and carried forward into the Middle Ages. Even Middle Age armies built around heavy knights maintained a force of lightly armored scout

cavalry to act as the eyes of an army on the march. Scout cavalry employed horses bred for stamina and speed. They would range far in advance and to the flanks of an army to gather information about enemy movements. Scout cavalry were less useful in battle because the men wore little armor and light weapons. They were very useful, however, once an enemy was defeated and routing. Then scout cavalry were effective in running down fleeing survivors and capturing equipment, wagons, and prisoners.



Light Cavalry

Fast with greater line of sight than Scout Cavalry; resistant to conversion.

Created at	Stable
Strong vs.	archers, mangonels, cavalry archers, Bombard Cannons, Monks
Weak vs.	Pikemen, knights, camels
Upgrades	Attack — Forging, Iron Casting, Blast Furnace (Blacksmith) Armor — Scale Barding Armor, Chain Barding Armor, Plate Barding Armor (Blacksmith) Speed — Husbandry (Stable) Unit creation speed — Conscription (Castle) Your units resistant to other Monks — Faith (Monastery)

As Middle Age armies grew larger and campaigned farther afield, the importance of scouting grew. Many civilizations developed light cavalry, an improvement on scout cavalry, for this role. Light cavalry were better trained and better equipped for fighting. In battle they could be used to harass or charge enemy infantry or support their own knights in a charge. Light cavalry wore only partial armor and a shield and fought most commonly with a spear. Civilizations that could not afford extensive armor for warriors, such as barbarian groups from the East, put large contingents of light cavalry into the field.



Knight

Heavy and quick.

Created at	Stable
Strong vs.	archers
Weak vs.	Pikemen, camels, Mamelukes
Upgrades	Attack — Forging, Iron Casting, Blast Furnace (Blacksmith) Armor — Scale Barding Armor, Chain Barding Armor, Plate Barding Armor (Blacksmith) Speed — Husbandry (Stable) Unit creation speed — Conscription (Castle) Your units resistant to other Monks — Faith (Monastery)

The knight was a heavily armored and mounted warrior who had achieved certain minimums in training and position in Middle Age society. When made a knight, the warrior was often given land to support his military expenses in return for a pledge to serve his lord on campaign for so many weeks each year. By

parceling out land in this manner, a high lord controlled a hierarchy of soldiers that could be called upon when needed. Knights spent most of their time fighting or training for fighting. They practiced war in tournaments, competing for prizes and honors. Because few others could afford the equipment and training for war, knights dominated Middle Age battlefields for centuries. The evolution of new tactics featuring pikemen, longbowmen, crossbowmen, and primitive handguns brought the dominance of heavy cavalry to an end.



Cavalier

Heavy and quick.

Created at	Stable
Strong vs.	archers
Weak vs.	Pikemen, camels, Mamelukes
Upgrades	Attack — Forging, Iron Casting, Blast Furnace (Blacksmith) Armor — Scale Barding Armor, Chain Barding Armor, Plate Barding Armor (Blacksmith) Speed — Husbandry (Stable) Unit creation speed — Conscription (Castle) Your units resistant to other Monks — Faith (Monastery)

There was a hierarchy among knights based on feudal rank and fighting prowess. A lowly knight might achieve great social standing through battlefield commendation, tournament victory, or marriage. Elite knights were made members of important orders, like the Order of the Garter or of the Golden Fleece. Such elite men were known as chevaliers or cavaliers. The first cavaliers were selected for their political power and fighting prowess. As the centuries passed, the orders became more of a social elite.



Paladin

Heavy and quick.

Created at	Stable
Strong vs.	archers
Weak vs.	Pikemen, camels, Mamelukes
Upgrades	Attack — Forging, Iron Casting, Blast Furnace (Blacksmith) Armor — Scale Barding Armor, Chain Barding Armor, Plate Barding Armor (Blacksmith) Speed — Husbandry (Stable) Unit creation speed — Conscription (Castle) Your units resistant to other Monks — Faith (Monastery)

The ultimate fighting knights were paladins, the cream of the cavalier class. Paladins were champions for their lords and their orders of knighthood. These men were of the highest social class and elite warriors. They often made up the personal bodyguard of a great king and were sworn to protect his life with their own.



Camel

Excels at killing other mounted units.

Created at	Stable
Strong vs.	knights, Cataphracts
Weak vs.	infantry, archers
Upgrades	Attack — Forging, Iron Casting, Blast Furnace (Blacksmith) Armor — Scale Barding Armor, Chain Barding Armor, Plate Barding Armor (Blacksmith) Speed — Husbandry (Stable) Unit creation speed — Conscription (Castle) Your units resistant to other Monks — Faith (Monastery)

The camel was a useful mount for warriors in desert regions of the world because it could move quickly across sand and could go long periods without water. In addition, horses shied away from the presence of camels. The Saracens made good use of camels during the Crusades; camel riders appeared out of the desert to raid Crusader outposts and caravans and then escaped back into terrain that horses could not cross.



Heavy Camel

Excels at killing other mounted units.

Created at	Stable
Strong vs.	knights, Cataphracts
Weak vs.	infantry, archers
Upgrades	Attack — Forging, Iron Casting, Blast Furnace (Blacksmith) Armor — Scale Barding Armor, Chain Barding Armor, Plate Barding Armor (Blacksmith) Speed — Husbandry (Stable) Unit creation speed — Conscription (Castle) Your units resistant to other Monks — Faith (Monastery)

The heavy camel was an especially experienced warrior and camel rider who wore some armor. They were used by desert civilizations of the Middle East who fought against archers from the Byzantine Empire and horse archers raiding down from the steppes of Asia.



Cataphract & Elite Cataphract

Byzantine unique unit created in Castle Age. Heavily armored. Attack bonus vs. infantry.

Created at Castle

Strong vs. swordsmen, archers

Weak vs. knights, camels

Upgrades **Attack** — Forging, Iron Casting, Blast Furnace (Blacksmith)

Armor — Scale Barding Armor, Chain Barding Armor, Plate Barding Armor (Blacksmith)

Speed — Husbandry (Stable)

Unit creation speed — Conscription (Castle)

Your units resistant to other Monks — Faith (Monastery)

The Byzantine army carried on many of the military traditions of the old Roman Empire into the Middle Ages. This was a professional force that was well trained and well led. Officers studied tactics and command. The army was organized into formal units that maintained their own traditions for centuries. The best units in the Byzantine army were partially armored cavalymen called cataphracts. They fought with several weapons, including the bow and sword. With plains to the east and north of their empire, the cataphract was ideally suited for combat against the unarmored cavalry of their enemies. The Byzantine army went into decline partially because it lost the plains of Asia Minor from which it had drawn both horses and cavalymen for service as cataphracts.



Mameluke & Elite Mameluke

Saracen unique unit created in Castle Age. Camel with ranged attack. Excels vs. other mounted units.

Created at Castle

Strong vs. Barracks units, Monks, Teutonic Knights

Weak vs. archers, mangonels

Upgrades **Attack** — Forging, Iron Casting, Blast Furnace (Blacksmith)

Armor — Scale Barding Armor, Chain Barding Armor, Plate Barding Armor (Blacksmith)

Speed — Husbandry (Stable)

Unit creation speed — Conscription (Castle)

Your units resistant to other Monks — Faith (Monastery)

The mamelukes were slaves trained as warriors by various Arab leaders, partially because early believers in Islam would not fight each other. Slave warriors got around this ban. The mamelukes were well trained and highly motivated. A mameluke army from Egypt won a rare victory against the Mongols in Syria, turning these barbarian horsemen back from the Nile and North Africa. In time the mamelukes rose up against their Arab rulers and took control themselves. When Napoleon invaded Egypt in the eighteenth century, he defeated a mameluke army at the Battle of the Pyramids.



War Elephant & Elite War Elephant

Persian unique unit created in Castle Age. Slow, powerful, well armored, and difficult to destroy. Elite War Elephant causes area of effect damage; can hit several adjacent targets simultaneously.

Created at	Castle
Strong vs.	swordsmen, archers
Weak vs.	Pikemen, camels, Monks, Mamelukes
Upgrades	Attack — Forging, Iron Casting, Blast Furnace (Blacksmith) Armor — Scale Barding Armor, Chain Barding Armor, Plate Barding Armor (Blacksmith) Speed — Husbandry (Stable) Unit creation speed — Conscription (Castle) Your units resistant to other Monks — Faith (Monastery)

The last civilization in the Middle East to employ war elephants was Persia, who got their elephants from India. The war elephant was a powerful complement to an army, especially against troops with no experience against them. They were very difficult to kill, but remained difficult to control also. If they could be directed into an enemy formation, the enemy troops almost always fell back in disarray.

Siege weapons

Siege weapons are used to destroy enemy defenses such as walls, towers, and buildings. Most siege weapons cause graduated damage (the most damage occurs at the point of impact with diminishing levels of damage radiating out). You can build siege weapons at the Siege Workshop.



Scorpion & Heavy Scorpion

Fires large arrow-like bolts. Effective vs. large masses of units; shots hit multiple units causing damage to all units they touch.

Built at	Siege Workshop
Strong vs.	Barracks units, archers, Monks
Weak vs.	Stable units, Woad Raiders
Upgrades	Attack — Chemistry (University) Attack, Range — Fletching, Bodkin Arrow, Bracer (Blacksmith); Siege Engineers (Blacksmith) Tracking — Ballistics (University) Your units resistant to other Monks — Faith (Monastery)

The scorpion represents a light artillery weapon that fired large arrow-like bolts, small stones, or iron balls. These weapons came in a variety of sizes and looked like large crossbows. Scorpions might be mounted on tripods or more substantial wooden frames. They were used primarily in siege attacks but could also be deployed in a set position on a battlefield. They were useful against massed enemy troops, especially cavalry, and against fortifications.

The heavy scorpion was an improved version of the Scorpion. The heavy scorpion consisted of a heavier bow and frame, and could fire larger missiles



Bombard Cannon

Powerful mobile anti-building siege weapon. Requires Chemistry.

- Built at** Siege Workshop
Strong vs. Barracks units, archers, skirmishers, Monks
Weak vs. Stable units, Woad Raiders
Upgrades **Range, Attack** — Siege Engineers (University)
Your units resistant to other Monks — Faith (Monastery)

Gunpowder reached Europe from China by the thirteenth century and primitive cannons appeared first in the fourteenth century. Bombard cannons were large, ponderous, and dangerous to fire because the guns tended to break and because gunpowder was of uneven quality. They were used mainly in sieges where the time was available to set them up and fire them at a fixed target. By the fifteenth century, bombard cannons firing stone or iron shot were making castles obsolete. Cannons could bring down vertical stone walls quickly by firing shot at high velocity directly into the lower wall sections. Giant bombard cannons manned by European mercenaries were instrumental in the Turkish attack that finally captured Constantinople in 1453.



Battering Ram

Slow, lumbering; reduces enemy towns to ruins.

- Built at** Siege Workshop
Strong vs. archers, cavalry archers
Weak vs. Barracks units, Stable units
Upgrades **Attack** — Siege Engineers (University)
Your units resistant to other Monks — Faith (Monastery)

The most direct way to attack a stone wall or other stone fortification was to knock it down with a battering ram. The typical ram was a stout log mounted on wheels or suspended from a frame so it could swing forward and backward. The frame was brought up to the wall or gate to be battered and then men heaving in unison repeatedly slammed the ram head into the target. The battering ram frame required a roof of some sort to protect the crew from above. This was often covered with wet animal hides to retard fire. Given enough time, any obstruction could be knocked down, opening a breach for assault.



Capped Ram

Slow, lumbering; reduces enemy towns to ruins.

- Built at** Siege Workshop
Strong vs. archers, cavalry archers
Weak vs. Barracks units, Stable units
Upgrades **Attack** — Siege Engineers (University)
Your units resistant to other Monks — Faith (Monastery)

Rams were simple and effective weapons for breaking into fortifications. The typical battering ram was a stout log mounted on wheels or suspended from a frame so it could swing forward and backward. Any wall could be knocked down given enough time. Capping the point of a battering ram with iron greatly improved the battering ram. The capped ram did more damage and lasted longer before needing replacement.



Siege Ram

Slow, lumbering; reduces enemy towns to ruins.

- Built at** Siege Workshop
Strong vs. archers, cavalry archers
Weak vs. Barracks units, Stable units
Upgrades **Attack** — Siege Engineers (University)
Your units resistant to other Monks — Faith (Monastery)

The ultimate battering ram was the siege ram. This was a large engine that was heavily protected and designed to hit with a powerful force. Siege rams were often prefabricated weapons that were hauled to the site of the siege and assembled on the spot.



Mangonel, Onager & Siege Onager

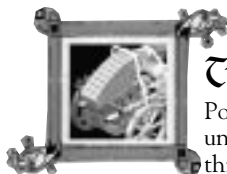
Wheeled siege weapon used to attack a small mass of units. Area of effect attack. Can attack ground. Siege Onagers can cut paths through forests.

- Built at** Siege Workshop
Strong vs. Barracks units, archers
Weak vs. Stable units, Wood Raiders
Upgrades **Attack** — Chemistry (University)
Range, Attack — Siege Engineers (University)
Your units resistant to other Monks — Faith (Monastery)

The mangonel was an improvement on the ancient catapult that was used to throw stones and other missiles, usually in a siege attack against a fortified position. The mangonel usually fired directly at a target, using a bar to stop the throwing arm when it was vertical. This threw the missile directly forward. Mangonels were

used to fire one large stone or a basket of smaller stones. They were often assembled on the spot for use, but were also built on wheeled frames for easier movement.

The onager was an improvement of the mangonel; it was larger, more powerful, and hurled a heavier payload for greater distance. The siege onager was the largest upgrade of the onager line of weapons. It had the longest range and did the most damage.



Trebuchet

Powerful; destroys buildings, walls from distance. Cannot fire on close units. Must be packed to move, unpacked to attack. Can cut paths through forests.

Built at
Strong vs.
Weak vs.
Upgrades

Castle
archers, skirmishers
swordsmen, Stable units, Mangudai, Woad Raiders
Attack — Chemistry (University)
Range, Attack — Siege Engineers (University)
Unit creation speed — Conscription (Castle)
Your units resistant to other Monks — Faith (Monastery)

When you build a Trebuchet, it is packed and must be unpacked and assembled before it can attack.



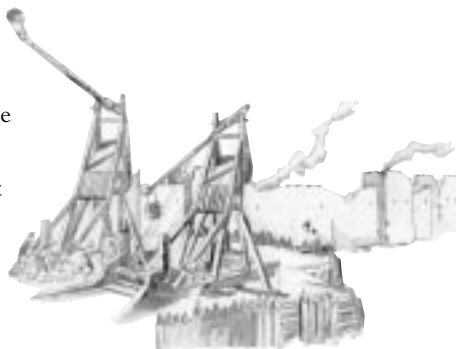
To pack/unpack a Trebuchet

Click the Trebuchet, and then click the **Pack** or **Unpack** button.

To attack with a packed Trebuchet

Click the packed Trebuchet, and then right-click an enemy target.

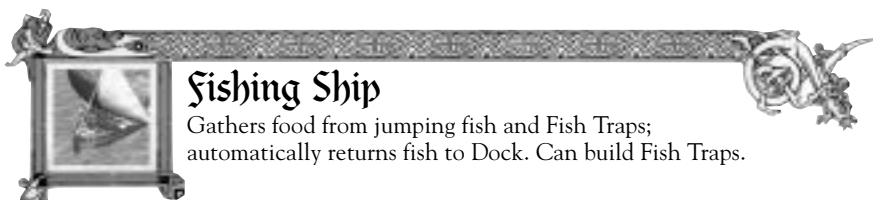
The Trebuchet moves within range of the enemy target, unpacks, and begins attacking.



The most powerful of the Middle Age nongunpowder siege engines was the trebuchet. This was a large catapult-like weapon with a long throwing arm and missile bag suspended by ropes. When released the arm swung up and the bag was brought up and forward. Centrifugal force acting on the suspended bag increased the range and height achieved by the released missile. Stones fired by the Trebuchet plunged down on their target and did great damage to the tops and roofs of walls, towers, and other structures. Trebuchets were expensive and complicated machines, requiring specialists to build and operate. They could only be moved in parts and required assembly before use. Edward I of England refused the surrender of Stirling Castle in Scotland on one occasion so that he could watch his most recently acquired Trebuchet in action.

Ships

Ships are used to fish, trade with other players, transport units across water, and engage in combat. You can build ships and research technologies that improve them at the Dock.



Fishing Ship

Gathers food from jumping fish and Fish Traps; automatically returns fish to Dock. Can build Fish Traps.

- Built at** Dock
Armor — Careening (Dock)
Speed — Dry Dock (Dock)
Lower cost — Shipwright (Dock)
Your units resistant to other Monks — Faith (Monastery)

The technology of shipbuilding, sailing, and navigation improved substantially during the Middle Ages. One result of these advances was a greater range and efficiency for Fishing Ships. The rich waters off the coasts of Europe, North Africa, and Asia provided a bounty of seafood that could be preserved by drying and salting. Preserved fish, especially cod, became an important trade good in the late Middle Ages.



Trade Cog

Trades by sea; takes goods from your Dock to a foreign Dock and brings back gold. The farther the Dock, the higher your profit.

- Built at** Dock
Armor — Careening (Dock)
Speed — Dry Dock (Dock)
Lower cost — Shipwright (Dock)
Your units resistant to other Monks — Faith (Monastery)



To trade using a Trade Cog

Click the Trade Cog, and then right-click a foreign Dock.

For more information on trading, see Chapter V.

The demands of trade along the northern coasts of Europe led to the development of new types of ships with wide beams, deep drafts, square sails, stern rudders, and large cargo space. Ships of this new design were called cogs and they dominated Middle Age sea commerce from the Baltic Sea to the Western Mediterranean. Because these ships could not be drawn up on a beach easily, ports required piers extending out into water sufficiently deep to keep the cogs afloat. The Far Eastern equivalent to the trade cog was the Chinese junk, a much more advanced ship not surpassed in the West for many centuries.



Fire Ship & Fast Fire Ship

Spew fire at other ships.

Built at	Dock
Strong vs.	galleys, Longboats
Weak vs.	demolition ships
Upgrades	Armor — Careening (Dock) Speed — Dry Dock (Dock) Lower cost — Shipwright (Dock) Your units resistant to other Monks — Faith (Monastery)

The Byzantines alone in the West carried forward the ancient traditions of ship building into the Middle Ages. Their improvement over the trireme was the fire ship, a narrow and fast warship powered by both oars and lateen sails. The fighting power of these ships was provided partly by marines, archers, and catapults, but the secret weapon of the Byzantine navy was Greek fire. This extremely volatile mixture was squirted out of hoses from the bow of the fire ship and ignited on contact with air. Fire was a devastating weapon against wooden ships and the enemies of the Byzantines could not stand up to fire ships spraying Greek fire. Other civilizations acquired the secret of Greek fire at times, but it was so closely guarded and dangerous to use that it is lost today. The fire ship was improved over the years to increase its speed, maneuverability, and armor. Constantinople was successfully defended by its navy of fast fire ships for many centuries.



Cannon Galleon & Elite Cannon Galleon

Long-range warship used to attack targets on shore to establish a beachhead. Fires slowly, with minimum range. Requires Chemistry.

Built at	Dock
Weak vs.	galleys, fire ships, demolition ships
Upgrades	Armor — Careening (Dock) Speed — Dry Dock (Dock) Lower cost — Shipwright (Dock) Your units resistant to other Monks — Faith (Monastery)

Primitive cannon were first mounted on ships in the fourteenth century. These were mounted in the stern or bow for firing forward or aft. Small weapons were mounted on the rails for use against enemy crews in close action. The first ship built specifically for carrying cannon appeared in 1406. Effectively mounting a large number of cannons on a ship took many years to work out. It required new designs to compensate for the enormous weight of the guns high on the ship's sides. Tackle had to be designed to allow the guns to be fired and reloaded safely. Safe procedures were also needed for storing and accessing powder. Useful cannon galleons did not appear until late in the Middle Ages.



Transport Ship

Moves units across water.

- Built at** Dock
Upgrades **Armor and Capacity** — Careening (Dock)
Speed and Capacity — Dry Dock (Dock)
Lower cost — Shipwright (Dock)
Your units resistant to other Monks — Faith (Monastery)

For more information about moving units, see Chapter IV.

Trading ships of all kinds were requisitioned when armies were moved overseas. Such ships were usually modified into transports to better accommodate troops, horses, livestock, siege equipment, and supplies. England was invaded on several occasions during the Middle Ages, including the early Saxon/Angle/Jute invasions, numerous Norse invasions (the Danes ruled much of England temporarily), and the later Norman invasion of 1066. The Normans also invaded Sicily and southern Italy. Many of the Crusades involved sea movement from France to the Holy Land. The English brought armies into France several times during the Hundred Year's War.



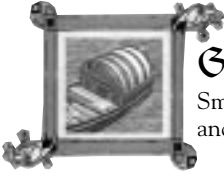
Demolition Ship & Heavy Demolition Ship

Filled with explosives. Pilot near enemy ships and detonate to wrest control of the sea from an entrenched opponent.

- Built at** Dock
Strong vs. fire ships
Weak vs. galleys, Longboats, Bombard Cannons
Upgrades **Armor** — Careening (Dock)
Speed — Dry Dock (Dock)
Lower cost — Shipwright (Dock)
Your units resistant to other Monks — Faith (Monastery)

Kings and civilizations without a naval tradition turned to a simple expedient when facing a naval engagement. They loaded an expendable ship with combustibles and a skeleton crew. The doomed ship was then sailed into contact with enemy ships and set alight. When done properly, demolition ships burned fiercely and exploded, setting adjacent enemy ships on fire also. Wooden ships sealed with pitch and outfitted with flammable rigging and equipment were at great risk to fire and explosion (once gunpowder was aboard). A demolition ship could damage or destroy ships many more times more powerful and valuable and could be used against seaside buildings.

Demolition ships eventually were made larger and filled them with explosives of greater power, especially gunpowder. This heavy demolition ship resulted in greater explosions and a greater chance of damaging or destroying one or more enemy ships. It could be devastating against a large target or many enemy ships caught traveling close together.



Galley

Small, basic, fast ship with weak attack. Scouts water for early attacks and enemy fishing fleets.

Built at	Dock
Strong vs.	demolition ships, cannon galleons
Weak vs.	fire ships, Bombard Cannons
Upgrades	Attack — Chemistry (University) Attack, Range — Fletching, Bodkin Arrow, Bracer (Blacksmith) Armor — Careening (Dock) Speed — Dry Dock (Dock) Targeting — Ballistics (University) Lower cost — Shipwright (Dock) Your units resistant to other Monks — Faith (Monastery)

Warships largely disappeared in Europe during the Dark Ages because no civilization other than the Byzantines possessed the wealth and organization necessary for maintaining any sort of navy. As the centuries passed, a few small warships again appeared in the Western Mediterranean. These were oar-powered galleys used primarily for scouting and chasing down pirates that plagued sea trade. The best warships in the West were built and maintained by the Byzantines, who alone had carried on their shipbuilding traditions since ancient times.



War Galley

Medium combat ship.

Built at	Dock
Strong vs.	demolition ships, cannon galleons
Weak vs.	fire ships, Bombard Cannons
Upgrades	Armor — Careening (Dock) Attack — Chemistry (University) Attack, Range — Fletching, Bodkin Arrow, Bracer (Blacksmith) Speed — Dry Dock (Dock) Targeting — Ballistics (University) Lower cost — Shipwright (Dock) Your units resistant to other Monks — Faith (Monastery)

The war galley was a larger and improved fighting ship. It carried a larger contingent of marines and archers. When necessary, the equivalent of a war galley was created by putting fighting towers at the stern and bow of trading ship. These provided better protection and a height advantage for archers when closed with an enemy ship.



Galleon

Improved combat ship.

Built at	Dock
Strong vs.	demolition ships, cannon galleons
Weak vs.	fire ships, Bombard Cannons
Upgrades	Armor — Careening (Dock) Attack — Chemistry (University) Attack, Range — Fletching, Bodkin Arrow, Bracer (Blacksmith) Speed — Dry Dock (Dock) Targeting — Ballistics (University) Lower cost — Shipwright (Dock) Your units resistant to other Monks — Faith (Monastery)

The galleon was a sailing ship outfitted for war, the largest fighting ship used in the West prior to the mounting of cannons on board. This large and sturdy ship carried a large contingent of fighting men and possibly some heavier siege artillery. The crew would attempt to board and capture an enemy ship in hand-to-hand fighting. Catapults or large crossbows provided additional firepower.



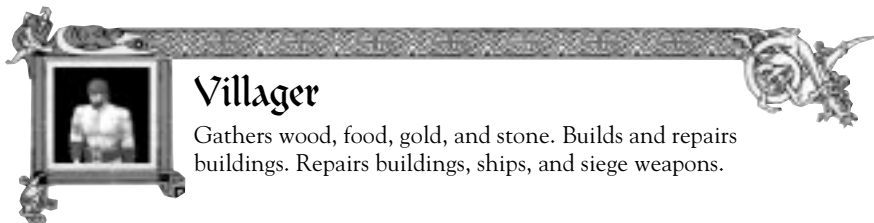
Longboat & Elite Longboat

Viking unique unit created in Castle Age. (The Vikings are the only civilization with two unique units. The Viking Longboat may be built at a Dock once a Viking Castle has been built.)

Built at	Dock
Strong vs.	demolition ships, cannon galleons
Weak vs.	fire ships, Bombard Cannons
Upgrades	Armor — Careening (Dock) Attack — Chemistry (University) Attack, Range — Fletching, Bodkin Arrow, Bracer (Blacksmith) Speed — Dry Dock (Dock) Targeting — Ballistics (University) Lower cost — Shipwright (Dock) Your units resistant to other Monks — Faith (Monastery)

The Viking raiders of the ninth through eleventh centuries were especially terrifying because they could strike anywhere along the seacoast and even upriver. They had this capability thanks to their longboats. These ships were long, narrow, and of shallow draft, but were surprisingly seaworthy. They used oars and a single square sail for propulsion. Longboats could be taken into very shallow water and beached. Only a coast with high bluffs or rocky shoreline was safe from them.

Other units



Villager

Gathers wood, food, gold, and stone. Builds and repairs buildings. Repairs buildings, ships, and siege weapons.

Created at
Upgrades

Town Center

HP, armor, efficiency — Loom, Wheelbarrow, Hand Cart (Town Center)

Attack — Sappers (Castle)

Resource-gathering — Double-Bit Axe, Bow Saw, Two-Man Saw; Stone Mining, Gold Mining, Stone Shaft Mining, Gold Shaft Mining (Lumber Camp, Mining Camp); Heavy Plow (Town Center)

Build speed — Treadmill Crane (University)

Your units resistant to other Monks — Faith (Monastery)

Villagers perform the economic work for your civilization. They chop wood, mine stone and gold, hunt, forage, fish, herd sheep, and farm. They also construct buildings and repair damaged buildings, ships, and siege weapons. If necessary, they can also engage in combat. Villager gender is randomly determined when you create a new villager. They perform the same tasks regardless of their gender.

The great percentage of people in the Middle Ages were peasants, serfs, and lowly villagers who gathered the food and did most of the work. They supported a relatively small class of religious leaders and nobleman who controlled the wealth and power of the community. The life of the peasant and serf was hard but improved as feudalism gave way to social systems that allowed the workers to retain more of their produce. Many peasants moved into the middle class of the growing cities. Those who remained on the farms saw their production and wealth increase thanks to specialization and many technological improvements in agriculture.





Relic

Special objects placed randomly on the map. Can only be moved by Monks. When garrisoned in a Monastery, generate gold for your civilization. Cannot be destroyed.

You can win most games by controlling all relics, as explained in Chapter II. There are multiple relics in each game.

The influence of religion in daily life during the Middle Ages, especially in Europe, was exemplified by the attraction and trafficking of religious relics. The burial sites of saints became the focus of pilgrimages. A church or monastery that owned even a few bones from a saint or a small piece of the true cross drew pilgrims. In time a market for saintly bones developed and rich men competed to acquire such relics and endow them to local religious institutions. Attracting pilgrims and believers was good for the local economy. The most famous relic of the period is the Shroud of Turin, purported to be the burial shroud of Jesus Christ. This shroud was acquired in the Middle East and brought to Italy in the late Middle Ages.



Monk

Slow and weak. Converts enemy units, ships, and some buildings to your civilization (player color). Heals wounded villagers, military units (except siege weapons and ships).

Created at
Strong vs.
Weak vs.
Upgrades

Monastery
Teutonic Knights, War Elephants
archers, knights, Light Cavalry, Woad Raiders
(all at Monastery)
Convert some buildings, siege units — Redemption
Movement speed — Fervor
HP — Sanctity
Convert other Monks — Atonement
Greater conversion range — Block Printing
Less rejuvenation time — Illumination
Your units resistant to other Monks — Faith

For more information about Monks' abilities, see Chapter IV; for more information about how to improve your Monks, see Chapter VIII.

Religion was a powerful force during the Middle Ages, whether it was Roman Catholicism of the West, Islam in the Middle East, or Buddhism in Asia. The missionaries and teachers of religion were mainly monks, men who took vows of poverty and who dedicated their lives to spreading their message. Middle Age conflicts often derived from religious differences and were led or supported by contingents of monks on each side. The Crusades, for example, were multiple attempts by European Christians to wrest control of the Holy Land from the hands of Islamic Arabs. Large numbers of monks accompanied the Christian crusading armies.



Trade Cart

Carries goods to foreign Markets and brings back gold as profit. Distant Markets are the most profitable.

Built at Market
Upgrades Your units resistant to other Monks — Faith (Monastery)



To trade using a Trade Cart

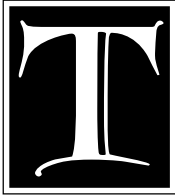
Click the Trade Cart, and then right-click a foreign Market.

For more information on trading, see Chapter V.

The trade cart represents the wagon, pack horses, and other means of land transport used for the overland trade of goods during the Middle Ages. One important land trade route was the movement of wool from England across the Channel into France. The wool was manufactured into cloth and this cloth was carried into Italy to exchange for spices and silk from the East. The most famous land trade route of the age was the Silk Road, from China to Constantinople and the Levant. Camel and horse trains carried silks across forbidding desert terrain in exchange for Western gold and silver.



Chapter VIII



Technologies

Researching technology improves the abilities of your villagers, soldiers, and buildings. For example, researching the Wheelbarrow (at the Town Center) makes your villagers move faster and carry more so they work more efficiently. Researching Scale Mail Armor (at the Blacksmith) increases the armor of your infantry units so they are harder to kill. Researching Town Watch (at the Town Center) lets your buildings see the enemy from farther away so you have more warning of their approach.

For more information about researching technology, see Chapter III.

Building technologies

Researching the following technologies improves your buildings, walls, and towers.



Town Watch

Town Watch (at the Town Center) lets your buildings see enemies from farther away so you have more warning of their approach.

Each town and community was responsible for its own defense for much of the Middle Ages, relying on the local lord and his retinue of soldiers for protection. The danger from bandits, raiders, or unfriendly neighbors was real. Communities developed a town watch that scouted the nearby countryside regularly. The town watch reported danger to give the community time to prepare what defense it could.



Town Patrol

Town Patrol (at the Town Center) lets your buildings see enemies from even farther away than Town Watch.

As communities grew they had more to defend and more resources with which to defend. The town watch grew into a town patrol usually provided by the local lord as part of his responsibility for the community's safety. Town patrols ranged far from the community to crossing points or passes where enemies might appear. Longer ranged patrols meant earlier warnings and more time for preparation against attack.



Masonry

Masonry (at the University) makes your buildings stronger so they can take more damage in combat.

Europeans of the Dark Ages and later had to relearn the techniques of masonry exhibited by the Roman ruins that surrounded them. Roman bridges and aqueducts stood for many centuries after the Roman Empire was gone, but the barbarian immigrants could not repair or duplicate these structures. The craft of masonry was gradually reclaimed and then advanced. The great achievements of European masonry in the Middle Ages were the cathedrals that appeared across the region.



Architecture

Architecture (at the University) makes your buildings even stronger than Masonry.



The rebirth of masonry allowed the architecture of the Middle Ages to advance as well. New techniques for vaulting and support made possible the great cathedrals that stand as icons for this age. The famous architectural feature of this age was the flying buttress. This new element shifted part of the great weight of a cathedral's roof onto supports outside the walls, allowing great airy vaults to open over the center of the church. Massive load-bearing pillars left long open spaces between which beautiful stained glass windows could be placed.



Treadmill Crane

Treadmill Crane (at the University) makes villagers construct buildings faster.

The construction of castles, cathedrals, and other major building projects required the invention of new techniques, as well as the re-discovery of ancient technologies. A critical tool known to the ancients but lost to the Europeans of the Dark Ages was the crane. The simple crane was a long pole with block and tackle gear that was used to pull loads to a height. The treadmill crane was an improvement over the simple version. It

used a large circular treadmill upon which men walked. Gears converted the horizontal circular motion into vertical turning, providing power to wind ropes around a drum and pull up heavy loads. A variation of the treadmill crane employed a capstan that men could push against, like those used on sailing ships to raise anchors.



Hoardings

Hoardings (at the Castle) make your Castles stronger.

Men fighting from the top of sheer castle walls could not shoot or otherwise attack enemies at the base of the wall without exposing themselves to arrows. Castles were improved with hoardings, which were fortifications and crenellations that extended out from the tops of walls to protect defenders. They could now more safely attack men below or those climbing up. Hoardings made castles more difficult to capture.

Economy & trade technologies

Researching the following technologies improves your economy and trading abilities.



Loom

Loom (at the Town Center) makes your villagers harder to kill.

The invention of the loom and the ability to weave cloth was an important ancient technology that was quickly recovered during the Dark Ages. Good wool clothes were an important asset that lengthened life expectancy in the Northern European climate. Raising sheep for wool and then making cloth was one of the early important industries of the Middle Ages.



Wheelbarrow

Wheelbarrow (at the Town Center) makes your villagers move faster and carry more resources so they work more efficiently.

The simple wheelbarrow, or one-wheeled hand cart, was a significant invention at a time when most people worked with their hands in an agricultural community. There was little industry in the early part of the Middle Ages. The economy was powered largely by people growing crops, herding livestock, gathering, and building. The wheelbarrow provided an important productivity improvement.



Hand Cart

Hand Cart (at the Town Center) makes villagers move faster and carry more resources.

The hand cart or simple wagon pulled by a horse or other animal was an improvement in land transport and boosted productivity. A man with a cart could carry the load of many men and more cheaply. The demand for carts was a boost to the economy itself by creating jobs for horse breeders, harness makers, cart makers, and wheelwrights.



Gold Mining

Gold Mining (at the Mining Camp) makes villagers mine gold faster.

The search for gold and silver since ancient and even prehistoric times meant that by the Dark Ages there was little of these precious metals to be found on the surface. To find more, it had to be mined from underground. The technology of gold prospecting and gold mining advanced during the early part of the Middle Ages, driven by the need for currency and demand for jewelry.



Gold Shaft Mining

Gold Shaft Mining (at the Mining Camp) makes villagers mine gold even faster than Gold Mining.

When sources of gold and silver near the surface were exhausted, miners developed technology for going deep underground. This involved building lifts to send men down and bring ore up. It required pumps to pull water up and push air down. And it required new tunneling techniques for shoring up mine galleries and shafts to prevent cave-ins. Some of the richest silver mines were found in Eastern Europe.



Stone Mining

Stone Mining (at the Mining Camp) makes villagers mine stone faster.

The principal building material in Europe during the Dark Ages was wood, which was available in abundance. Next most useful was stone salvaged from decaying Roman buildings that no one knew how to repair. As civilization coalesced in this area once more, the construction trades revived and stone became more desirable and affordable as a building material. Stone mining, or quarrying, required technology for making stone-cutting tools and moving stone from the quarry to the building site.



Stone Shaft Mining

Stone Shaft Mining (at the Mining Camp) makes villagers mine stone even faster than Stone Mining.

The demand for stone escalated rapidly when castles were being built across Europe, towns were being fortified, and the increasingly wealthy Roman Catholic Church began building its great cathedrals. Stone cutting became an important trade. New technology was needed to get to desirable stone because the easily reached surface sources were rapidly exhausted in some areas.



Double-Bit Axe

Double-Bit Axe (at the Lumber Camp) makes villagers chop wood faster.

The double-bit axe had blades, or bits, on both sides. It was a large, heavy axe that speeded the cutting of trees. With two cutting edges, woodcutters could switch bits when one became dull and then sharpen both at the same time. Cutters worked faster and more efficiently with the double-bit axe.



Bow Saw

Bow Saw (at the Lumber Camp) makes villagers chop wood even faster than Double-Bit Axe.

The bow saw had a rounded handle like a bow with the saw blade connecting the bow ends. The bow saw was a more precise tool than previous saws. Woodcutters using it got more usable wood from each tree by reducing waste.



Two-Man Saw

Two-Man Saw (at the Lumber Camp) makes villagers chop wood even faster than the Bow Saw.

The large two-man saw allowed two men to work together taking down a tree and increased the productivity of both. One man pulled the saw toward him with both hands and cut the tree. The second man rested but kept his hands on the saw. When the first man finished his pull, the second man pulled the saw back and the first man rested. The two-man saw cut with each back and forth motion and had big teeth and cut deeply, bringing trees down in quick time. Because each operator could use two hands when pulling, they could handle the large size and pull.



Horse Collar

Horse Collar (at the Mill) increases the amount of food your Farms produce before they go fallow and must be rebuilt.

During the Dark Ages oxen were the prime source of animal power on farms, even though horses were recognized as being stronger and easier to use. The available harnesses for horses, however, choked the animal, and therefore seriously limiting its pulling power. A chest horse collar was invented in the East, possibly China, and gradually worked its way to Europe. This was an important innovation for European farming because it tremendously increased the pulling power of horses. This reduced the time needed to plow land and led to more land being taken into cultivation.



Heavy Plow

Heavy Plow (at the Mill) increases the amount of food your Farms produce even more than Horse Collar.

Following the implementation of the chest horse collar, the next important innovation for European farming was the heavy plow. This was a large wood and metal plow that could bite deep into the dense, rich soil deposited on the European plains following the last Ice Age. The heavy grasses in these areas defied previous attempts to plow. The heavy plow pulled behind strong horses bred for power broke open these soils. This opened vast tracks of land that proved very productive and greatly increased food production. Populations climbed as a result.



Crop Rotation

Crop Rotation (at the Mill) increases the amount of food your Farms produce even more than the Heavy Plow.

With experience over time farmers noted that food production gradually declined on fields where the same crops were planted year after year. Experimentation showed that proper crop rotation could restore high yields. Farmers of the Middle Ages did not understand the science of this result but developed a practical plan through experience. Planting the same crops over and over depleted specific nutrients that a plant needed in quantity. Through crop rotation, different plants were found to restore the nutrients needed by something else. Alfalfa, for example, restores nitrogen to soil from which it has been depleted by other crops. Planting alfalfa restored the soil for the next year and made good winter feed for livestock.



Coinage

Coinage (at the Market) decreases the cost of sending a tribute of resources to another player.

Money degraded during the Dark Ages in Western Europe because the barbarian tribes that took control were largely illiterate and had no system of government that could administer the making of coins. Those coins that exist from this era are very crude copies of Roman coins and usually of low-value metals. The rise of Charlemagne's empire and other strong kings created the stable administrations that could successfully provide coinage. A stable and available supply of money was a great boost to economic growth. The most useful European coins were silver pennies, roughly the size of the modern U.S. 10-cent piece, and smaller denominations made of copper and bronze.



Banking

Banking (at the Market) eliminates the cost of sending a tribute of resources to another player.

The loaning of money for interest, or usury, was long prohibited by the church in the West and this proved a handicap for economic growth. The religious laws were avoided by a number of ploys, and non-Christians were often allowed into a community to provide this service. Preaching a pogrom against money-lending Jews or other non-Christians was a convenient way for more than one king to clear off a large debt. The religious and political climate changed gradually, especially in the great trading cities of Italy where the first of many great merchant banking firms came into existence.



Guilds

Guilds (at the Market) reduces the cost of buying and selling resources at the Market.

Political and economic power during the Dark Ages was held by barbarian chiefs. This power eventually shifted to kings, churchmen, and powerful nobles. Near the end of the Middle Ages the middle class of townspeople grew more important and took a share of this power. One innovation of the middle class was the creation of guilds. Guilds controlled a specific enterprise such as cloth trading, butchering, or iron making within a town or region. They set the prices and determined who would work in the business. Outsiders were blocked from working. In return for a monopoly, usually bought from the king or town, they provided a superior product. Controlling trades through guilds resulted in high standards of living for guild members, a quality product, and high prices.



Cartography

Cartography (at the Market) lets you share exploration and unit line of sight with your allies so you see what they have explored. (Before your allies can see what you have explored, they must research Cartography, too.)

There was a revival of European learning after the Dark Ages that started mainly in the monasteries of the Christian Church, particularly in Ireland. The west Europeans were far behind the educational standards of the Byzantines, the Saracens, and the Chinese. Part of this revival was an interest in geography that became even more pronounced when the Crusaders and adventurers brought back tales of exotic trade goods and riches beyond the horizon. Kings and churchmen commissioned maps and cartography, the science of map making, became a newly prized skill.



Conscription

Conscription (at the Castle) decreases the time required to create units at the Barracks, Stable, Archery Range, and Castle.

Lords of the Middle Ages had the ability to call up their vassals and the peasant militia for limited service. Conscription was the next evolution in acquiring men for military service. It allowed a lord to put men into military service for an extended period, not just a few months of campaigning each year. In some parts of the world, a man might be conscripted for many years of service.



Sappers

Sappers (at the Castle) increases the damage villagers cause when they attack buildings.

Men who specialized in the techniques of attacking fortifications became known as sappers. They dug the trenches to bring weapons up close and they undermined walls to cause their collapse. Armies without a contingent of sappers were handicapped when attempting to take a castle or fortified town. Many sappers worked as mercenaries for the highest bidder.



Spies

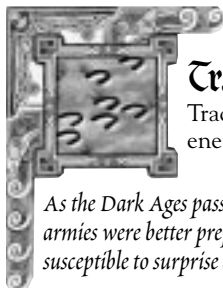
Spies (at the Castle) lets you see what your enemies have explored and share their unit line of sight. You can purchase the Spies technology for gold. By paying a fee dependent on the number of enemy villagers in existence, you can learn the exact location of each unit and building still in play.

In a Regicide game, this technology is called Treason. For information about the unique role of Treason in a Regicide game, see Chapter II.

Advanced civilizations of any age gathered information about potential enemies as part of their foreign policy. Much of this intelligence was gathered overtly through the normal channels of trade and diplomacy. Prudent civilizations with hostile neighbors actively enlisted spies and informants to monitor enemy activity. During the Middle Ages the Byzantines and Mongols were especially active in employing networks of agents among their enemies. Spies gave early warning of enemy forces marshalling for attack or searched for weaknesses in enemy defenses.

Infantry technologies

Researching the following technologies improves your infantry units.



Tracking

Tracking (at the Barracks) lets your infantry units see the enemy from farther away.

As the Dark Ages passed and barbarian clans became trained armies, military techniques improved. The new armies were better prepared for campaigning and maneuver. One result of these improvements was being less susceptible to surprise and ambush.



Squires

Squires (at the Barracks) make your infantry units move faster.

Prior to becoming a knight, young men put in a long apprenticeship as a squire. Squires were assigned to a knight for their training in weapons and social graces. In return they cared for the knight's equipment and horses, dressed him for combat, guarded him, and accompanied him into battle. All knights were squires at an early age, but not all squires became knights. Squires without noble birth, financial backing, or the support of superior lord might live out their life without becoming a knight. Squires fought alongside the knights, although their weapons and armor were of a lower standard. The support of squires made armies more effective.



Scale Mail Armor

Scale Mail Armor (at the Blacksmith) increases the armor of your infantry units.

Scale mail armor was made of layers of rounded metal scales that overlapped each other in a cascade, something like a covering of overlapping leaves. This partially protected the wearer from both missiles and hand weapons. A blow against scale mail armor was partially deflected and the layers of scales absorbed much of the energy of the blow. Scale mail armor was an improvement over leather.



Chain Mail Armor

Chain Mail Armor (at Blacksmith) increases the armor of your infantry units even more than Scale Mail Armor.

Armor made of linked metal chains was an improvement over a cascade of metal scales. It had greater integrity and held up better after taking some damage. Whereas a row of scales might come loose after a blow, chain mail armor stayed largely intact. Because the linked chains were smaller than the scales they replaced, chain mail armor was more flexible and comfortable to wear. While an improvement, chain mail armor was also more expensive and time-consuming to manufacture.



Plate Mail Armor

Plate Mail Armor (at the Blacksmith) increases the armor of your infantry units even more than Chain Mail Armor.

Armor made of large metal plates was the best defense obtainable against missiles and hand weapons. It was stronger and absorbed more energy. Large sheets of hammered steel were fashioned to fit the wearer's body. Making plate mail armor became an important craft. Specialists in Italy received orders for armor from all over Europe. The booty from battle or tournaments included valuable armor. Armor required regular oiling to prevent rust and this was the duty of squires indentured to knights. Plate mail armor appears ponderous today but was actually reasonably light and well designed for mobility. Athletic knights could perform handstands wearing armor. Knights could mount their horses without much difficulty and did not require cranes for a lift.



Forging

Forging (at the Blacksmith) increases the attack strength of your infantry and cavalry units.

Iron tools and weapons were hammered out of iron bars through forging. The bars were heated in the forge until they were red hot. At this point the metal could be shaped by hammering. The hot bar was held against an anvil and pounded into the desired shape. In the hands of an expert smithy, the process of continually heating, hammering, and cooling created quality tools and sharp, sturdy weapons. Men who worked the forges were called blacksmiths because they worked with black iron and got quite dirty during a day's work.



Iron Casting

Iron Casting (at the Blacksmith) increases the attack strength of your infantry and cavalry units even more than Forging.

The ability to pour molten iron into a mold to create complicated shapes was called iron casting. This was useful for making iron tools and weapons that could not be easily made by forging or to speed the process of manufacturing. The secrets of iron casting were discovered in China many centuries before this technology reached Europe. The ability to cast large metal objects became especially important when manufacturers were trying to figure out how to make cannons.



Blast Furnace

Blast Furnace (at the Blacksmith) increases the attack strength of your infantry and cavalry units even more than Iron Casting.

The Saracens and later the Japanese made the first high-quality steel through the laborious process of folding iron over and over and hammering it. A tremendous number of repetitions of this process removed a very high percentage of impurities in the metal creating steel. The Saracens and Japanese were both known for the sharpness and strength of their best swords. Innovators learned to speed the process of making steel through a blast furnace. By blasting oxygen into the furnace when iron ore was being smelted, the temperature of the mixture was raised and more impurities were burned off. The result was steel, a useful material for weapons because it could hold a sharper point and did not fracture as easily as iron.

Missile/siege unit technologies

Researching the following technologies improves your archers and towers.



Fletching

Fletching (at the Blacksmith) increases the attack strength and range of scorpions, Archery Range units, towers, Town Center, Castle, and ships (except those using gunpowder weapons).

The provision of feathers or other wind foils at the rear of an arrow was called fletching and this innovation improved the stability of an arrow in flight. Fletching increased the range and accuracy of the arrow. Well-made arrows were essential to the success and effectiveness of archers.



Bodkin Arrow

Bodkin Arrow (at the Blacksmith) increases the attack strength and range of scorpions, Archery Range units, towers, Town Center, Castle, and ships (except those using gunpowder weapons).

The bodkin arrow was an innovation that made archers of all types more effective against men wearing armor. The bodkin was simply a straight point intended to puncture, rather than a typical broad point intended to slice as it penetrated. The broad point was fine for hunting or use against unarmored targets, but armor effectively dissipated its energy. The bodkin concentrated its power in the point and could penetrate any armor at a sufficiently short range. The English longbowmen at Agincourt lofted barrages of bodkin arrows down upon the dense ranks of French knights. The bodkins, aided by the force of gravity, penetrated helmets, shoulders, legs, and arms when they struck perpendicularly to the face of armor.



Bracer

Bracer (at the Blacksmith) increases the attack strength and range of scorpions, Archery Range units, towers, Town Center, Castle, and ships (except those using gunpowder weapons).

The bracer was a hard leather guard worn on an archer's forward hand. This improvement had the duel advantage of supporting the wrist, which would grow quite weary after many shots, and protecting the inside of the arm from the fletching of launched arrows. Without protection, the arm could be cut over the course of many shots and weaken the archer to the point of taking him out of combat. The bracer was an important improvement for archers that made them more effective.



Padded Archer Armor

Padded Archer Armor (at the Blacksmith) increases the armor of your archers.

Archers and skirmishers were not expected to engage in hand-to-hand fighting so they rarely wore armor early in the Middle Ages. They also needed flexibility of arm movement and might be required to move about a battlefield quickly. When available, however, these troops would add protective clothing that did not interfere significantly with their fighting ability. One early type of light armor was simply padded cloth, worn on the torso, that provided some protection from blows or missiles.



Leather Archer Armor

Leather Archer Armor (at the Blacksmith) increases the armor of your archers even more than Padded Archer Armor.

Padded armor for light troops was improved with an outer layer of leather over the cloth padding. Leather was light and flexible but provided more protection than simple cloth.



Ring Archer Armor

Ring Archer Armor (at the Blacksmith) increases the armor of your archers even more than Leather Archer Armor.

As the Middle Ages progressed, light troops were more aggressively employed in battle. They supported pikemen phalanxes and were put into combined formations with these units. Crossbowmen needed to get close to the enemy to shoot. During assaults on fortifications and castles, they were exposed to enemy fire. In conjunction with their more aggressive roles, the armor that light troops wore was upgraded to ring, or chain mail. This was the lightest and most flexible of the metal armors and minimized interference with fighting, while providing better protection than padded leather.



Chemistry

Chemistry (at the University) increases the attack strength of all non-gunpowder missile weapons. You must research Chemistry to build gunpowder units (Bombard Tower, Bombard Cannon, Hand Cannoneer, and Cannon Galleon). After researching Chemistry, missile weapons fire flaming arrows.

The science of chemistry was very crude during the Middle Ages and devoted almost entirely to finding ways to convert base metals into gold. This study was called alchemy and practitioners were called alchemists. Alchemists occasionally stumbled upon useful chemicals by accident. The most significant result of chemistry experiments was the European acquisition of gunpowder, which had been invented many centuries earlier by the Chinese.



Ballistics

Ballistics (at the University) improves how accurate scorpions, archers, galleys, and towers are in hitting moving targets.

Missile weapons grew increasingly important as the Middle Ages proceeded, culminating in the development of firearms and cannons. Before these innovative weapons there were longbows, crossbows, and a variety of siege engines throwing rocks, spears, and arrows. Practical men studied how these missiles performed in flight and worked to improve velocity and accuracy. This was the science of Ballistics, the study of the motion of projectiles in flight. This experience led to improvements throughout the age as part of the arms race among weapons, armor, fortification, attack, and defense.



Murder Holes

Murder Holes (at the University) eliminates the minimum range of towers (except Bombard Towers) and Castles so they can fire at soldiers attacking their base.

Hoardings were fortifications built at the top of castle walls and towers from which defenders could fight. They needed to be beyond the vertical plane of the wall so they could attack enemies at the base of the wall. At the bottom of the hoardings were trap doors called murder holes. These could be opened and defenders could shoot arrows and drop stones, boiling water, or burning sand directly down. Without murder holes, enemies up against the bottom of a wall were relatively safe.



Heated Shot

Heated Shot (at the University) increases the damage towers cause to ships.

Coastal gunners who engaged ships learned to heat their cannonballs in furnaces until they were red hot. If a heated shot lodged in the woodwork of a sailing ship, it could set the ship afire. The wadding in the barrel of the gun had to be sufficiently thick to not burn away before the cannon could be fired. If the shot burned through the wadding too quickly, the gun could go off before being properly aimed. In such a case the gun might explode rather than fire. Heated shot that plunged through decks was especially dangerous. It could lodge deep in the ship where the crew could not reach it with water before fire had taken hold. If fire reached the powder magazine, the ship would explode.



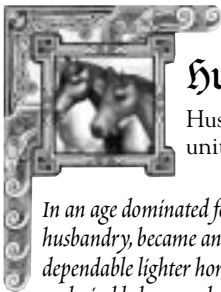
Siege Engineers

Siege Engineers (at the University) increases the damage siege weapons cause to buildings as well as range.

Men who specialized in designing, building, and operating siege weapons were called siege engineers. These weapons were marvels of their age and complicated to operate. Hitting a narrow stone wall from a distance with a plunging stone shot was a difficult problem. Kings prized men who could solve it.

Cavalry technologies

Researching the following technologies improves your cavalry units. You can also research Forging, Iron Casting, and Blast Furnace (at the Barracks) to increase the attack strength of your cavalry units. For descriptions of these technologies, see “Infantry technologies” earlier in this chapter.



Husbandry

Husbandry (at the Stable) increases the speed of all cavalry units.

In an age dominated for centuries by knights, the breeding and provision of horses, a branch of animal husbandry, became an important skill. Knights needed heavy chargers to carry them into battle but also dependable lighter horses with stamina for campaigning in the country. Scouts and light cavalry needed fast and nimble horses when traveling cross-country in enemy territory. Horse breeders of the Middle Ages selected for these traits, and horses of different abilities were the result.



Scale Barding Armor

Scale Barding Armor (at the Blacksmith) increases the armor of your cavalry units, including Cavalry Archers, Mangudai, and War Elephants.

Barding was armor placed on horses. Scale barding armor was made of layers of rounded metal scales that overlapped each other in a cascade. This partially protected the horse from both arrows and hand weapons. A blow against the armor was partially deflected, and the layers of scales absorbed much of the energy of the blow.



Chain Barding Armor

Chain Barding Armor (at the Blacksmith) increases the armor of your cavalry units even more than Scale Barding Armor.

Armor made of linked metal chains was an improvement over a cascade of metal scales. It had greater integrity and held up better after taking some damage. Where a row of scales might come loose after a blow, chain barding armor stayed largely intact. Because the linked chains were smaller than the scales they replaced, Chain Armor was more flexible and comfortable to wear.



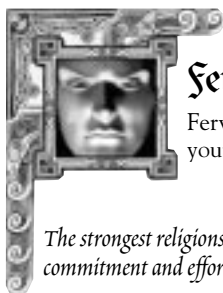
Plate Barding Armor

Plate Barding Armor (at the Blacksmith) increases the armor of your cavalry units even more than Chain Barding Armor.

Armor made of large metal plates was the best defense obtainable against missiles and hand weapons. It was stronger and absorbed more energy. Large sheets of hammered steel were fashioned to fit the body of the horse.

Monk technologies

Researching the following technologies improves your Monks.



Fervor

Fervor (at the Monastery) makes your Monks move faster.

The strongest religions inspire great passion and fervor among their faithful. The result is a high degree of commitment and effort, especially among the teachers and interpreters of the group.



Sanctity

Sanctity (at the Monastery) increases the hit points of your Monks.

To achieve sanctity was to achieve a holiness of life and character. The holy men of the great religions of the Middle Ages strove for sanctity through their obedience to sacred texts, their vows of poverty, and their respect for all living things. Through sanctity they inspired those of other religions or those less committed.



Redemption

Redemption (at the Monastery) lets your Monks convert enemy buildings (except Town Centers, Castles, Monasteries, Farms, Fish Traps, walls, towers, Gates, and Wonders) and siege weapons. Monks can convert most enemy units from a distance; however, they must stand adjacent to buildings, rams, and Trebuchets.

The ability of someone fallen from the faith to redeem himself or herself was a powerful act of forgiveness on the part of a religion. Religions that were forgiving and allowed redemption had an advantage over those that did not.



Atonement

Atonement (at the Monastery) lets your Monks convert enemy Monks.

Several of the most successful religions reach an atonement, or reconciliation, between their all-powerful god and the common men and women on Earth. This was an important feature that strengthened the faith of believers and attracted converts.



Illumination

Illumination (at the Monastery) decreases the time your Monks need to rest before attempting another conversion.

The strength of any religion is its ideas and the faith that these ideas encourage. The message and spread of these ideas can be enhanced by their presentation. During the Middle Ages religions used icons, impressive churches, music, and artwork to help spread and strengthen their message. Enduring symbols of this effort from the Middle Ages are the illuminated manuscripts copied laboriously by hand in the Scriptoria of isolated monasteries.



Faith

Faith (at the Monastery) makes your units harder for enemy Monks to convert.

Civilizations can conflict ideologically, as well as militarily and economically. When the Christian Crusaders invaded the Holy Lands, for example, they encountered the ideas of Islam, as well as new weapons, tactics, and desirable goods.



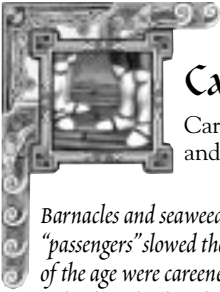
Block Printing

Block Printing (at the Monastery) lets your Monks convert enemy units from farther away.

Block printing, an old Chinese invention, made possible the printing press, one of the great inventions of the Middle Ages. This made possible the wide dissemination and easy storage of information on an amazing scale that continues to accelerate today. The first book printed was the Christian Bible. The important texts of other religions soon followed.

Ship technologies

Researching the following technologies improves your ships.



Careening

Careening (at the Dock) increases the pierce armor of ships and the number of units Transport Ships can carry.

Barnacles and seaweed attached themselves to the underside of wooden hulled ships over time. These "passengers" slowed the ship down as they spread across the hull, making the ships ever more inefficient. Ships of the age were careened periodically to scrap off these obstructions and reseal the bottom. Careening required unloading the ship, dragging it up onto a sandy beach sideways, and pulling it over to expose the bottom. Crewmen worked in shallow water scraping and resealing seams with new pitch. Careening was usually done in conjunction with tides to help float the ship off, and a ship needed to be careened twice to be cleaned on both sides.



Dry Dock

Dry Dock (at the Dock) makes your ships faster and increases the number of units Transport Ships can carry.

Ships needing extensive repairs were sailed into a new structure called a dry dock from which the water could be pumped. This left the ship dry and accessible to workmen from all directions.



Shipwright

Shipwright (at the Dock) decreases the amount of wood required to build ships.

Men who built and designed ships were called shipwrights. Their value to sea coast communities increased as the demand for sea trade and war ships increased. Expert shipwrights built sturdier ships at a lower cost.

Appendix

Building Attributes

Cost: W=wood, S=stone, G=gold

ECONOMIC	Age	Cost	Hit pts	Attack	Garrison	Range
Town Center	III	275W	2400	5	15	6
House	I	30W	900	0	0	0
Mill	I	100W	1000	0	0	0
Mining Camp	I	100W	1000	0	0	0
Lumber Camp	I	100W	1000	0	0	0
Dock	I	150W	1800	0	10*	0
Farm	I	60W	480	0	0	0
Fish Trap	II	100W	50	0	0	0
Market	II	175W	2100	0	0	0
Blacksmith	II	150W	2100	0	0	0
Monastery	III	175W	2100	0	10*	0
University	III	200W	2100	0	0	0
Wonder	IV	1000 W, S, G	4800	0	0	0
MILITARY						
Barracks	I	175W	1200	0	10*	0
Stable	II	175W	1500	0	10*	0
Archery Range	II	175W	1500	0	10*	0
Castle	III	650S	4800	11	20	8
Siege Workshop	III	200W	2100	0	10*	0
Gate	II	30S	2750	0	0	0
Palisade Wall	I	2W	250	0	0	0
Stone Wall	II	5S	1800	0	0	0
Fortified Wall	III	5S	3000	0	0	0
Outpost	I	25W, 25S	500	0	0	0
Watch Tower	II	125S, 25W	1020	5	5	8
Guard Tower	III	125S, 25W	1500	6	5	8
Keep	IV	125S, 25W	2250	7	5	8
Bombard Tower	IV	125S, 100G	2220	120	5	8

* Units can be garrisoned here only if a gather point is set on the building while units are being created. They cannot reenter once ungarrisoned. Units garrisoned in towers, Town Centers, and Castles add attack and range.

Unit Attributes

Speed: S=slow, M=medium, F=fast
Cost: F=food, W=wood, S=stone, G=gold

INFANTRY	Cost	Hit	Dps	Attack	Armor	Range	Speed	Special
Militia	60F, 20G	40	4	0/0	0	0	S	
Man-at-Arms	60F, 20G	45	6	0/0	0	M	M	Attack bonus vs. buildings
Long Swordsman	60F, 20G	55	9	0/0	0	M	M	Attack bonus vs. buildings
2H Swordsman	60F, 20G	60	11	0/0	0	S	S	Attack bonus vs. buildings
Champion	60F, 20G	70	13	1/0	0	S	S	Attack bonus vs. buildings
Spearman	35F, 25W	45	3	0/0	0	M	M	Attack bonus vs. cavalry, War Elephants
Pikeman	35F, 25W	55	4	1/0	0	M	M	Attack bonus vs. cavalry, War Elephants
Berserk	65F, 25G	48	9	0/0	0	S	S	Attack bonus vs. buildings; heals over time
Elite Berserk	65F, 25G	60	14	2/0	0	S	S	Attack bonus vs. buildings; heals over time
Samurai	60F, 30G	60	8	1/0	0	S	S	Attack bonus vs. other unique units, buildings
Elite Samurai	60F, 30G	80	12	1/0	0	S	S	Attack bonus vs. other unique units, buildings
Teutonic Knight	85F, 40G	70	12	5/2	0	S	S	Attack bonus vs. buildings
Elite Teutonic Knight	85F, 40G	100	17	10/2	0	S	S	Attack bonus vs. buildings
Throwing Axeman	55F, 25G	50	7	0/0	3	S	S	Attack bonus vs. buildings; ranged attack
E Throwing Axeman	55F, 25G	60	8	1/0	4	S	S	Attack bonus vs. buildings; ranged attack
Woad Raider	65F, 25G	65	8	0/0	0	M	M	Attack bonus vs. buildings
Elite Woad Raider	65F, 25G	80	13	0/0	0	M	M	Attack bonus vs. buildings
Huskarl	80F, 40G	60	10	0/4	0	S	S	Attack bonus vs. buildings, archers
Elite Huskarl	80F, 40G	70	12	0/6	0	S	S	Attack bonus vs. buildings, archers

ARCHERS

Archer	25W, 45G	30	4	0/0	4	M		
Crossbowman	25W, 45G	35	5	0/0	5	M		
Arbalest	25W, 45G	40	6	0/0	5	M		
Skirmisher	25F, 35W	30	2	0/3	4	M	M	Attack bonus vs. archers
Elite Skirmisher	25F, 35W	35	3	0/4	5	M	M	Attack bonus vs. archers
Cavalry Archer	40W, 70G	50	6	0/0	3	F		
Hvy Cav Archer	40W, 70G	60	7	1/0	4	F		
Hand Cannoneer	45F, 50G	35	17	1/0	7	M	M	Requires Chemistry
Chu Ko Nu	40W, 35G	45	8	0/0	4	M	M	Multiple fires between reloads
Elite Chu Ko Nu	40W, 35G	50	8	0/0	4	M	M	Multiple fires between reloads
Janissary	60F, 55G	35	15	1/0	8	M		
Elite Janissary	60F, 55G	40	18	2/0	8	M		
Longbowman	35W, 40G	35	6	0/0	5	M		
Elite Longbowman	35W, 40G	40	7	0/1	6	M		
Mangudai	55W, 65G	60	6	0/0	4	F	F	Attack bonus vs. siege weapons
Elite Mangudai	55W, 65G	60	8	1/0	4	F	F	Attack bonus vs. siege weapons

OTHER UNITS

Villager	50F	25	3	0/0	0	S	S	Builds, repairs buildings; gathers resources; adds attack to buildings when garrisoned
Monk	100G	30	0	0/0	9	S	S	Converts units; heals at range
Trade Cart	100W, 50G	70	0	0/0	0	M	M	Trades with other Markets

CAVALRY	Cost	Hit	Dps	Attack	Armor	Range	Speed	Special
Scout Cavalry	80F	45	3	0/2	0	M		
Light Cavalry	80F	60	7	0/2	0	F		
Knight	60F, 75G	100	10	2/2	0	F		
Cavalier	60F, 75G	120	12	2/2	0	F		
Paladin	60F, 75G	160	14	2/3	0	F		
Camel	55F, 60G	100	5	0/0	0	F	F	Attack bonus vs. cavalry
Heavy Camel	55F, 60G	120	7	0/0	0	F	F	Attack bonus vs. cavalry
Cataphract	70F, 75G	110	9	2/1	0	F	F	Attack bonus vs. infantry
Elite Cataphract	70F, 75G	150	12	2/1	0	F	F	Attack bonus vs. infantry
War Elephant	200F, 75G	450	15	1/2	0	S	S	Attack bonus vs. buildings
Elite War Elephant	200F, 75G	600	20	1/3	0	S	S	Attack bonus vs. buildings
Mameluke	55F, 85G	65	7	0/0	3	F	F	Attack bonus vs. cavalry
Elite Mameluke	55F, 85G	80	8	1/0	3	F	F	Attack bonus vs. cavalry

SIEGE

Scorpion	75W, 75G	40	12	0/6	5	S	S	Bolts damage all they touch
Heavy Scorpion	75W, 75G	50	16	0/7	5	S	S	Bolts damage all they touch
Bombard Cannon	225W, 225G	50	40	2/5	12	S	S	Requires Chemistry; min. range; attack bonus vs. buildings, ships
Battering Ram	160W, 75G	175	2	0/180	0	S	S	Attack bonus vs. buildings
Capped Ram	160W, 75G	200	3	0/190	0	S	S	Attack bonus vs. buildings
Siege Ram	160W, 75G	270	4	0/195	0	S	S	Attack bonus vs. buildings
Mangonel	160W, 135G	50	40	0/6	7	S	S	Area of effect damage
Onager	160W, 135G	60	50	0/7	8	S	S	Area of effect damage
Siege Onager	160W, 135G	70	75	0/8	8	S	S	Area of effect damage
Trebuchet (packed)	200W, 200G	150	0	2/8	0	S		
Trebuchet (unpacked)	200W, 200G	150	200	1/150	16	S	S	Attack bonus vs. buildings, ships

SHIPS

Fishing Ship	75W	60	0	0/4	0	M	M	Harvests fish; builds Fish Traps
Trade Cog	100W, 50G	80	0	0/6	0	F	F	Trades with other Docks
Transport Ship	125W	100	0	4/8	0	F	F	Carries land units
Galley	90W, 30G	120	6	0/6	5	F		
War Galley	90W, 30G	135	7	0/6	6	F		
Galleon	90W, 30G	165	8	0/8	7	F		
Fire Ship	75W, 45G	100	2	0/6	2	F		
Fast Fire Ship	75W, 45G	120	3	0/8	2	F		
Demolition Ship	70W, 50G	50	110	0/3	0	F	F	Explodes, damaging everything nearby; attack bonus vs. buildings
Heavy Demo Ship	70W, 50G	60	140	0/5	0	F	F	Explodes, damaging everything nearby
Cannon Galleon	200W, 150G	120	35	0/6	13	M	M	Requires Chemistry; min. range; attack bonus vs. buildings
E Cannon Galleon	200W, 150G	150	45	0/8	15	M	M	Min. range; attack bonus vs. buildings
Longboat	100W, 50G	130	7	0/6	6	F	F	Fire multiple arrows
Elite Longboat	100W, 50G	160	8	0/8	7	F	F	Fire multiple arrows

Technology Costs & Benefits

Cost: F=food, W=wood, S=stone, G=gold

BUILDING TECHNOLOGIES

Town Watch	II	75F	+4 building LOS
Town Patrol	III	300F, 200G	+4 building LOS
Masonry	III	175W, 150S	Increases building HPs/armor
Architecture	IV	200W, 300S	Increases building HPs/armor
Treadmill Crane	III	200W, 300S	+20% villager build speed
Hoardings	IV	400W, 400S	+1000 Castle HPs

ECONOMY & TRADE TECHNOLOGIES

Loom	I	50G	+15 villager HPs; +1/+1P armor
Wheelbarrow	II	175F, 50W	+10% villager speed; +25% villager capacity
Hand Cart	III	300F, 200W	+10% villager speed; +50% villager capacity
Gold Mining	II	100F, 75W	+15% gold-mining speed
Gold Shaft Mining	III	200F, 150W	+15% gold-mining speed
Stone Mining	II	100F, 75W	+15% stone-mining speed
Stone Shaft Mining	III	200F, 150W	+15% stone-mining speed
Double-Bit Axe	II	100F, 50W	+20% wood-chopping speed
Bow Saw	III	150F, 100W	+20% wood-chopping speed
Two-Man Saw	IV	300F, 200W	+10% wood-chopping speed
Horse Collar	II	75F, 75W	Farm +75 food
Heavy Plow	III	125F, 125W	Farm +125 food; +1 villager food capacity
Crop Rotation	IV	250F, 250W	Farm +175 food
Coinage	II	150F, 50G	Decreases tribute fee to 20%
Banking	III	200F, 100G	No tribute fee
Guilds	IV	300F, 200G	Decreases trading fee to 15%
Cartography	II	100F, 100G	See ally LOS and exploration
Conscription	IV	150F, 150G	+33% unit creation speed at Barracks, Stable, Archery Range, Castle
Spies/Treason	IV	200G/enemy villager; 400G/use	See enemy LOS and exploration/see enemy Kings' locations
Sappers	IV	400F, 200G	Villagers +15 attack vs. buildings

MONK TECHNOLOGIES

Fervor	III	140G	+15% Monk speed
Sanctity	III	120G	+50% Monk HPs
Redemption	III	475G	Convert buildings (except walls, Gates, Town Centers, Monasteries, Castles, Farms, Fish Traps, Wonders), all siege units
Atonement	III	325G	Convert other Monks
Illumination	IV	120G	+50% Monk rejuvenation speed
Faith	IV	750F, 1000G	+50% conversion resistance
Block Printing	IV	200G	+3 conversion range

INFANTRY TECHNOLOGIES

Tracking	II	75F	+2 infantry LOS
Squires	III	200F	+10% infantry speed
Scale Mail Armor	II	100F	+1/+1P infantry armor
Chain Mail Armor	III	200F, 100G	+1/+1P infantry armor
Plate Mail Armor	IV	300F, 150G	+1/+2P infantry armor
Forging	II	150F	+1 infantry/cavalry attack
Iron Casting	III	220F, 120G	+1 infantry/cavalry attack
Blast Furnace	IV	275F, 225G	+2 infantry/cavalry attack

MISSILE/SIEGE TECHNOLOGIES

Fletching	II	100F, 50G	+1 attack/range for archers, galleys, Longboats, Town Centers, Castles, towers
Bodkin Arrow	III	200F, 100G	+1 attack/range for archers, galleys, Longboats, Town Centers, Castles, towers
Bracer	IV	300F, 200G	+1 attack/range for archers, galleys, Longboats, Town Centers, Castles, towers
Padded Archer Armor	II	100F	+1/+1P archer armor
Leather Archer Armor	III	150F, 150G	+1/+1P archer armor
Ring Archer Armor	IV	250F, 250G	+1/+2P archer armor
Ballistics	III	300W, 175G	Track moving units
Murder Holes	III	200F, 200S	No minimum tower/Castle range
Heated Shot	III	350F, 100G	+50% tower attack vs. ships
Chemistry	IV	300F, 200G	+1 missile attack (except gunpowder units); enables gunpowder units to be researched
Siege Engineers	IV	500F, 600W	+1 siege range (except rams); +20% siege unit attack vs. buildings

CAVALRY TECHNOLOGIES

Husbandry	III	250F	+10% cavalry speed
Scale Barding Armor	II	150F	+1/+1P cavalry armor
Chain Barding Armor	III	250F, 150G	+1/+1P cavalry armor
Plate Barding Armor	IV	350F, 200G	+1/+2P cavalry armor

SHIP TECHNOLOGIES

Careening	III	250F, 150G	+1P armor; +5 Transport Ship capacity
Dry Dock	IV	600F, 400G	+15% ship speed; +10 Transport Ship capacity
Shipwright	IV	1000F, 300G	-20% wood to build ship



Dark Age



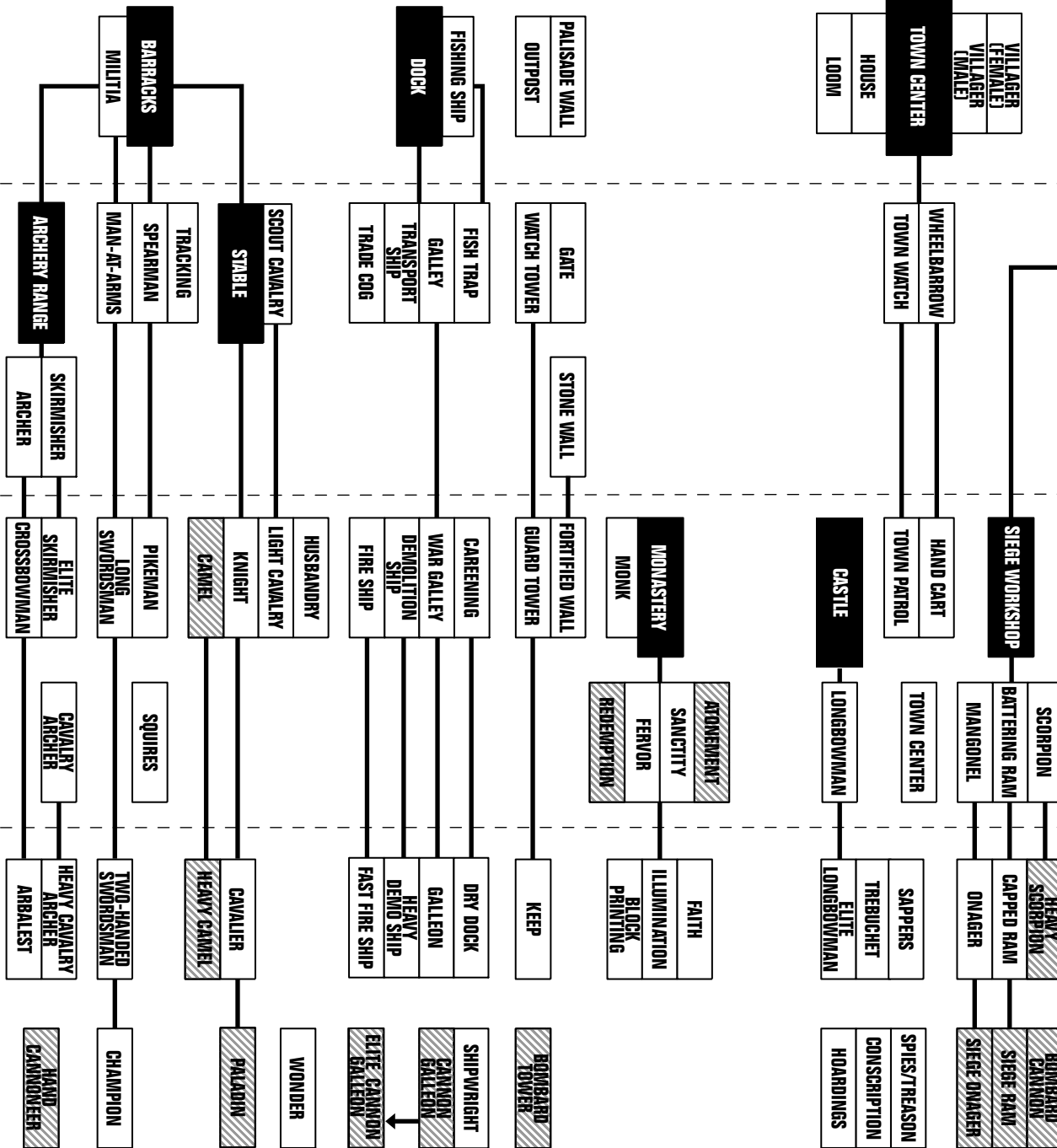
Feudal Age



Castle Age



Imperial Age



Britons

Unique Unit: Longbowman
Team Bonus: Archery Ranges
20% faster

CIVILIZATION ATTRIBUTES

- ⊕ Town Centers cost -50%
- ⊕ Foot archers +1 range Castle Age, +1 Imperial Age (for +2 total)
- ⊕ Shepherds work 25% faster



Dark Age



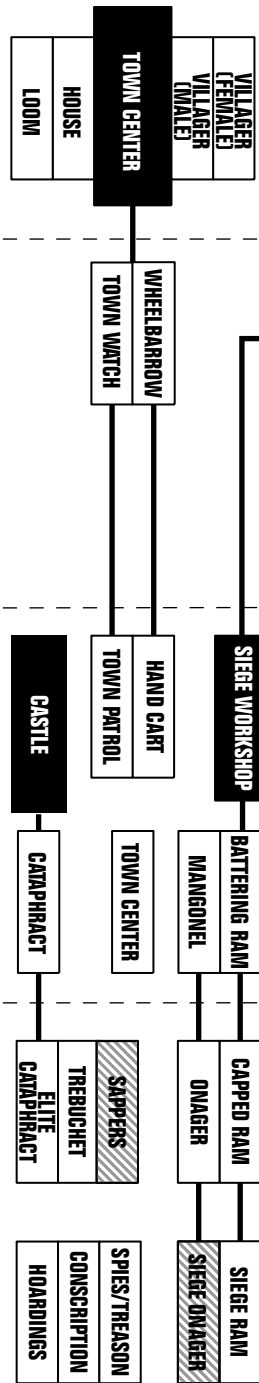
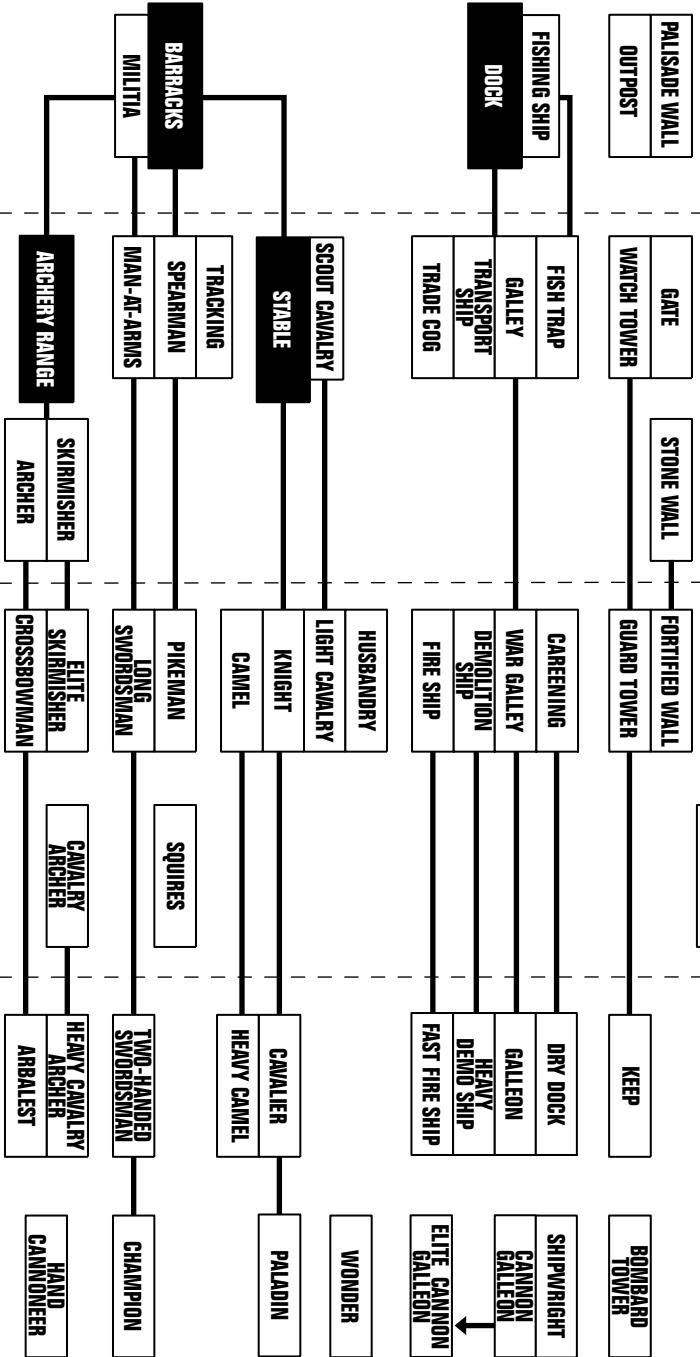
Feudal Age



Castle Age

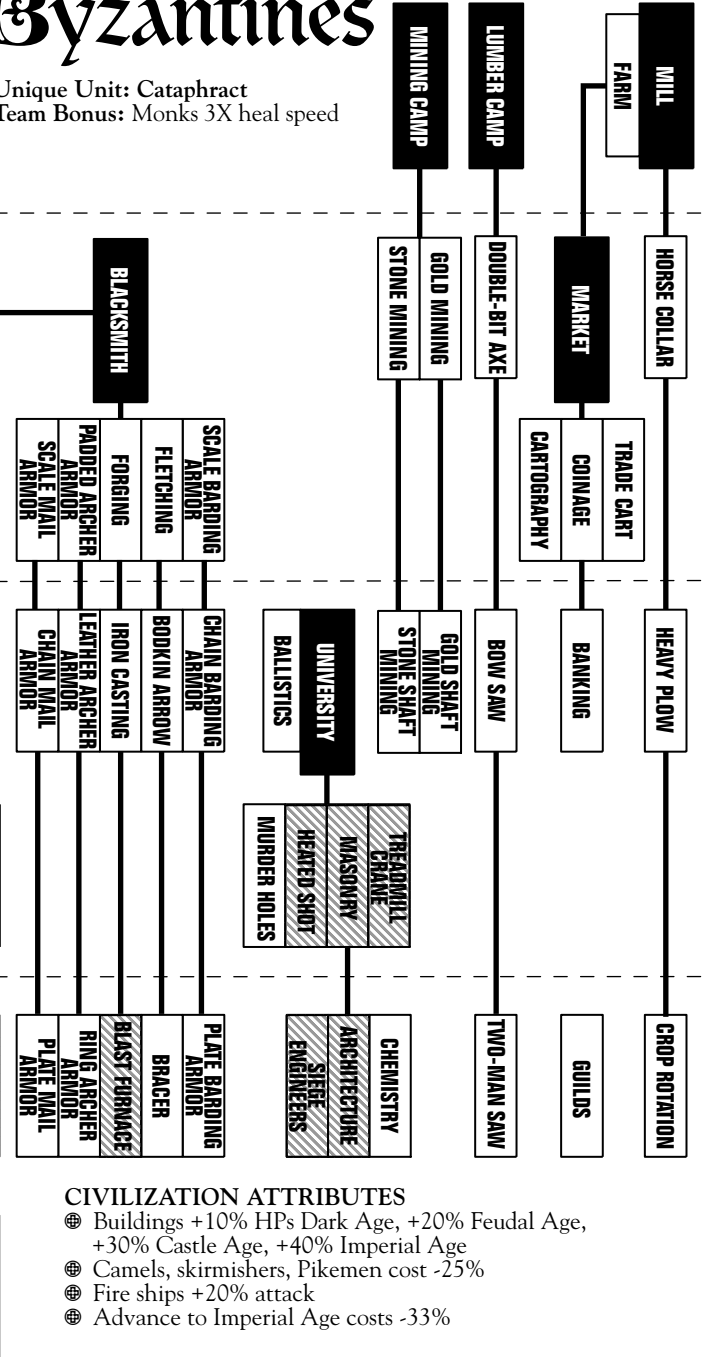


Imperial Age



Byzantines

Unique Unit: Cataphract
Team Bonus: Monks 3X heal speed



CIVILIZATION ATTRIBUTES

- ⊕ Buildings +10% HPs Dark Age, +20% Feudal Age, +30% Castle Age, +40% Imperial Age
- ⊕ Camels, skirmishers, Pikemen cost -25%
- ⊕ Fire ships +20% attack
- ⊕ Advance to Imperial Age costs -33%



Dark Age



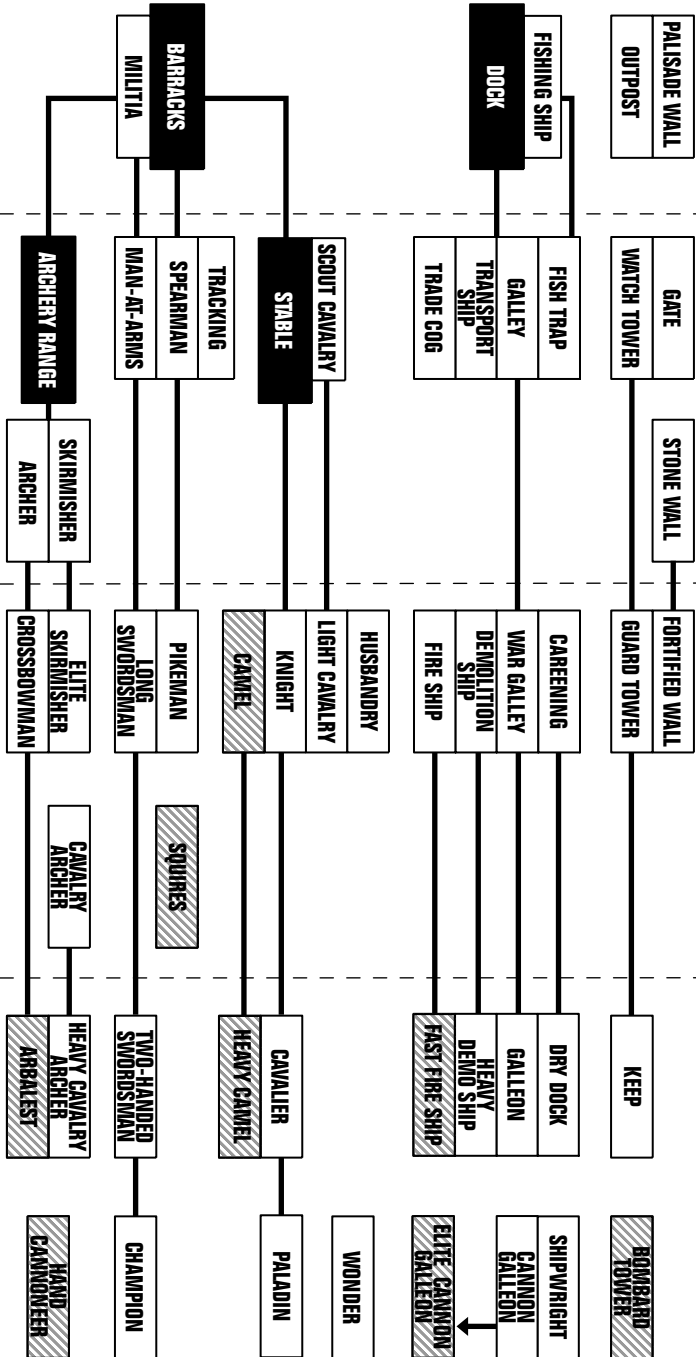
Feudal Age



Castle Age

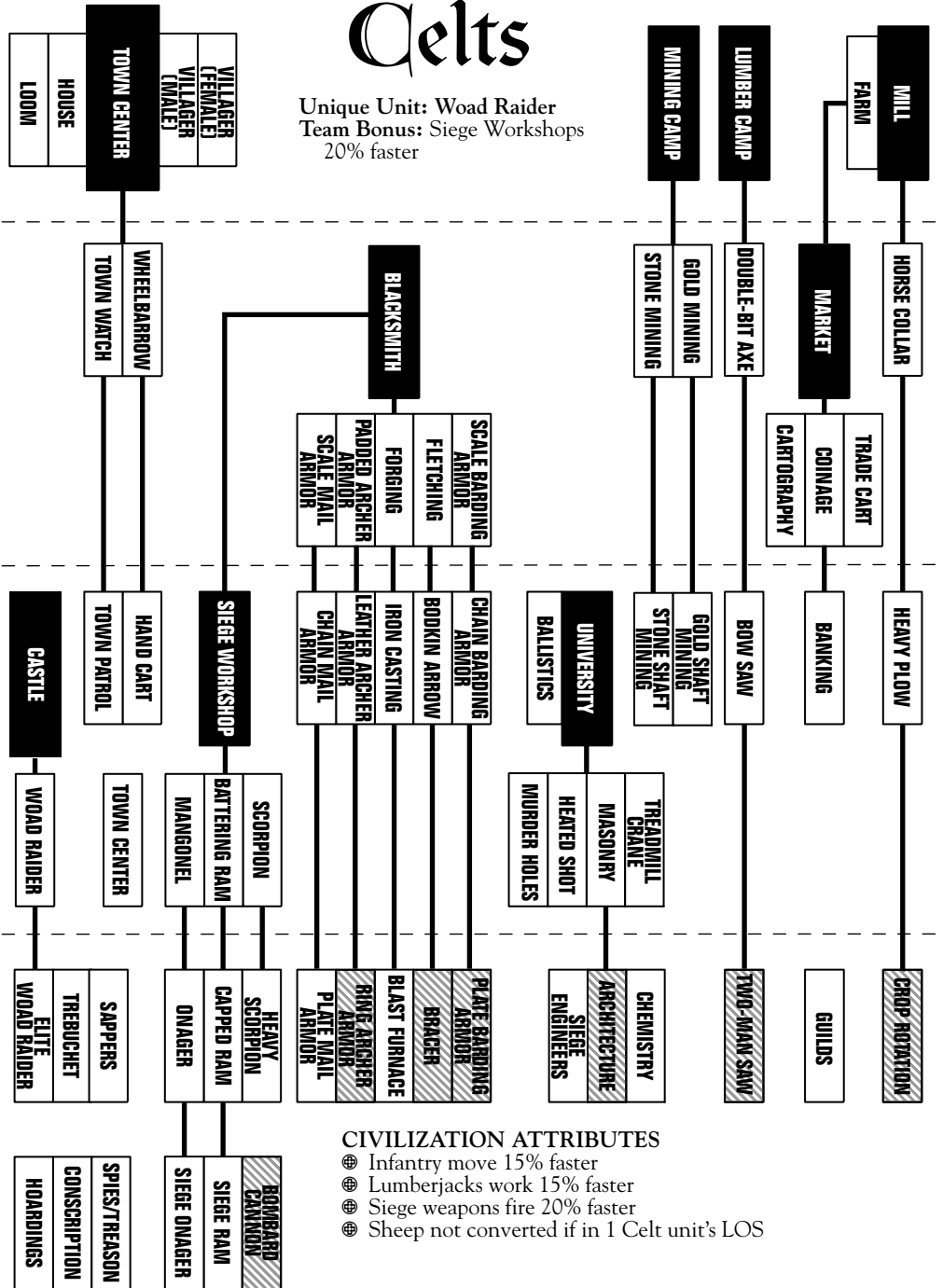


Imperial Age



Celts

Unique Unit: Woad Raider
Team Bonus: Siege Workshops
20% faster



CIVILIZATION ATTRIBUTES

- ⊕ Infantry move 15% faster
- ⊕ Lumberjacks work 15% faster
- ⊕ Siege weapons fire 20% faster
- ⊕ Sheep not converted if in 1 Celt unit's LOS



Dark Age



Feudal Age



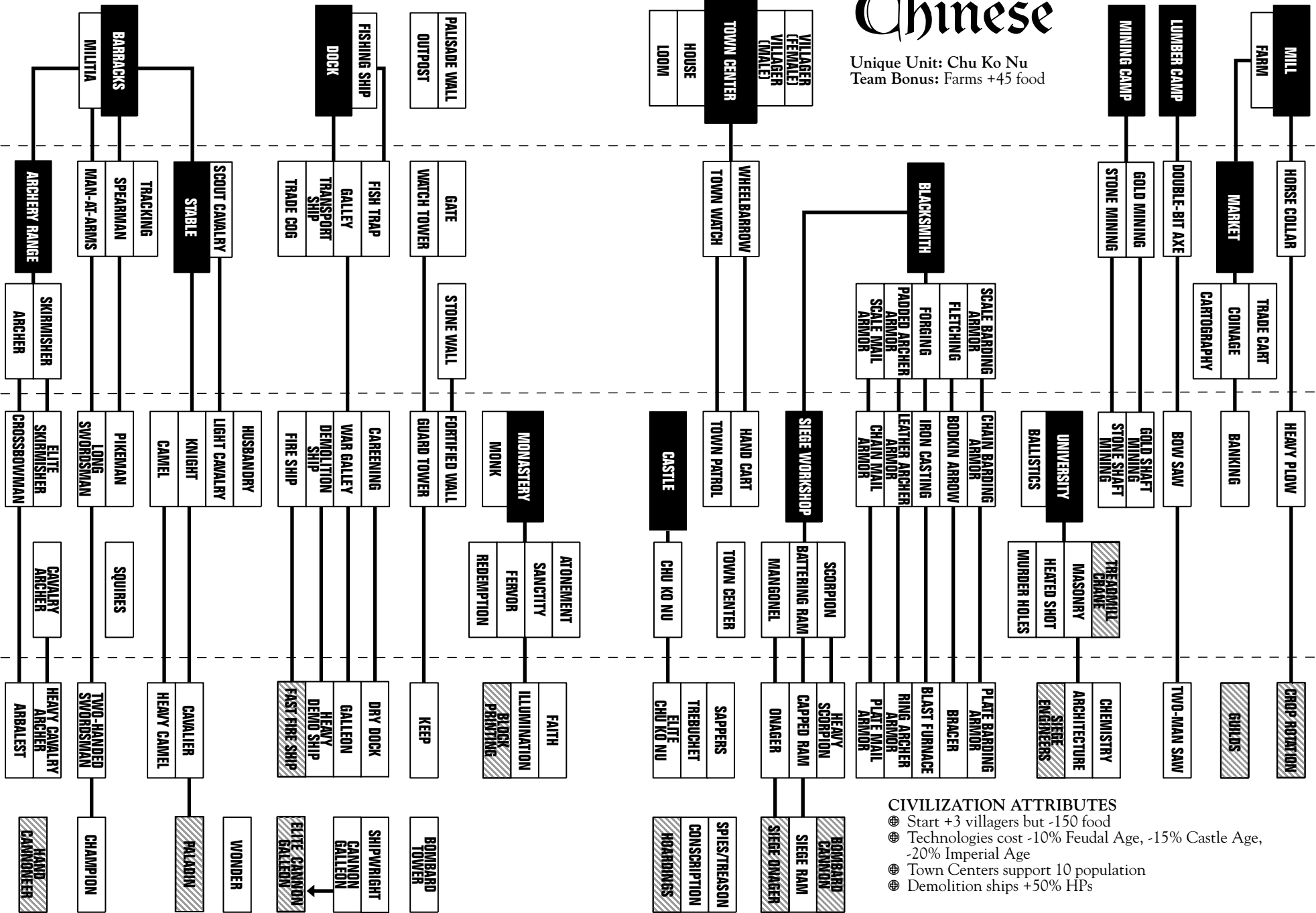
Castle Age



Imperial Age

Chinese

Unique Unit: Chu Ko Nu
Team Bonus: Farms +45 food



- CIVILIZATION ATTRIBUTES**
- ☉ Start +3 villagers but -150 food
 - ☉ Technologies cost -10% Feudal Age, -15% Castle Age, -20% Imperial Age
 - ☉ Town Centers support 10 population
 - ☉ Demolition ships +50% HPs

Franks

Unique Unit: Throwing Axeman
Team Bonus: knights +2 LOS



Dark Age



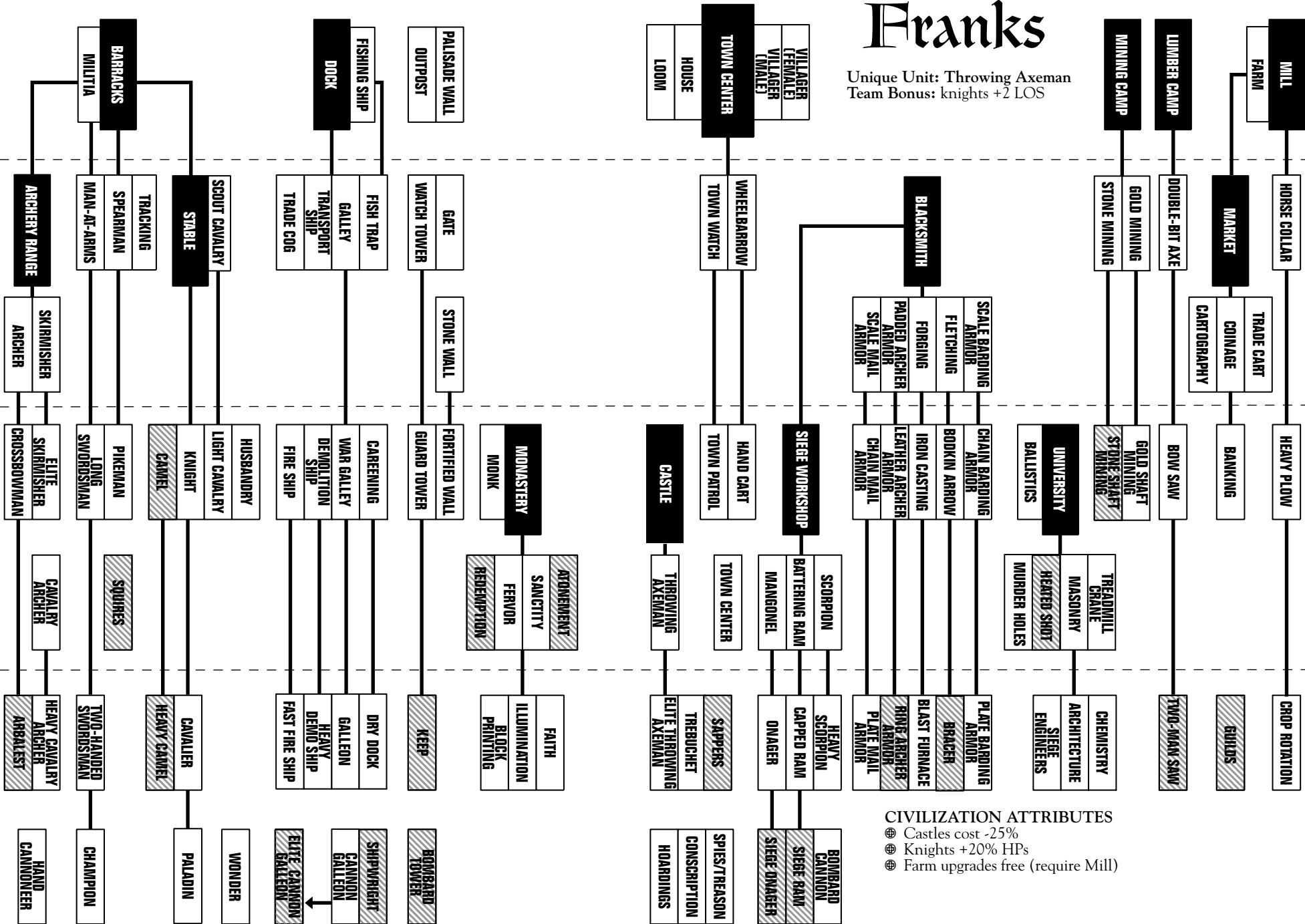
Feudal Age



Castle Age



Imperial Age



CIVILIZATION ATTRIBUTES

- ⊕ Castles cost -25%
- ⊕ Knights +20% HPs
- ⊕ Farm upgrades free (require Mill)

Goths

Unique Unit: Huskarl
Team Bonus: Barracks 20% faster



Dark Age



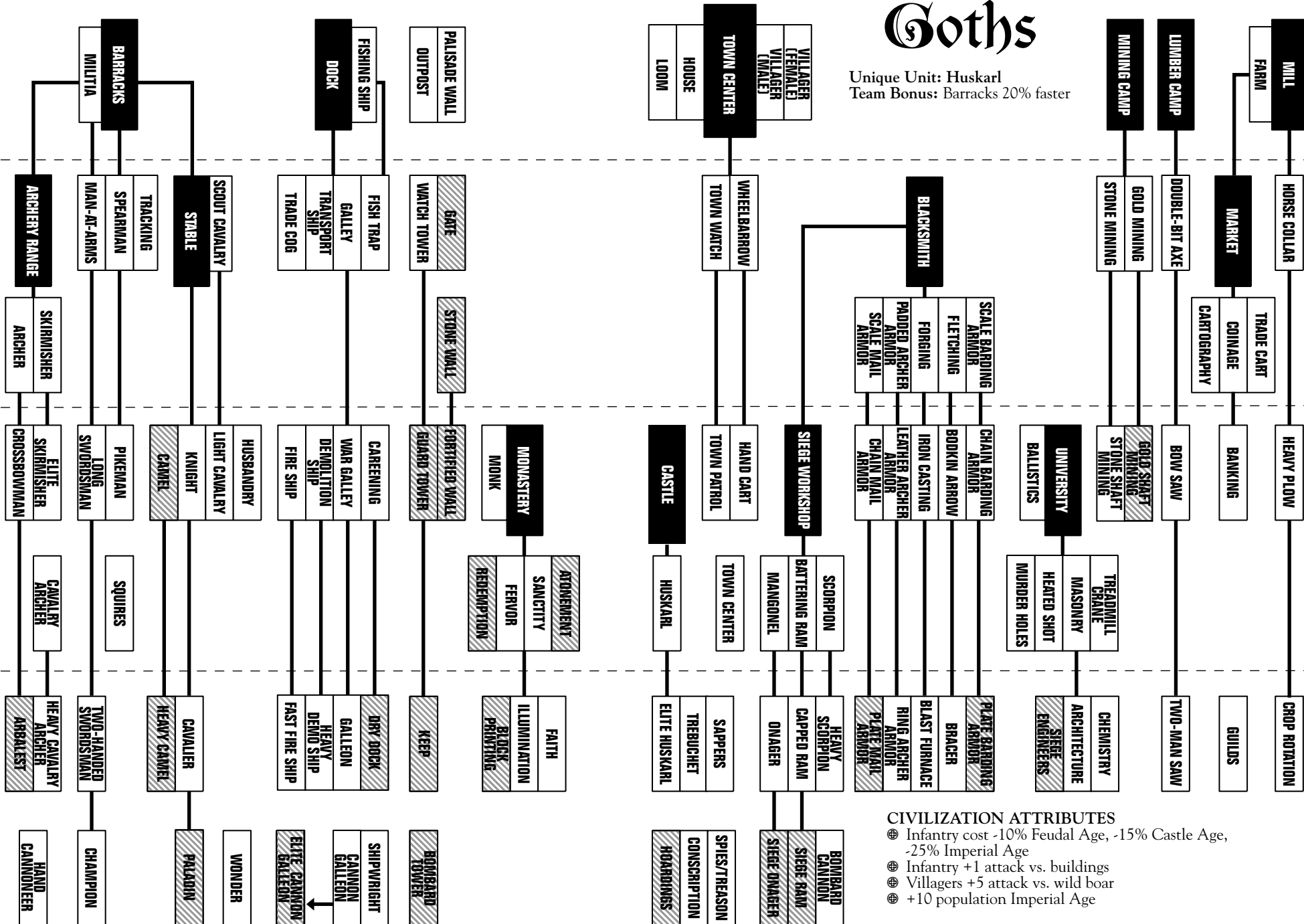
Feudal Age



Castle Age



Imperial Age



CIVILIZATION ATTRIBUTES

- ⊕ Infantry cost -10% Feudal Age, -15% Castle Age, -25% Imperial Age
- ⊕ Infantry +1 attack vs. buildings
- ⊕ Villagers +5 attack vs. wild boar
- ⊕ +10 population Imperial Age



Dark Age



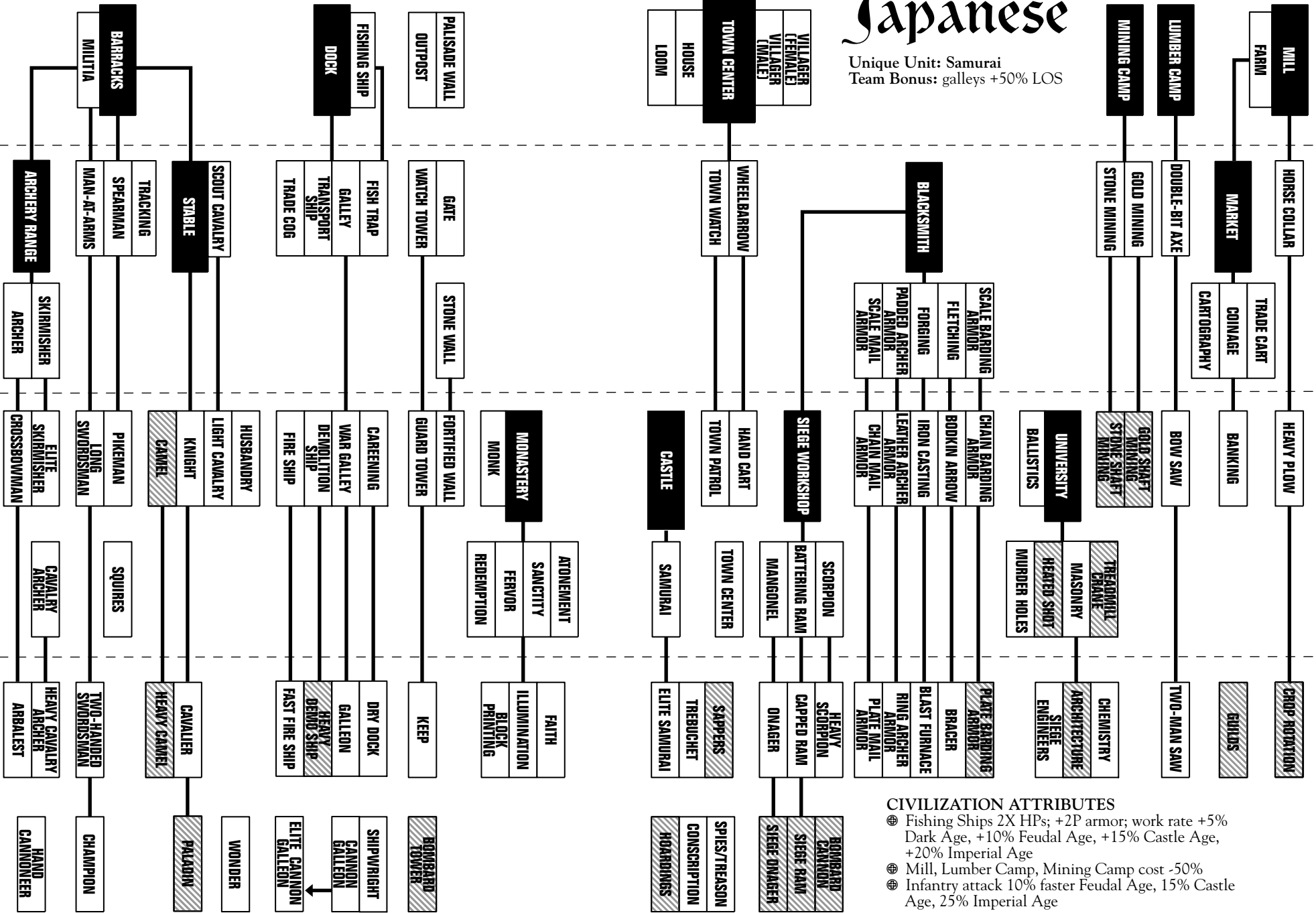
Feudal Age



Castle Age



Imperial Age



Japanese

Unique Unit: Samurai
Team Bonus: galleys +50% LOS

CIVILIZATION ATTRIBUTES

- ⊕ Fishing Ships 2X HPs; +2P armor; work rate +5% Dark Age, +10% Feudal Age, +15% Castle Age, +20% Imperial Age
- ⊕ Mill, Lumber Camp, Mining Camp cost -50%
- ⊕ Infantry attack 10% faster Feudal Age, 15% Castle Age, 25% Imperial Age



Dark Age



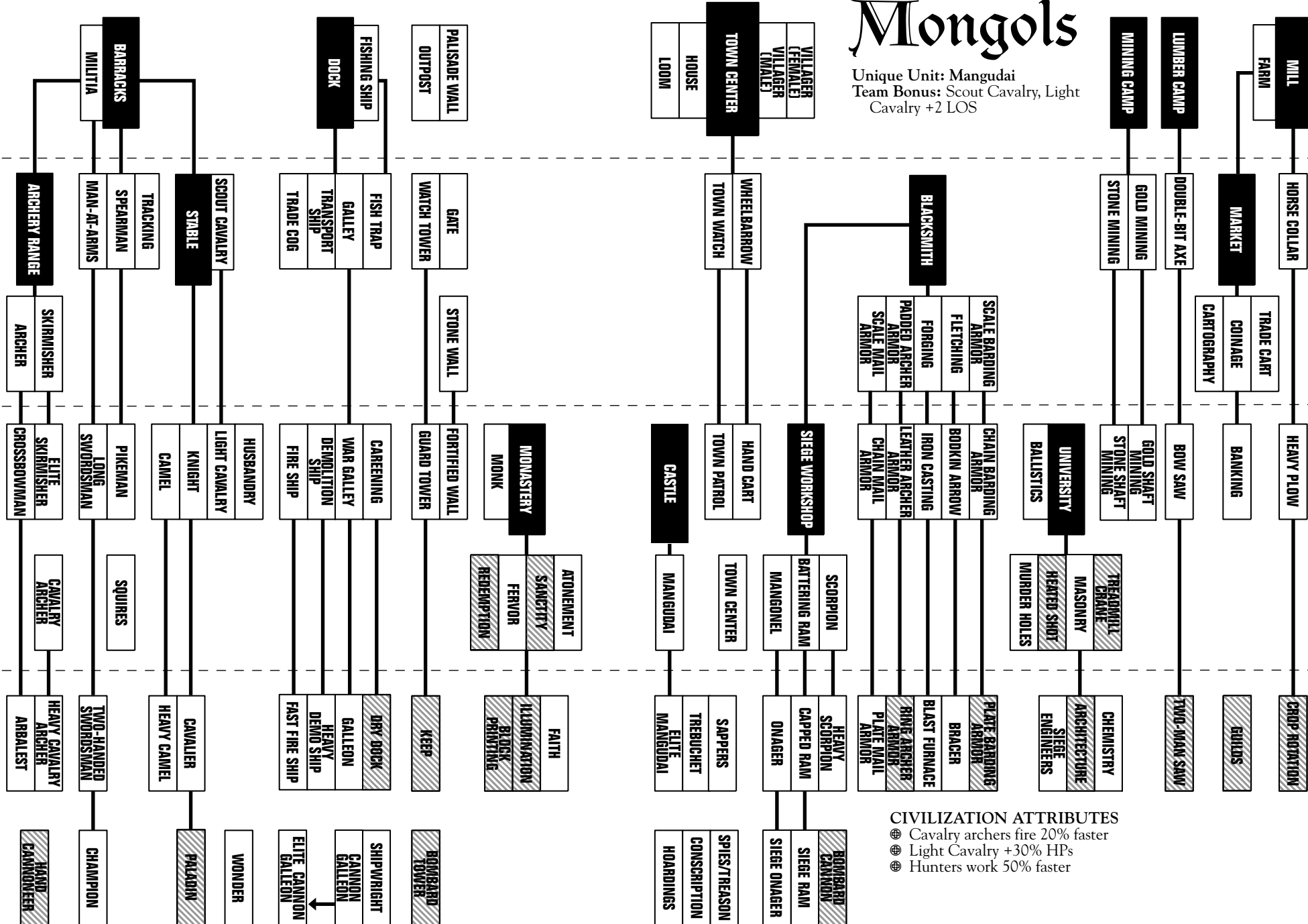
Feudal Age



Castle Age



Imperial Age



Mongols

Unique Unit: Mangudai
Team Bonus: Scout Cavalry, Light Cavalry +2 LOS

CIVILIZATION ATTRIBUTES

- ⊕ Cavalry archers fire 20% faster
- ⊕ Light Cavalry +30% HPs
- ⊕ Hunters work 50% faster



Dark Age



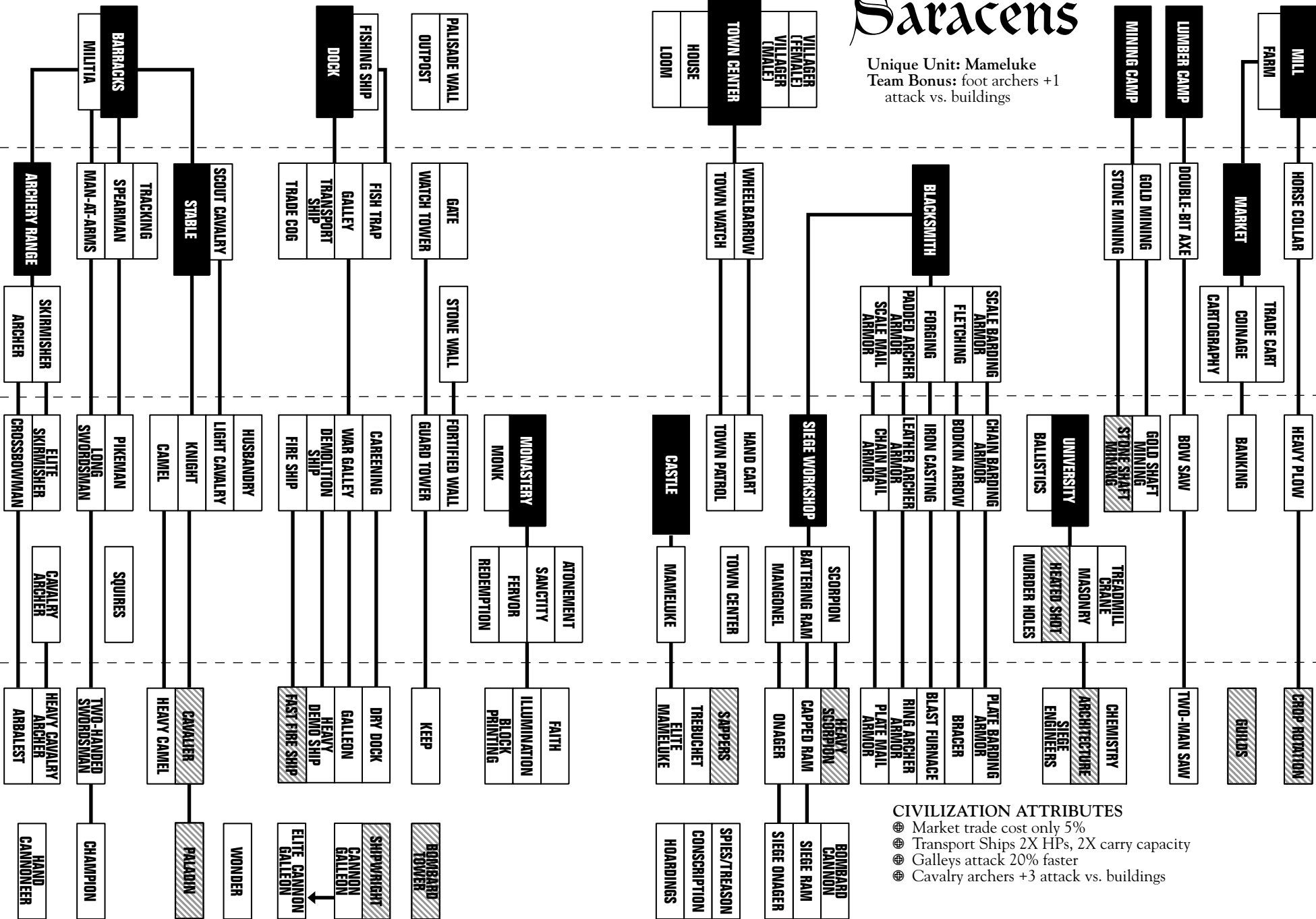
Feudal Age



Castle Age



Imperial Age



Saracens

Unique Unit: Mameluke
Team Bonus: foot archers +1 attack vs. buildings

CIVILIZATION ATTRIBUTES

- ⊕ Market trade cost only 5%
- ⊕ Transport Ships 2X HPs, 2X carry capacity
- ⊕ Galleys attack 20% faster
- ⊕ Cavalry archers +3 attack vs. buildings

Teutons

Unique Unit: Teutonic Knight
 Team Bonus: units more resistant to conversion



Dark Age



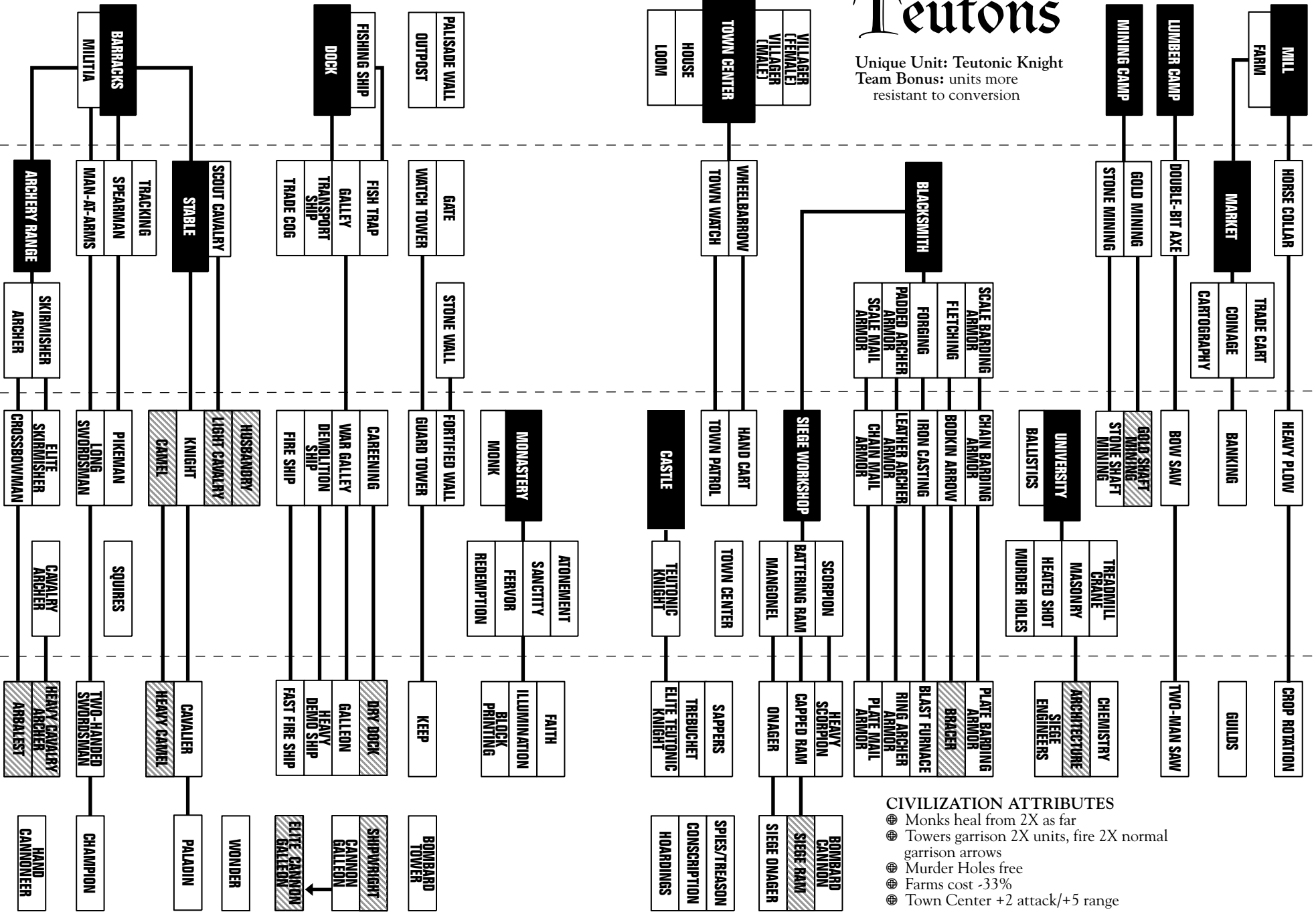
Feudal Age



Castle Age



Imperial Age



CIVILIZATION ATTRIBUTES

- ⊕ Monks heal from 2X as far
- ⊕ Towers garrison 2X units, fire 2X normal garrison arrows
- ⊕ Murder Holes free
- ⊕ Farms cost -33%
- ⊕ Town Center +2 attack/+5 range



Dark Age



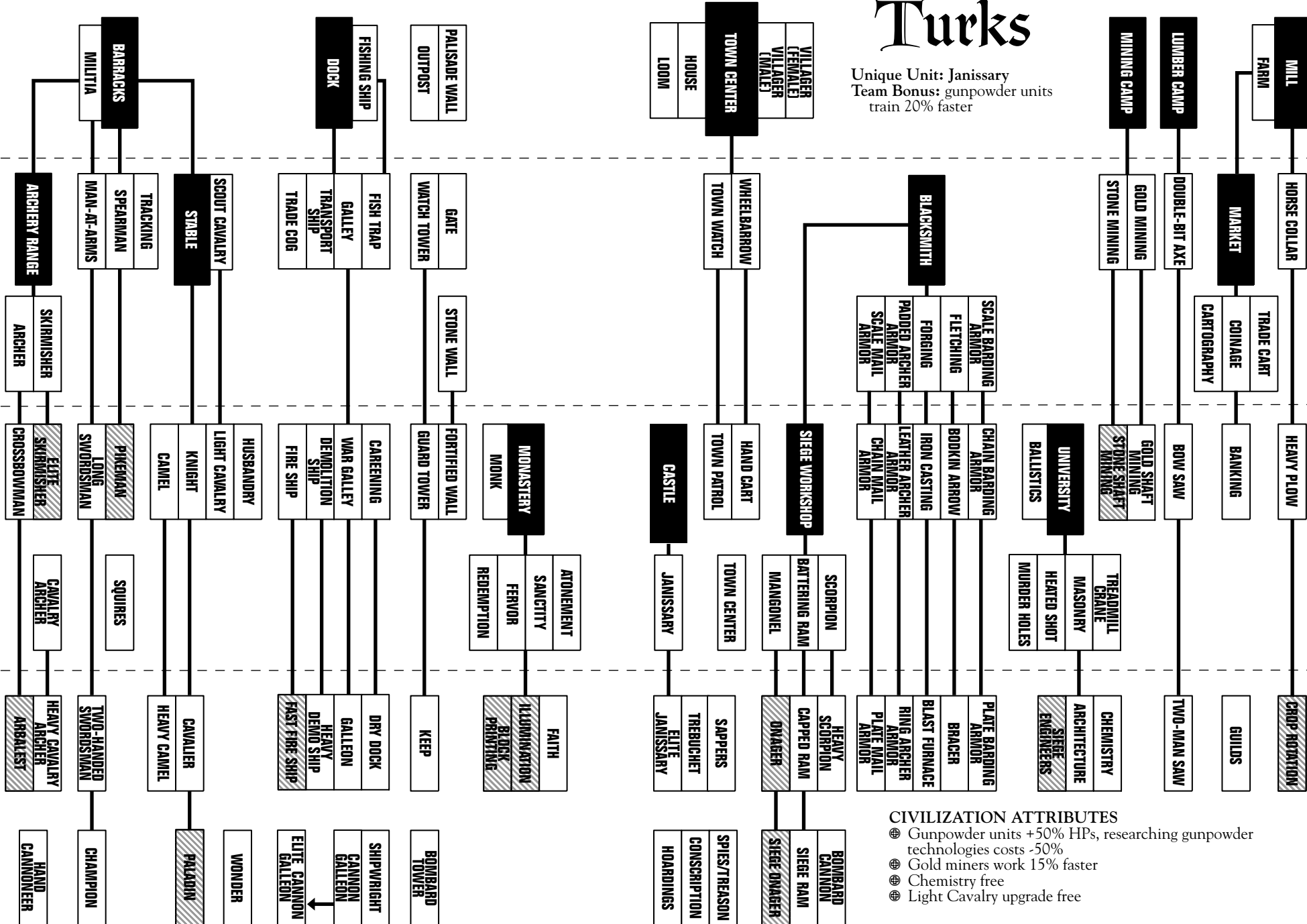
Feudal Age



Castle Age



Imperial Age



Turks

Unique Unit: Janissary
Team Bonus: gunpowder units train 20% faster

CIVILIZATION ATTRIBUTES

- ⊕ Gunpowder units +50% HPs, researching gunpowder technologies costs -50%
- ⊕ Gold miners work 15% faster
- ⊕ Chemistry free
- ⊕ Light Cavalry upgrade free

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