Wikijunior: Ancient Civilizations

en.wikibooks.org

On the 28th of April 2012 the contents of the English as well as German Wikibooks and Wikipedia projects were licensed under Creative Commons Attribution-ShareAlike 3.0 Unported license. A URI to this license is given in the list of figures on page 127. If this document is a derived work from the contents of one of these projects and the content was still licensed by the project under this license at the time of derivation this document has to be licensed under the same, a similar or a compatible license, as stated in section 4b of the license. The list of contributors is included in chapter Contributors on page 117. The licenses GPL, LGPL and GFDL are included in chapter Licenses on page 133, since this book and/or parts of it may or may not be licensed under one or more of these licenses, and thus require inclusion of these licenses. The licenses of the figures are given in the list of figures on page 127. This PDF was generated by the LATEX typesetting software. The LATEX source code is included as an attachment (source.7z.txt) in this PDF file. To extract the source from the PDF file, you can use the pdfdetach tool including in the poppler suite, or the http://www. pdflabs.com/tools/pdftk-the-pdf-toolkit/ utility. Some PDF viewers may also let you save the attachment to a file. After extracting it from the PDF file you have to rename it to source.7z. To uncompress the resulting archive we recommend the use of http://www.7-zip.org/. The LATEX source itself was generated by a program written by Dirk Hünniger, which is freely available under an open source license from http://de.wikibooks.org/wiki/Benutzer:Dirk_Huenniger/wb2pdf.

Contents

1	Anc	ient Pueblo Peoples	3				
	1.1	What country did they live in?	4				
	1.2	What did their buildings look like?	4				
	1.3	What did they eat?	5				
	1.4	What did they wear?	5				
	1.5	What did they believe?	5				
	1.6	What did their writing look like?	6				
	1.7	Are some of them famous even today?	6				
	1.8	What is left of them today?	6				
2	Azte	ecs	7				
	2.1	What country did they live in?	7				
	2.2	What did their buildings look like?	7				
	2.3	What did they wear?	8				
	2.4	What did their writing look like?	9				
	2.5	What did they believe?	10				
	2.6	Are some of them famous even today?	11				
	2.7	What is left of them today?	12				
3	Assy	Assyrians 1					
	3.1	What country did they live in?	13				
	3.2	The History of Assyria	13				
	3.3	What did their buildings look like?	15				
	3.4	What did they eat?	16				
	3.5	What did they wear?	17				
	3.6	What did their writing look like?	18				
	3.7	What did they believe?	19				
	3.8	Are some of them famous even today?	20				
	3.9	What is left of them today?	20				
4	Celt	s :	21				
	4.1	What country did they live in?	21				
	4.2	What did they look like?	21				
	4.3		22				
	4.4	What did they eat?	22				
	4.5		23				
	4.6		24				
	4.7		25				
	4.8		25				
	4.9	· · · · · · · · · · · · · · · · · · ·	26				

5	Chin	ese	27
_	5.1		$\frac{1}{27}$
	5.2	J.	28
	5.3	8	$\frac{-5}{29}$
	5.4	· ·	$\frac{-5}{29}$
	5.5		3 0
	5.6		32
	5.7		$\frac{32}{33}$
	5.8		33
	5. 6	Are some of them famous:	99
6	Egyp	tians	35
	6.1	What country did they live in?	35
	6.2	What did their buildings look like?	36
	6.3	<u> </u>	38
	6.4	· · · · · · · · · · · · · · · · · · ·	39
	6.5		41
	6.6	U .	42
	6.7	9	43
	6.8	v .	$\frac{10}{44}$
	0.0	What is left of them today.	
7	Gree	ks	47
	7.1	What area did they live in?	47
	7.2	What did their structures look like?	48
	7.3	What did they wear?	48
	7.4		49
	7.5		50
	7.6		51
	7.7	· · · · · · · · · · · · · · · · · · ·	52
	• • •		_
8	Hebr	ews	53
	8.1	Who are Hebrews?	53
	8.2	What country did they live in?	53
	8.3	What did their buildings look like?	54
	8.4	What did they eat?	55
	8.5		56
	8.6	·	57
	8.7	<u> </u>	57
	8.8		58
	8.9		60
		·	
9	Incas		61
	9.1	8	62
	9.2	U .	63
	9.3	What did they wear?	64
	9.4	σ	64
	9.5	What did their writing look like?	65
	9.6	Are some of them famous even today?	66
	9.7		66

10	Mou	nd Builders	69
	10.1	Where did they Live?	69
	10.2	What did their buildings look like?	70
	10.3	When did they live there?	70
	10.4	What did they eat?	70
	10.5	What did they wear?	71
	10.6	What did their writing look like?	71
	10.7	Are some of them famous even today?	72
	10.8	What Happened To Them?	72
	10.9	What is left of them today?	72
		Who Lives There Now?	72
11	Maya	ans	75
	11.1	What country did they live in?	76
	11.2	What did their buildings look like?	76
	11.3	What did they eat?	77
	11.4	What did they wear?	78
	11.5	What did their writing look like?	78
	11.6	What did they believe?	79
	11.7	What is left of them today?	79
	11.8	Are some of them famous even today?	80
12	Norse		83
	12.1	What country did they live in?	84
	12.2	What did their buildings look like?	85
	12.3	What did they eat?	85
	12.4	What did they wear?	86
	12.5	What did they believe?	86
	12.6	What did their writing look like?	87
	12.7	Are some of them famous even today?	87
	12.8	What is left of them today?	88
	12.9	How do we know this?	88
	12.10	For More Reading	88
13	Persi	ans	91
10	13.1	What country did they live in?	91
	13.2	What did their buildings look like?	92
	13.3	What did they wear?	94
	13.4	What did their writing look like?	95
	13.5	What did they believe?	96
	13.6	Are some of them famous even today?	97
	13.7	What is left of them today?	98
14	Roma		99
	14.1	What country did they live in?	99
	14.2	What did their buildings look like?	100
	14.3	What did they eat?	101
	144	What did they wear?	101

	14.5	What did their writing look like?	102
	14.6	What did they believe?	103
	14.7	Are some of them famous even today?	104
	14.8	What is left of them today?	105
	14.9	Beauty in Ancient Rome	106
	14.10	Marriage in Ancient Rome	106
	14.11	Slaves in Rome	107
	14.12	Children in Ancient Rome	108
	14.13	Shows and entertainment in Ancient Rome	109
	14.14	References	109
15	Scytl	nians	111
	15.1	What country did they live in?	111
	15.2	What did their buildings look like?	112
	15.3	What did they eat?	113
	15.4	What did they wear?	113
	15.5	What did their writing look like?	115
	15.6	What did they believe?	116
	15.7	References	116
16	Cont	ributors	117
Lis	st of F	ligures	127
17	Licen	ases	133
	17.1	GNU GENERAL PUBLIC LICENSE	133
	17.2	GNU Free Documentation License	134
	17.3	GNU Lesser General Public License	135

1 Ancient Pueblo Peoples

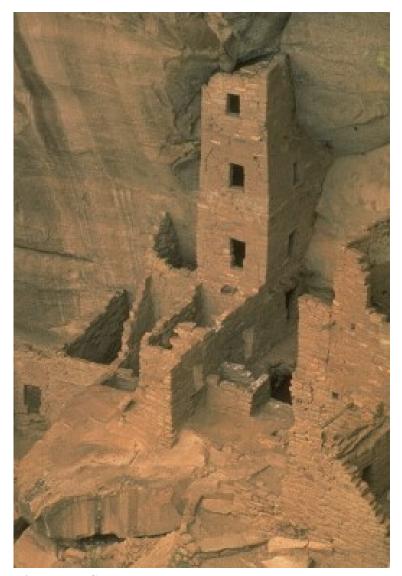


Figure 1 Square Tower House at Mesa Verde

The Ancient Pueblo people were a Native American culture also known as Anasazi, but descendants of the people prefer not to be called that. They are the ancestors of modern Pueblos. Their culture dates back to 1200 B.C.

1.1 What country did they live in?

The Ancient Pueblo people lived in what is now the southwestern United States of America. They lived in a high desert area filled with flat-topped hills called mesas. Utah, Colorado, New Mexico and Arizona meet at a point called "Four Corners". The area surrounding Four Corners was the home of the Ancient Pueblos, which is probably why the "Four corners." nickname is "the pueblo corners".

1.2 What did their buildings look like?

Cliff Palace at Mesa Verde¹

The Ancient Pueblo people built large buildings made up of many individual rooms. Families built the buildings over generations. Different families lived together in a single building, like an apartment complex today. The Spanish called the buildings pueblos. Pueblo is a Spanish word that means "village". It is from these pueblos that the Ancient Pueblo people get their name.

These buildings were made of wood logs, adobe and stone. Adobe is a natural building material made from water, dirt and straw. The Ancient Pueblo builders used stones to make the walls of each room. Then they covered them with a layer of smooth adobe. The color of the walls is often the same as the color of the ground nearby.

Rooms at Taos Pueblo² One very famous pueblo is Taos Pueblo. It has a multi-storied residential complex of reddish-brown adobe. The Rio Pueblo River runs through the middle of the pueblo. Pueblo people built this pueblo between 1000 and 1450 A.D. About one hundred and fifty people still live there today.

They also built enclosed pits called kivas. Religious rituals and ceremonies were held inside the kivas. Most kivas built by the Ancient Pueblo people were round underground rooms. A hole in the roof was both a door and chimney. There were benches and alcoves in the walls. A fire pit was in the center.

The Ancient Pueblo people are famous for their cliff dwellings. Mesa Verde in south western Colorado has several built into its sides. Cliff Palace is a particularly well known dwelling there. It has 220 rooms, in several stories and 23 kivas. The design of Cliff Palace seems random. Different people added new rooms slowly. Over many years, it took shape. People who lived there grew their food on the top of the mesa above them. They had to climb the face of a steep cliff to get home. They used small hand and foot holds carved in the rock. Pueblo Corn³

¹ https://en.wikibooks.org/wiki/Image%3AMesa_verde_cliff_palace_close.jpg

² https://en.wikibooks.org/wiki/Image%3ATaos_Pueblo1.jpg

³ https://en.wikibooks.org/wiki/image%3APueblo_corn.jpg

1.3 What did they eat?

The Ancient Pueblo people were superb farmers despite the harsh and arid climate. They ate mainly corn, beans, and squash. They knew how to dry their food and could store it for years. Women ground the dried corn into flour, which they made into paper-thin cakes. They cooked these on a hot rock. Today their ancestors call these cakes "piki." They also cooked stews in clay pots over a fire.

Since they lived in the high desert, food was hard to come by. They had bows and stone-tipped arrows. They hunted and ate animals like mice, rabbits, squirrels, deer, elk, and turkey. They also gathered wild foods like piñon nuts, yucca bulbs, and sunflower seeds. They kept turkeys and ate their eggs, but they may not have eaten the birds themselves. Instead, they used these birds to control insects. The birds would eat the bugs before the bugs ate the plants.

1.4 What did they wear?

Ancient Pueblo people wore many different types of clothing. They wore shirts and loincloths made of animal hides and furs. As animals were scarce, so was leather. They made sandals with thick soles from the matted fibers of the yucca plant. Yucca fibers were also used as thread.

About 1,000 years ago, they began trading and growing cotton. They used cotton to weave shirts, dresses, loincloths and blankets. They decorated their clothing using natural dyes made from plants and minerals. Some common colors were ochre yellow, rust red, and pale blue-gray. The Ancient Pueblo people were expert weavers and they would decorate the fabric they wove. They painted or embroidered abstract geometric designs on the fabric.

The weather was hot during the summer, so they wore little clothing then; however, they experienced cold winters. To make robes and coats, they wrapped feathers around Yucca fibers which they then sewed together.

They also wore jewlery They crafted pendants, earrings and necklaces from turquoise. They traded for shells and beads and wore these as well.

1.5 What did they believe?

Katchina Doll⁴

No one knows for sure what the Ancient Pueblo people believed. We can make some good guesses, though. This is because we know what modern Pueblos believe.

They did not believe in a single god. They believed in many mystic beings and gods. Today their descendants call some of these kotchinas. The kotchinas could speak directly

⁴ https://en.wikibooks.org/wiki/image%3AImage-Kachina_small_01.png

with gods. People would ask the kotchinas to help them. Dancing was a main way that people connected with kotchinas.

According to Pueblo history, their ancestors entered this world from another world. The people who entered this world are the First People. A flute-playing locust led them on the journey.

An important concept in Pueblo history and religion is the sipapu. A sipapu was a place where people could communicate with the spirits. It could be an alcove in a kiva, a mountain, a body of water, or some other place. Ancient Pueblo Indians believed that the dead pass into the spirit world through the sipapu. When someone died, their spirit went to a different world for a time. Then they were reborn in this world as a new baby.

1.6 What did their writing look like?

Pot Made by Maria Martinez⁵ Ancient Puebloans did not have a written language. They did create pottery, cloth, and rock carvings with abstract designs, though. These designs identified groups or spirits. They also made rock carvings that had pictures of people and animals.

1.7 Are some of them famous even today?

A Pueblo medicine man named Popé led a revolt against the Spanish in 1680. The revolt was in response to the cruel treatment the Native Americans received from the conquering Spanish. The Pueblos managed to force the Spanish out of New Mexico but two years after Popé's death, the Spanish regained control.

Maria Martinez is a famous pottery maker known for her recreation of traditional Puebloan designs. Her most famous pots have matte black designs on a shiny black surface.

1.8 What is left of them today?

There are still Pueblo people living in New Mexico and Arizona. Some live other places in the American south west. There are around 25 pueblos today. Taos, Acoma, Zuni, and Hopi are the most well known pueblos. Modern Pueblo people are descended from the Mogollon and Hohokam people as well as the Ancient Pueblo people.

⁵ https://en.wikibooks.org/wiki/Image%3AMartinez_Pot.jpg

2 Aztecs

2.1 What country did they live in?



Figure 2 Map of Mexico^a

The Aztecs lived in what is now Mexico. The name Mexico comes from the Aztec word Mexica, a name they used to describe themselves. Their capital city, Tenochtitlan, was located where Mexico City currently stands today

2.2 What did their buildings look like?

The Aztec's city, Tenochtitlan, was built on a self-made island. When they first arrived in the area, there was nothing but a swampy island in the middle of Lake Texcoco. They developed a system, called the *chinampa* system to dry the land by setting up small plots in which they produced all the food they needed. When enough land was dry they would begin to build there. Over time, they added to the size of the island using this system.

a https://en.wikipedia.org/wiki/Mexico

2.2.1 Tenochtitlan

Tenochtitlan was divided into four zones (called *campan*). Each *campan* was divided into 20 districts (*calpullis*), and each *calpulli* was crossed by streets, or *tlaxilcalli*. There were three main streets that crossed the city and extended to firm land; the *calpullis* were divided by channels used for transportation, with wood bridges that were removed at night. Each *calpulli* had its own *tianquiztli* (marketplace), but there was also a main marketplace in Tlatelolco.

Tenochtitlan was created symmetrical, that is, a mirror image on both sides. At the heart of the city lay public buildings, temples and schools. Inside a walled square, 300 meters to the side, was the ceremonial center. There were public buildings, the main temple, the temple of Quetzalcoatl, the ball game, the *tzompantli*, or rack of skulls, the temple of the sun, the platforms for the sacrifice of gladiators, and some minor temples. Outside was the palace of Moctezuma. Nearby was the *cuicalli* or house of the songs, and the *calmecac*, or school. All construction had to be approved by the *calminilocatl*, a person in charge of city planning.

Moctezuma's palace had 100 rooms and bathrooms for the lords and ambassadors of allies and conquered people. It also had two zoos, one for birds of prey and another for other birds, reptiles, and mammals. There was also a botanical garden and an aquarium. The aquarium had ten salt water ponds and ten fresh water ponds, containing fish and aquatic birds.

2.3 What did they wear?

Aztec men wore the cloth around their waists and cloaks around their shoulders. Aztec women wore sleeveless blouses and wraparound skirts. Nobles dressed in brightly colored cotton clothes decorated in gold and feathers. This was done to attract attention to themselves. The poor wore clothes made of maguey fibers, and slaves did not wear much at all

The Aztec army dressed differently from everyday people. Warriors wore vests made of quilted cotton, feathered plumes that are dusted with stones and precious metals. They also wore collars, bracelets, and earrings made of the same materials. Depending on how many enemies they captured, warriors could earn the right to wear animal costumes. Chiefs wore layers of gold or silver with feathers underneath. Both chiefs and warriors wore wooden helmets shaped like animals and carried shields made of woven reeds and feathers. Common soldiers did not have these items. They painted themselves in the colors of their chief's banner and wore a simple girdle.

When sacrificing humans to the gods, priests wear black blood-stained robes, while the victim was painted with chalk. Often, masks were worn during the ceremony.



Figure 3 The name glyph for Ahuitzotl, an Aztec emperor.

2.4 What did their writing look like?

Like the Mayans, the Aztecs wrote using a series of glyphs, or pictures. For example, a snake (coatl) was represented by a drawing of a snake's head. Numbers below 20 were represented by a series of dots. Numbers larger than 20 were represented by glyphs. For example, the number 500 would be represented by a feather and four flags (400 + 5*20 = 500). To show that glyphs belonged to a single group, a line was drawn to connect them. Next, a line was drawn to the object being counted.

2.5 What did they believe?



 ${\bf Figure}~{\bf 4}~~{\bf Quetzalcoatl}^a$

a https://en.wikipedia.org/wiki/Quetzalcoatl

According to Aztec legend, the ancestors of the Aztecs came from a place in the north called Aztlán. They were guided by a god named Huitzilopochtli, meaning "Left-handed Hummingbird." There was a prophecy that said that they should build their home where they saw an eagle eating a snake while perched on a nopal cactus. When they arrived on the island in Lake Texcoco, they saw this, and settled there.

The Aztecs also believed that their ancestors were considered by other groups to be uncivilized. However, they decided to learn, and took knowledge from other peoples, especially the Toltec. They believed all culture came from them.

The Aztecs had several creation myths. One said that there were four ages before our time, each of which ended in a catastrophe. Our age - Nahui-Ollin, the fifth age, or fifth creation - escaped destruction because of the sacrifice of Nanahuatl ("full of sores", the smallest and humblest of the gods), who was transformed into the Sun. Another says that Earth was created by the twin gods Tezcatlipoca and Quetzalcoatl. Tezcatlipoca lost his foot in the process of creating the world and all representations of these gods show him without a foot and with a bone exposed.

2.6 Are some of them famous even today?

At the time of the arrival of the Spanish, Emperor Moctezuma ruled over Tenochtitlan. His name in Nahuatl, pronounced Mo–tekw–so–ma, meant "he who makes himself ruler by his rage."

Legend has it that ten years before the Spanish arrived, eight things happened that signaled the fall of the Aztec empire. They were:

- 1. A comet appeared in the sky during the day.
- 2. A pillar of fire (possibly the comet) appeared in the night sky.
- 3. The temple of Huitzilopochtli was destroyed by fire.
- 4. A bolt of lightning struck the Tzonmolco temple.
- 5. Tenochtitlan was flooded.
- 6. Strange people with many heads but one body were seen walking through that city.
- 7. A woman was heard weeping a dirge for the Aztecs.
- 8. A strange bird (quetzal) was caught. When Moctezuma looked into its mirror-like eyes, he saw unfamiliar men landing on the coast.

In the spring of 1519, Moctezuma received reports of strange men off the coast of his empire. At first, the emperor sent an ambassador with a costume of Tlaloc, and another of Quetzalcoatl. When the ambassador met conquistador Hernán Cortés, he thought he looked like Quetzalcoatl. He told Moctezuma, who tried to stop him from coming to Tenochtitlan. He sent gold, wizards, priests, and even one of his ambassadors, Tzihuacpopoca, who pretended to be the emperor.

Eventually, Moctezuma met Hernán Cortés. He believed he was the god Quetzalcoatl. He took him to his garden and gave him flowers, the greatest honour he could give. When Cortés ordered a halt to the human sacrifices, he agreed. He even offered to be baptized a Christian and become a subject of King Charles I of Spain.

When Cortés went to meet other Spaniards on the coast, deputy governor Pedro de Alvarado took over. He stopped the Aztecs from celebrating Toxcatl, and killed most of the important upper class Aztecs in what is known as "The Massacre in the Main Temple." Between 350 and 1000 people died. This enraged the Aztecs, who revolted. Moctezuma was then taken by the Spanish. On July 1, 1520, Moctezuma appeared on the balcony of his palace, pleading

with his people to retreat. Instead, they threw rocks at him, and he died shortly after the attack.

After the death of Moctezuma, there were only two other emperors. One died of smallpox, the last Aztec emperor was named Cuahutemoc, and to make him confess where the Aztec wealth was kept, they burned his feet until finally his death came very possibly from shock, or so Mexican scholars say. One year later, the Aztec empire had crumbled. Techichpotzin, Moctezuma's daughter, inherited his wealth. She was baptized a Christian and given the name Isabel Moctezuma. She married a total of five times before she died.

2.7 What is left of them today?

Although the Aztecs no longer exist, their influence is still felt in Mexico. More than 60% of the population are *mestizo* or mixed. This means that some of their ancestors were Aztec. There are also over 1.5 million people in Mexico who speak Nahuatl, which comes from the Classical Nahuatl spoken by the Aztecs.

The Nahuatl language has given many words to English, usually through Spanish. Here is a list of some English words of Nahuatl origin:

- avocado: from ahuacatl (fruit)
- chilli: from chilli (vegetable)
- chocolate: from xocolatl (drink)
- cocoa: from cacahuatl (fruit/nut)
- coyote: from coyotl (mammal)
- ocelot: from ocelotl (mammal)
- shack: from xacalli (structure)
- tomato: from (xi)tomatl (fruit/berry)

de:Wikijunior Alte Zivilisationen/ Azteken¹

¹ https://de.wikibooks.org/wiki/Wikijunior%20Alte%20Zivilisationen%2F%20Azteken

3 Assyrians

3.1 What country did they live in?

The Assyrians were fierce warriors who lived in northern Mesopotamia from 1900-612 BC. Their kingdom was upstream on the Tigris River, across from their enemies, the Babylonians. The Assyrians were a much more warlike people than the Babylonians. They were also known as great traders. Their caravans traveled all over the place, bringing goods to trade as well as food and wine to various cities in Mesopotamia.

About 1200 BC, the Assyrians finally conquered Babylon, the greatest city of the time. The Assyrians leveled the city. They turned it into rubble. After they leveled the city, the Assyrians began to worry about Marduk, the chief of all the Babylonian gods. They were afraid Marduk might punish them for destroying his city. The Assyrians decided the smartest thing to do would be to rebuild the city, and to return the statue of Marduk to his temple. They really did not have any use for the city. So, they rebuilt Babylon, but left it an empty city. Eventually, people returned to the city and Babylon rose again.

During the height of its power (8th – 6th centuries BC), the Assyrian civilization expanded to cover the whole of Mesopotamia (including Babylon, Syria, Palestine and Cyprus) as well as northern Arabia and north-eastern Egypt.

3.2 The History of Assyria

The history of the Assyrian Empire can be divided into three segments (or parts), the Old Assyrian Empire, the Middle Assyrian Empire, and the New Assyrian Empire. The Old Assyrian Empire was formed around 1900 B.C. and lasted until around 1363B.C. It was a time of conquest. The Assyrians attacked their neighbors, such as Sumer and Akkad, and grew more powerful, though still not as powerful as some of their other neighbors.

During Middle Assyrian Empire, the Empire was very powerful and still growing. This stage in the life of the empire lasted from 4000 - 1000 B.C. Iron swords, lances, and armor strengthened the Assyrian army because iron weapons were stronger than the bronze weapons used by other civilizations of that era. The Assyrians used iron to create powerful battering rams. A battering ram is a large, heavy log carried by several men and propelled with enough force to break down city walls. The Assyrians added wheels and canopies to their battering rams. A canopy is a small roof that protected Assyrian soldiers from rocks and spears thrown down at them.

The invention of spoke wheels made Assyrian chariots lighter, faster, and better prepared to outrun soldiers and other chariots. Arrows from their deadly crossbows could penetrate the armor of rival soldiers. About 1000 B.C., the Assyrians introduced the first cavalry. A

cavalry is an army that fights on horseback. The saddle had not yet been invented, so the Assyrian cavalry fought on the bare backs of their horses.

The New Assyrian Empire occurred during the pinnacle, or top, of the empire's power. The Assyrians owned most of their known world. In fact, the kings thought that the gods chose them to rule, and that made them representatives of the gods on earth. This was a form of what is known as Theocracy. Theocracy is a form of Government where ruler's power comes from religion. The kings were given titles and names like, "King of the Universe." Because of their power they were not only in charge of the army but the temples too. During this time magnificent palaces and temples were constructed, partly to show off the wealth (or money) of the kings. The last great king during the was Ashurbanipal (pronounced Ash-er-ban-ee-pol). He ruled from 668-627 B.C. After his rule the country soon fell. The Medes and Babylonians invaded and finally defeated the nation in 612 B.C.

3.3 What did their buildings look like?



Figure 5 A winged bull in bas-relief 713-716 B.C.

Assyrians built magnificent temples and palaces, decorated with beautiful reliefs and statues of winged bulls, known as cherubs (though you must be careful not to confuse these with angels of the same name).

The Assyrians built in rectangles. Their rectangular homes were built of stone. They had doors but no windows. The roofs were flat with layers of earth on sturdy beams. This made their homes nearly fireproof. They built walled towns with huge rectangular buildings. They decorated their buildings with huge demons to protect the building, and possible the town residents, from evil influence. First and foremost, the Assyrians were deeply religious warriors, and their construction reflected this.

3.4 What did they eat?

Assyrians ate a platter of ground lamb, wheat, pine nuts, and other middle eastern spices. This was called Kidbei (Kid-be). Their bread was called lehmo or pita. Yogurt was a main part of the Assyrians diet. Assyrians had two main desserts. One is a pastry filled with a buttery paste. This is called Kadee. The other dessert is called Baklava. Baklava is a dessert found in many other middle eastern civilizations. Richta, an Assyrian rice dish is tasty. Booshala is a creamy soup with many delicious ingredients one of which is ground lamb.

3.5 What did they wear?



Figure 6 Blessing genie Dur Sharrukin

The men wore long coatlike garments and were bearded. Women wore a sleeved tunic and a shawl over their shoulders. Knee-length and full-length tunics (a garment like a shirt) with short sleeves were the most common types of clothing worn. They were worn along with some type headdress. Shawls were also worn. The two were generally worn together, but sometimes not.

The Assyrian cavalry was well outfitted for war, with chain mail and leather boots. Chainmail is a type of armor consisting of small metal rings linked together in a pattern to form

a mesh. While other armies fought in sandals, leather boots protected Assyrian soldiers while they were around horses, and prepared the Assyrian army to fight in rough terrain and in cold weather, rain, and snow.

Though there are no actual pieces of clothing around today, archeologists can still infer with some help from the Old Testament of the Bible that rich coloring was prominent. Colors probably included:

- Blue: dark indigo, though sometimes lighter.
- Red: A lot Indian red.
- Yellow
- Green
- Purple: Dark, and a little brownish.

3.6 What did their writing look like?

Assyrian writing was called cuneiform (kU-nee-u-form). The cuneiform is one of the oldest known forms of writing. Cuneiform writing began as a system of pictographs. Over time, however, its letters simplified and became less of a picture.

Cuneiform was written upon clay tablets, on which symbols were drawn with a blunt reed called a stylus. The indentations left by the stylus were wedge shaped, which gave rise to its name, cuneiform ("wedge shaped").

Around 600 BCE, before the people of ancient Mesopotamia were conquered by the great Persian Empire, the last Assyrian king started a project. He began collecting a library of clay tablets of all the literature of Sumer, Babylon, and Assyria. When discovered in modern times, over 30,000 tablets still remained in the great library in his capital city of Nineveh. These tablets are our single most important source of knowledge about ancient Mesopotamia.

3.7 What did they believe?

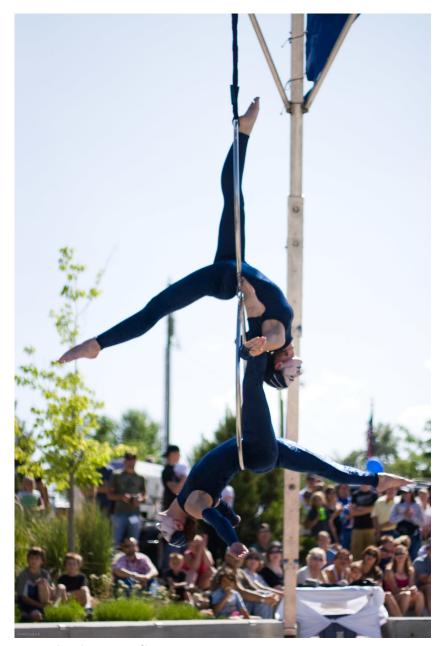


Figure 7 Ishtar An Assyrian God

The Assyrian king was believed to be the earthy representative of the gods. His enemies were punished with violence. The message was simple – mess with Assyria and you will face the consequences. Like the Babylonians, the Assyrians believed that there were many gods that ruled different parts of the universe. They built each of their gods a primary temple that was considered the home of the god. People would bring sacrifices to the gods and the priests would try to attend to the needs of the gods through ceremonies and festivals.

The Assyrians did not believe in a happy, busy afterlife. They believed that after death every soul went to the underworld. The underworld was considered a dark and dismal place. This made death a dreadful event as there was no hope of ever having anything better.

In the funeral ceremony itself, they would place the hand of the deceased on a plate of food, so that they would have something for the trip. They would bury their dead with a few of their favorite possession. The Assyrians, however, liked to keep their dead at home. The poor would dig a hole somewhere in the house, and bury their dead at home. The rich would build a room just for the burial. In both cases, an oil lamp would be kept burning near or at the gravesite, to remind everyone that this person is near and cares for them.

Babylonian and Assyrian religion had much in common: most of the myths and the gods were the same. One difference though was that in Assyria the king of gods was Assur, the patron god of the city of Assur, unlike Babylonian Marduk, the patron of Babylon.

The following is a list of gods worshipped by the Assyrians:

- Ishtar, the goddess of love
- Adramelech, A sun god
- Anshar, the national God
- As Shalla, the Assyrian goddess of grain
- Anasas, God of medicine
- Nishraeli
- Nisroch, god of farming
- Nimrod
- Oannes
- Nabu, god of Wisdom and Writing
- Samnuha
- Gubaba
- Ashur/Assur, king of the gods

3.8 Are some of them famous even today?

King Ashurbanipal is known for his library of cuneiform tablets. It was the largest collection of the books in the ancient world. Many masterpieces of ancient literature and many facts from ancient history are known to us from the documents of Ashurbanipal's library. Also, the Assyrians are mentioned in the Bible¹ as the people who conquered Israel over a hundred years before Judah's conquest. We can also see, in the Bible, that the Assyrians were conquered by the Babylonians, who conquered Judah later on.

3.9 What is left of them today?

Assyrian people still live in northern Iraq, Iran, Syria, Palestine (specially Jerusalem) Jordan (Medaba), Australia, and the US. They speak Aramaic language and most of them are Christians.

¹ https://en.wikipedia.org/wiki/Bible

4 Celts

4.1 What country did they live in?

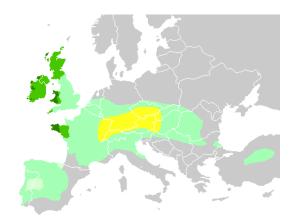


Figure 8

In around 400 BC, the Celts ranged from Britain¹ and Ireland² all the way across Europe to northern Turkey. Today, Celtic descendants live in Scotland, Wales, Cornwall and Northern Ireland in the United Kingdom³, Brittany in France⁴, the Isle of Man and the Republic of Ireland⁵. Other Celtic people live in countries where their ancestors moved to.

4.2 What did they look like?

Men wore a loose fitting tunic down to the knees and trousers called Bracae. Women wore long, loose fitting dresses. They made their clothes from linen woven from the flax that Celtic farmers grew. They were very concerned about their appearance and used dye from berries to colour their clothes. Both men and women also wore great cloaks when travelling, women used a decorative brooch to fasten their cloak at the neck. These cloaks were very heavy and often used as sleeping bags for the men when they were away hunting. The Celts used lime to bleach their hair, preferring light hair and both men and women wore their hair long.

¹ https://en.wikibooks.org/wiki/Wikijunior%3AEurope%2FUnited%20Kingdom

² https://en.wikibooks.org/wiki/Wikijunior%3AEurope%2FIreland

³ https://en.wikibooks.org/wiki/Wikijunior%3AEurope%2FUnited%20Kingdom

⁴ https://en.wikibooks.org/wiki/Wikijunior%3AEurope%2FFrance

 $^{5 \}qquad \verb|https://en.wikibooks.org/wiki/Wikijunior%3AEurope%2FIreland| \\$

4.3 What did their buildings look like?

Most Iron Age Celts in Britain lived in **roundhouses**; circular houses of wood or stone with thatched straw roofs shaped like a cone. Most roundhouses were made up of wooden posts, with the walls made out of "wattle and daub." Wattle and daub consists of wooden sticks (wattles), covered with a mixed mud and clay plaster (daub).

In Scotland most roundhouses were built of stone rather than wood, yet retained the coneshaped thatched roof. This type of roundhouse is called the **Atlantic roundhouse**.

Celtic houses in mainland Europe were rectangular.

The Celts in Ireland built many forts and settlements, the most popular design was the ringfort. Inside a ringfort wooden, circular houses were built using wattle and daub.

Celts also built fortified defensive structures, which can still be seen today, especially in the highlands and isles of Scotland, as well as Ireland.

4.4 What did they eat?

Celts ate like most other Europeans, subsisting mostly on grains supplemented by meats, fruits, and vegetables. Exactly what they ate varied by area, and Celts grew local crops. Scottish highlanders were famous for supposedly subsisting almost entirely on **oats**, though this was not entirely true. However, oats remain the favorite grain of Scotland, and Scottish cuisine is full of them. **Potatoes** serve this role in Ireland, although they were not introduced until after Columbus reached the New World.

The Celts in Ireland farmed the land and reared cattle and sheep. In the spring, they would get milk, butter and cheese from the cattle, killing them later in the year for meat. Cattle were not only a means of food for Celts, the Celts wealth was measured in the amount of cattle they owned. One ancient Irish tale tells of Queen Maedhb (May-ev) and another rival king, and their battle over the Táin Bó Chuaille (a bull). This doesn't just show the importance of cattle in Celtic society, but also the fact that they thoroughly accepted the idea of women as leaders, unlike other societies of that time.

The most famous example of food of any Celtic people is probably the Scottish haggis. Many people aren't quite clear on what a haggis is, and one survey conducted in the United States found that over half of the people they surveyed thought that the haggis was a small rodent native to Scotland. In reality, a haggis usually consists of a sheep's 'pluck' (heart, liver, windpipe and lungs), minced with onion, oatmeal, suet, spices, and salt, mixed with stock, which is traditionally boiled in the animal's stomach for about an hour.

4.5 What did they wear?



Figure 9 A bronze torque, a neckband worn by Gauls.



Figure 10 Relief statue of a Gaulish woman. She wears loose robes, an armband (probably bronze), and carries a sword.

Celts took a great interest in their clothes when they could afford to do so. Many more modern Celts had colourful designs woven into their clothes called **tartan**, still shown in Scottish Kilts and Trews today.

Celts also had a great fondness for jewellery, and both men and women wore quite a bit, when they could afford it.

Finally, many warrior Celts wore their weapons (swords, more often than not) as normal attire. This became very complex during the late Middle Ages with Scottish highlanders, who were sometimes seen with a broadsword at their waist, dirk (long knife) on their belt, one or more pistols also attached to their belt, a long hunting rifle, and a small dagger in their sock, called a Sgian Dubh (Gaelic for "Black Dagger").

4.6 What did their writing look like?

Celts didn't have a very high opinion of the written word. Instead, they recorded their history and culture in an **oral tradition**; that is, they recorded their past by telling stories. Early examples of Gaelic Celtic writing have been recovered in Europe, based on the Phoenician alphabet.

In Ireland, a different alphabet was used, primarily in Gaelic Celtic languages like Irish⁶, Manx⁷, and Scottish Gaelic. This alphabet was called **Ogham**, sometimes referred to as the "Celtic Tree Alphabet." It developed as a way for Irish monks to write in stone.



Figure 11 An example of Ogham from the Book of Ballymote.

After Christianity was spread throughout the Gaelic world, Ogham fell into disuse, in favor of the Latin alphabet (largely because Christian writings were all in the Latin alphabet).

4.7 What did they believe?

Celts were **polytheists**; they believed in many gods and goddesses (deities). Unlike many other civilisations, different groups of Celts worshipped various deities, although there were some patterns. **Beira** was the name that Celts gave to Mother Earth, and some of them believed her to be the mother of all their deities.

Most Celts believed in an afterlife, we know this because archaeologists have found many grave goods within their burial tombs (Dolmens, Cairns). Many, though not all, Celts worshipped in sacred groves.

4.8 Are some of them famous even today?



Figure 12

⁶ https://en.wikibooks.org/wiki/Wikijunior%3ALanguages%2FIrish

⁷ https://en.wikibooks.org/wiki/Wikijunior%3ALanguages%2FManx%20Gaelic



Figure 13

Yes! Today, the British Isles (along with Ireland) are probably regarded to be Celtic more than any other area in the world. No one is quite sure who lived there before them, and they were certainly well-established by the time the Romans came there in AD 43. After 20 years of Roman rule, the chieftain of the Icenii tribe, Prasutagus, died. Though by tradition, his wife **Boudicca** would have assumed leadership of the tribe, the Romans took Icenii land, brutally humiliating Boudicca and her two daughters. This enraged the Icenii people, and Boudicca raised an army to fight the Romans and liberate Britain. She gained support of many other Celtic tribes, and almost succeeded in toppling the Roman Empire in Britain. She is revered as a national hero in Britain.

The world-renowned Scottish poet, Robert Burns, was a Celt.

Many famous Celts are alive today. The famous Scottish actor, Sean Connery, is proud of his Celtic heritage.

4.9 What is left of them today?

Celts are alive and thriving today! Much of the population of Europe are seen as descendants of the Celts, and the nations of Scotland, Ireland, Wales, Cornwall, Brittany and Isle of Man are considered to be made up of primarily Celtic peoples. As well, the Celtic diaspora, the descendants of Celts around the world, is vast, being spread greatly through the British Empire. In particular, Novia Scotia, Canada, is a hotbed of modern Gaelic Celtic culture.

5 Chinese

Despite its being one of the four greatest ancient civilizations, the Chinese civilization had a slower progress than any other. The Chinese civilization has made countless contributions to the world, including the invention of compass, paper, gunpowder, silk, noodle, porcelain, and paper money and other things that are a part of our lives today. There were also many great works of architecture, such as, the Great Wall.

The Chinese is the only of the four greatest ancient civilizations that managed to survive throughout the five thousand years of its history and one of a few ancient civilizations that have lasted into modern times. The Chinese civilizations is normally divided in four characteristic periods (Pre-history and Shang, Han Empire, Qing [Manchu] Empire 1644-1912 and Modern age). Due to their extensive record keeping little mystery is left to us, much unlike the Egyptians and Babylonians. The influence of Chinese civilization also spread to most its neighboring regions predominantly Japan, Korea, Mongolia and Vietnam. The present-day China culture is still marked by this continual evolution but now China is part of the globalized human civilization.

5.1 Where do they live?

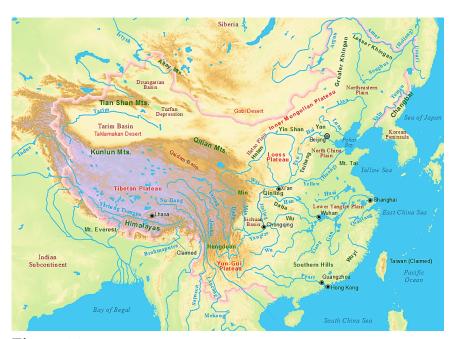


Figure 14

The geography of ancient China is often described by geologists in a system of three steps: The first step is to the far west near present day Tibet Autonomous Region (TAR)¹ (Tibet or Xizang for short). With the highest mountains on earth the climate is quite cold and in the summer quite warm. This area is widely considered inhospitable, from -40°C (-40°F) in the winter to 37°C (100°F) in the summer. Because of these extremes, there aren't many villages and the villages that are there are quite small.

The next step is the middle of China. It's covered with desert and a small amount of grassland. People there raise yaks, a type of grazing cattle. There are some low hills but no snow. With cold winters and hot summers this area was never densely populated.

Eastern China supported most of China's ancient population. Three rivers flow through this area: the Huang He in the north, the Chang Jiang (Yangzi Jiang) in the center, and the Sikiang in the south. The Huang He is the main river and is more commonly known in the Western World as the Yellow River. This is because the water and the soil around this river is yellow. There was plenty of water for crops and agriculture flourished. Wheat was the main crop in the north, and rice was more common in the southwest.

5.2 What do their buildings look like?



Figure 15 City wall of Xi'an is the best preserved city wall in China.

Most ancient Chinese buildings have not survived because they were made of wood. A small number of buildings were made of stone. However, the forbidden palace, which is still located in China, Beijing, has survived, and many tourists visit it every day. The Temple of

 $^{1 \}qquad \verb|https://en.wikipedia.org/wiki/Tibet%20Autonomous%20Region| \\$

Heavens, or Tian Tan, is also a famous tourist attraction. Chinese architecture has curved roofs to resemble the wings of a bird. Roof colors also hold significance; blue was usually reserved for religious buildings, orange/yellow was reserved for imperial buildings, etc.

5.3 What did they eat?

Northern Chinese people prominently diet was based on wheat; southern Chinese people on rice; and they ate with chopsticks, still common in the Asia today. Many of them ate noodles, which are long, thin pieces of dough that they boil in hot water. A main meat was pork. They also grew fruits like lemons, oranges, peaches, apricots and ginger.

5.4 What did they wear?

In ancient China, the wealthy wore silk, while commoners were cotton. The color yellow/gold could only be worn by the emperor and other royalty. A dragon was sometimes sewn on the Emperor's clothes, and gold was often were into clothing. The color red indicates celebrity or happiness and is usually worn on holidays. They also sometimes were jade depending on what they were doing, since jade was highly valued

They wore a style of clothing known as the Hanfu, which was robes tied together with a sash or belt. Hanfus vary from simple versions worn by commoners to scholarly versions worn by court officials to elaborate versions worn by the rich.

The Hanfu very much resembles and is the predecessor of the Japanese yukata/kimono, the Korean hanbok, and the Vietnamese Áo tứ thân.

In the 17th century, Manchurian nomads invaded the Ming Dynasty, and created the Qing Dynasty. They ordered everyone to wear Manchurian clothing, which is now known as the Cheongsam; Changshan (male) and the Qipao (female). This type of clothing is what most westerners picture when they think of Chinese clothing.

5.5 What does their writing look like?

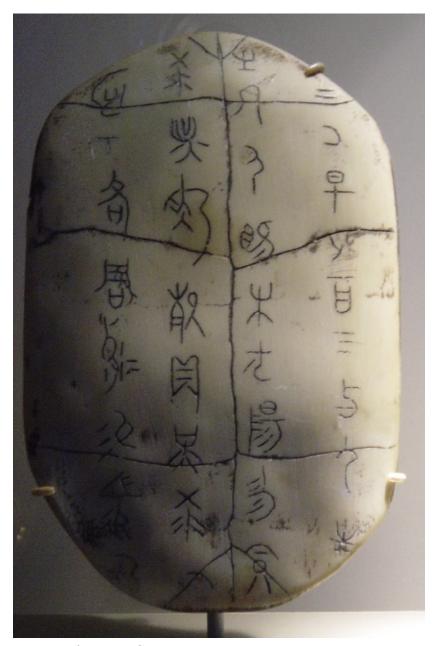


Figure 16 Replica of ancient Chinese script on an oracle turtle shell



Figure 17 Simplified Chinese (left) alongside traditional Chinese (right)

The ancient form of writing evolved into the character system that is still in use today. Traditional Chinese script includes cursive, semi-cursive, wild cursive, clerical, seal, etc. Today, mainland PR-China uses simplified Chinese script, introduced to improve literacy rate, but criticized by historians.

Taiwan², Hong Kong³, and Macao⁴ continue to use traditional script.

² https://en.wikipedia.org/wiki/Taiwan

³ https://en.wikipedia.org/wiki/Hong%20Kong

⁴ https://en.wikipedia.org/wiki/Macao

5.6 What do they believe in?

During the Bronze Age most of China worshiped many gods and spirits. The most important of these being Ti or "Deity Above". He was believed to help those that pleased him and punish those that didn't. Ti was in charge of all the gods and goddesses in the pantheon. The gods and goddesses all represented something in nature, e.g. the "God of Soil". Some of the emperors brought their servants with them to the after life. Priests and Priestess's main job was to act as mediums between the gods and goddesses and the worshipers they specialized in sacrificing and ceremonies of specific gods and goddesses. A special type of medium was an Augur. An Augur asked questions of the gods and goddesses or read oracle bones.

After the Bronze Age, Three Doctrines or Ideologies became important Chinese Religions. The Three ideologies can also be viewed as philosophies but they also have a spiritual element, which is why they are classified as religions. Daoism and Confucianism were native to China and developed in isolation. The Third Doctrine, Buddhism was brought from China by traveling monks from India.

Confucius was alive during when the Chou dynasty (a part of the Zhou Dynasty) was decaying it was riddled with corruption. Confucius experienced the corruption firsthand as he held a position in government. He believed that decline was because the Chinese had abandoned old traditions and old concepts of honor, politeness morality and social roles had been forgotten; this is the base of Confucianism.

Confucianism filtered into different aspect of Chinese culture. Confucius' teachings became the basis for education in China and his writings became the classics that every child in China reads.

The basis of Daoism is the concept of Dao. Dao is translated as "the path" or "the way." The term has no conclusive definition it refers to a wide force in nature and is the source of all things.

Daoism in its purest form calls followers to pursue Dao. This means he or she should not try to alter nature or force it to do what it was not meant to do. A follower must remain inactive and not make plans. A follower must not do anything contrary to Dao for example building a house or damming a river. Daoists were members of the educated wealthy elite. Some of the less privileged did learn about it but altered it to be more about magic and alchemy than the purest form of Daoism.

Siddharta Gautama founded Buddhism around 500 BC; He was later called The Enlightened One or the Buddha. Buddhism spread to China via the Silk Road. When it first arrived it was considered part of Daoism because of how similar Daoism and Buddhism are. How ever a number of Buddhist monks came from India to China and kept the religion from being incorporated into Daoism. Buddhism encourages followers to throw off self-interest. Through meditation and right living, a Buddhist can reach Nirvana or absence of suffering which was a similar concept to Dao.

All three religions were not intolerant of each other although they did not always agree. Many people were subscribers of more than one religion and all three subtly influenced each other.

5.7 What is their history?

The first step of the Chinese civilization was started by the rule of the Shang dynasty (kings), who ruled a group of towns and cities. They ruled from 1766 - 1027 BC. They were mostly located in the North West of the present-day China, and the rest of the land was run by other tribes who the Shang could not reach. In 1027 BC, the Shang king was replaced by the Zhou Dynasty, and these people ruled for 400 years. They extended the kingdom southwards and towards central China. In 772 BC, barbarians destroyed the capital Hao and a new capital was built at Luoyang. But the Chou were never as powerful again and from 772 - 481 BC the land was split into many small kingdoms run by chiefs. Around 500 BC the hundreds of tiny kingdoms had turned into around 20 states. Peace was proposed to end the wars in the area, but war returned in 481 BC. This lasted until 221 BC in a period known as "The Warring States". After this time, there were seven big kingdoms. Starting in 230 BC, one of them, the Qin kingdom defeated everyone and Prince Cheng named himself Shi Huangdi, the First Emperor of China. The name Qin was also given to the land, and it still remains today as China.

5.8 Are some of them famous?

Confucius (known in Chinese as Kongzi) is widely known as the prototypical Chinese sage. He spawned a whole school of philosophy. His follower, Mencius, is also known today. There are other ancient Chinese people known today, although their origin is thought of as legendary: Laozi, writer of the Daode jing, one of the five major classics of ancient Chinese wisdom; Sunzi, the military theorist who wrote the "Bing Fa", know in the West as "The Art of War". Historiographically, there is a rather important name: Sima Qian, the first major Chinese historian, dating from Western Han.

Politically, there are maybe two major figures: Qin Shi Huang, the First Emperor and the first builder of the Great Wall of China. Originally named Ying Zheng, he conquered the remaining Chinese kingdoms and became the first "Son of Heaven" to aggregate "All-Under-Heaven", the whole territory. Nearly 60 years later, Emperor Wu of Han (Han Wudi) rose to power, marking the true beginning of Confucianism as "the" building block of the Imperial State.

Zheng He is another famous person. He explored the world on big ships in 1405, almost a century before Ferdinand Magellan set sail. Zheng He visited India, the Persian Gulf, Egypt, and possibly even the most southern tip of Africa!

6 Egyptians

6.1 What country did they live in?



Figure 18 View of the Nile from the river



Figure 19 What the Nile looks like from space

Egypt is in northeastern Africa. The Ancient Egyptians lived along the River Nile, the "fertile river." This river flows from the central part of Africa. The Nile's water flows north and empties into the Mediterranean Sea. At the northern most part of the Nile, the Nile forms a delta. The delta is the wider, triangular mouth of river, where it leaves behind dirt and other sediment.

The Nile was very important to life in Egypt. Seasonal floods every year covered the land near the river with fresh silt, making the land very good for growing food. In order to grow more food, people built irrigation canals to move water from the river to nearby areas. The

Sahara Desert makes up much of the surrounding area, so most people didn't travel very far from the Nile. The surrounding desert land made the rich soil of the Nile very important for growing crops.

Egyptian transportation systems included boats that traveled north and south along the river. Boats could easily travel north, with the current of the river, but they could go south easily as well. The winds along the river usually blew to the south, so the Egyptians would raise sails on their boats and head against the current with the help of the wind!

The Greek historian Herodotus traveled the river thousands of years after the Egyptians started their civilization. He is often quoted as saying that "Egypt is the gift of the Nile." This means that, without the Nile, civilization in Egypt would be impossible.

6.2 What did their buildings look like?

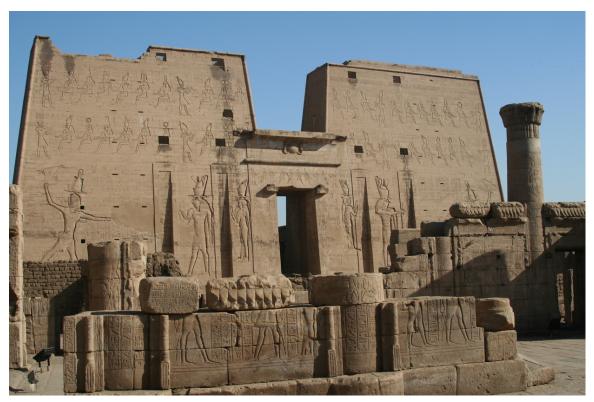


Figure 20 The well preserved Temple of Horus at Edfu is an example of Egyptian architecture and architectural sculpture.



Figure 21 All Gizah Pyramids

There were two types of buildings that the ancient Egyptians lived in. One was called the worker's home. The other was the town house, which was for wealthier people. Both types of houses were built from bricks. Stone was only used for building permanent structures, such as the Pyramids. The bricks were made from a mixture of mud, pebbles, and straw. The builders would pour the mixture into wooden frames and leave it in the sun to dry and harden. Buildings made from such bricks eventually crumbled, and new buildings were constructed right on top of the ruins. This led to the formation of tells or hills. Houses were often built along the Nile River, but they had to be high to avoid flooding.

A worker's home was usually one-story high and had up to four rooms. There was a yard and a kitchen in the back of the house, as well as two underground storage cellars. The roofs of the Egyptians houses were flat, and people spent much of their time there. Egyptian families slept, cooked, and ate their meals on the roof. It was a bit like having a living room, kitchen, dining room, and bedroom all up on the roof. The Egyptians did not have running water in their homes, but water could be taken from nearby wells. Workers' homes had very little furniture, including beds and storage chests for clothes.

The houses of the wealthy were much larger and up to three stories tall. Because the walls were much higher, they had to be supported by wooden beams. The walls of the first floor were sometimes made of stone for added strength. Different levels of the house served different purposes. The first floor was where business and work was conducted. The second and third floors were the living space for the family and had nicer furnishings. The roof was used for preparing and cooking meals that were then brought in by the servants. Wealthy

homes had gardens, pools, and small shrines for worship. Some houses were decorated with tiled floors, barred windows, fancy staircases, and painted walls. The ceilings were high and held up with columns.

The pyramids were large stone structures built to house the bodies of the Egyptian rulers, or **Pharaohs**, after they died. The pyramids were built high, because it was believed to be the ruler's staircase to heaven. Although the most famous shape is the familiar threedimensional triangle, pyramids were built in a variety of shapes. They were all built with the help of simple machines, including pulleys, inclined planes, and levers. The inside walls of the pyramids were decorated with **hieroglyphics**, the picture-based writing of the Egyptians. The tomb of the Pharaoh was located in a room deep in the heart of the pyramid, and was filled with gold, jewels, and other riches. It was also filled with other everyday objects that might be needed by the dead Pharaoh during his journey to the afterlife. This could include food, clothing, utensils, pottery, and furniture. Sometimes, even servants were sealed up in the tomb! Because of all the treasure inside the tomb, robbers sometimes broke into the pyramids, but their maze-like interior could cause them to get lost and die of starvation. Another defense against robbers were the curses written at the entrance of the pyramids. Most ancient Egyptians were very superstitious, and the curses were frightening enough to keep them away. Unfortunately, as centuries passed, thieves grew less afraid of the curses and managed to steal many of the ancient treasures that had been in the tombs for ages.

6.3 What did they eat?

The ancient Egyptians ate food that is not much different from what we eat today. Because the Nile River supplied them with a constant water source, the Egyptians were able to grow many different kinds of crops in their desert environment. Common crops included grains, vegetables, and fruit. It was expensive to raise animals. Therefore, most domestic animals were used as work animals rather than as food. Often, Egyptian families hunted wild animals to eat.

The Egyptians ate many different kinds of bread. The dough was made from grain, yeast, eggs, butter, salt, milk, and spices. In early times, it was cooked over an open fire. Later, pre-heated stone slabs were used. The bread could be plain or filled with beans, vegetables, or other ingredients. If sweet bread was desired, it would be flavored with honey, fruit, or dates. Honey was the main sweetener for the Egyptians, because they had not discovered sugar. They also believed that honey had healing properties.

Because the Nile provided lots of water, fruits and vegetables made up a large part of the Egyptian diet. Common vegetables included: cucumbers, onions, cabbage, garlic, radishes, leeks, and more. Green vegetables were often served with a dressing, usually made of vinegar and oil, not unlike the salad dressings we use today. Fruits like figs, pomegranates, dates, melons, and grapes were readily available. Wealthy people could import fruits like coconuts, apples, and peaches.

Fish was also a large part of their diet, although many rich people would not eat it. Fish was usually eaten fried, boiled, or roasted. It was also often sun-dried.

6.4 What did they wear?

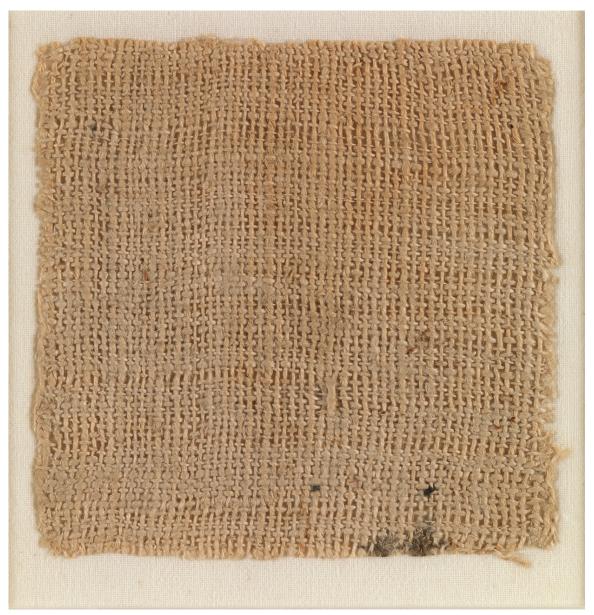


Figure 22 Ancient Egyptian linen, Late Period



Figure 23 Porteuse d'offrandes 1 XI° dynastie

Most Egyptians were white tunics made of linen. Linen was by far the most common textile. It helped people to be comfortable in the heat. Linen is made from the flax plant. Plant dyes could be applied to clothing but the clothing was usually left in its natural color. Only the pharaohs or wealthy were animal skins, from lions or leopards. Clothing made from animals was forbidden in temples and sanctuaries.

Men wore skirts or tunics to the knee. Women would cover their legs and often wore a simple dress called a kalasiris. While working, men wore loincloths, and women wore shorter skirts. Peasants, workers and other people of modest condition often wore nothing. Slaves often

worked naked. Wealthier people had pleats in their clothing, and some noblewomen wore beaded dresses.

Egyptians were sandals made of palm fiber or braided papyrus for shoes. Most people went barefoot and carried their shoes, wearing them only when necessary. Women seldom were shoes, because most of their work was indoors.

Royalty wore ceremonial clothes which were elaborately decorated with feathers and sequins. The Pharaoh's sandals and gloves were both highly ornamented.

Both men and women wore makeup. They also used a reddish dye called 'henna.' Unlike other ancient civilizations, the Egyptians were quite clean and washed and oiled themselves with scented oil before dressing. They used combs, razors, and tweezers as part of their hygiene routine. Men and women both wore wigs, which were changed every day and made from human hair or wool. Curled wigs were worn on special occasions.

Jewellery was a normal part of any Egyptian's outfit. All classes were some type of jewelery made of either gold or colorful beads or stones. Lapis lazuli and turquoise were used to make necklaces. Earrings and rings made of clay were also worn as a fashion accessory.

6.5 What did they believe?

Ancient Egyptians, for most of their history, believed in many gods. Ra, the sun god, was one of the most important gods. Several of the gods were based on animals, or had animals as their symbols. One god was often shown as a jackal and another as a cow.

Often, there were myths told about these gods and goddesses that explained some of the major ideas in ancient Egypt. One famous myth involves Isis and Osiris. This story helped explain several of the most important beliefs, such as the belief in the afterlife.

Egyptians believed that after people died, they went to an afterlife, where they would continue their lives as they lived them on Earth. To do this successfully, however, they had to preserve everything that they had in life on Earth. This is the reason that Pharaohs were buried with everything that they owned. Pharaohs, and others who were rich enough, would have scenes of their life on Earth painted on the walls of their tombs, so that those same sorts of scenes could be relived in the afterlife. This is also why Egyptians believed in mummification: the body had to be preserved, so that the spirit, called the 'ka,' could return to the body after death.

Under the rule of one Pharaoh named Akhenaten, Egypt became monotheist, meaning that they believed in one god. During this time, they worshipped the god Aten, another sun god. Monotheism was never fully embraced by the people of Egypt, however, and after the Pharaoh's death, the Egyptian people went back to polytheism.

6.6 What did their writing look like?



Figure 24 Hieroglyphs.

The Egyptians had three types of writing. The first is called **hieroglyphics**. This was a kind of picture writing in which pictures and characters make up words. This can be very hard to read, because the words often run together, and the Egyptians didn't use punctuation. Another form of writing is called "'Priests' Writing." This form is the same as hieroglyphics, but written very fast in a cursive style. Last came "Demotic," which became popular during the time when Egypt was ruled by Pharaohs.

Egyptians could carve hieroglyphs into stone, mud brick, or **papyrus** (paper made by pounding the stems of a reed until they stick together). Egyptian writing was so difficult that only a very few people learned to read it. If these "scribes" worked very hard, they could become court officials or priests. After Christianity became the religion of the Roman Empire, knowledge of how to speak and write Ancient Egyptian disappeared. In the early 1800s, a large slab of stone with three different forms of writing on it was found. Because it was found near the town of Rosetta in the Egyptian delta, it was called the **Rosetta Stone**.

Several years later, a man named Jean-François Champollion discovered that one of the languages on the stone was a form of Greek that he knew how to read. The three languages were hieroglyphs, Demotic, and Greek. By gradually comparing common words between

the Greek and Egyptian languages, he was able to get a basic understanding of how the ancient Egyptian language worked. However, it has taken the work of many other people to understand Egyptian writing. Even today, there are many signs and words we do not understand. People are still working to put together the puzzle of what all the symbols mean.

6.7 Are some of them famous even today?



Figure 25 Tutankhamun's burial mask.

Yes! King Tutankhamun, sometimes referred to as "King Tut" or "The Boy King", is one of the most well known ancient Egyptian kings in modern times. Interestingly, he was not considered to be very important in ancient times and was not recorded on most ancient king lists. However, the discovery of his tomb in 1922 made him a celebrity. While many tombs of the past were robbed, this tomb was left virtually undisturbed. Most of the items buried with Tutankhamun have been well preserved, including thousands of artefacts made from precious metals and rare stones. This is why he has become so popular in modern times. The discovery of this tomb has allowed historians and archaeologists to have a glimpse of what some of the more important kings may have had in their burial chambers before they were robbed.

Another king, called "Akheonaten" is also famous today. Akhenaten was Tutankhamun's father, and he tried to change the Egyptian religion from many gods to just one god called "Aten", who only the King could worship. This was a very big change for the people of Egypt and may have been unpopular. Akhenaten built a new city called **Amarna**, but when he died it was abandoned until it was discovered by archaeologists. They were able to see how Egyptians built their cities because it was so well preserved. Egyptologists and historians have argued for many years about why Akhenaten would change the religion that had flourished for thousands of years. Some believe he may have worshipped the "Aten" as his father, Amenhotep III, others think he wanted to make himself more powerful by only allowing the king to worship the god.

6.8 What is left of them today?



Figure 26 The Great Pyramid.

Even today Egypt is still a major country with a large population. Many modern Egyptians still live near the same land that their ancestors lived on thousands of years ago.

The ancient Egyptians wrote messages that they carved into the wall of many of their buildings, and most of the early work by Egyptologists was based on these writings. Moreover, thousands of papyrus scrolls -- on every aspect of life and many areas of knowledge -- have remained, many still untranslated, to this day. We have much of their art and jewellery as well. Many major pieces were recovered from King Tutankhamen's tomb, and from the tombs of many other Pharaohs. One of the more famous works is the bust of Neffertiti.

Many of the Ancient Egyptians' buildings, tombs and monuments survive, although most are in ruins. Still, there is much to be learned about Egyptian politics, history, religion, and scientific ideas.

de:Wikijunior Alte Zivilisationen/ Ägypter¹

¹ https://de.wikibooks.org/wiki/Wikijunior%20Alte%20Zivilisationen%2F%20%C3%84gypter

7 Greeks

7.1 What area did they live in?

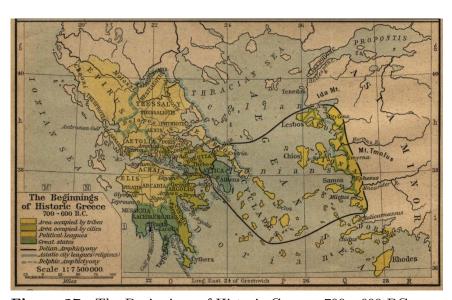


Figure 27 The Beginnings of Historic Greece. 700 - 600 BC.

Ancient Greeks lived on the Balkan Peninsula (approximately at the territory of modern Greece¹) and on the western part of Turkey. They governed themselves from their cities, each of which had a separate government which governed over the countryside surrounding them. There were quite a few of these city states, but their two greatest cities were Athens, in the north, and Sparta in the south. The Greeks lived under their own rule until first being absorbed by the Macedonians, who lived to their north, and then finally the Roman Empire. Greece has many mountains and poor soil, which prevents many crops from being grown there. The country has a mild climate, which makes it convenient to farm goats and sheep. Also, Greece is a sea country: there are many beaches and islands, and no part of the country is far away from the sea. That made many of the Greeks sailors, and that meant that they sailed near and far, trading with different people, learning about other cultures, and bringing their own culture to faraway lands. These types of exchanges inspired development of Greek science and art.

¹ https://en.wikibooks.org/wiki/Wikijunior%3AEurope%2FGreece

7.2 What did their structures look like?



Figure 28

Greek buildings were usually rectangular-shaped, surrounded by **colonnades** – rows of columns. Greece is rich in limestone, which was the most popular material of the time. Marble was more expensive, and was mostly used for statues and decoration.

Greek theaters looked very much like modern ones, except that most were open to the weather. There were semi-circled rows of seats, each row was higher than the row in front of it, so that people in the back could see better. Centered in front of the audience was a circular **orchestra**, where performances took place. A low building called a **skene** sat behind the orchestra. It was used to conceal actors, and gave room for costume changes, props and other "backstage" activity.

7.3 What did they wear?

Greek men wore **chitons** – pieces of cloth pinned on one shoulder. Women wore **peplos** – long tube-shaped cloth, which was pinned on both shoulders and gathered around the waist. When it was cold, both men and women wore a cloak, called **clamys**. Greeks wore sandals, which looked a lot like the sandals that we wear today.

7.4 What did their writing look like?

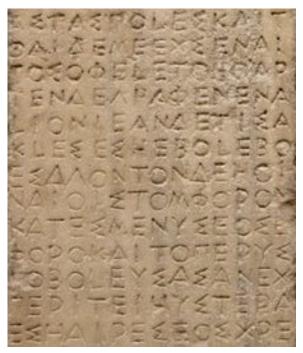


Figure 29 Athenian decree from the 5th century BC

Greek writing looked a lot like Modern Greek text, written with capital letters. The Greek alphabet appeared in 8th century BC and was influenced by the Phoenician alphabet, the first alphabet that used signs for letters, not for words or syllables. Unlike the Phoenician alphabet, which did not have characters for vowels, the Greek alphabet had characters for all the sounds used in the language. In that sense it was the first modern alphabet, and the oldest to be used to this day. The Greek alphabet became a base for two other alphabets: Latin (that is used in English) and Cyrillic currently used in Slavic-speaking countries.

7.5 What did they believe?



Figure 30 Athena

Greeks were **polytheistic**, which means that they believed in many gods and goddesses. Each god or goddess was "responsible" for some side of life or natural phenomenon.

Twelve of the most important gods resided on mount Olympus. Their leader was Zeus, the god of the sky. Other Olympic gods were: his wife Hera - the goddess of marriage and motherhood, Poseidon – god of the sea, Aphrodite - the goddess of love, Apollo – the god of art and leader of muses - and Athena, the goddess of wisdom and war, and the favorite daughter of Zeus.



Figure 31 Centaur

Greeks believed in many mystical creatures other than gods: titans – children of Gaia, goddess of Earth, challenging Olympic gods; nymphs – nature spirits; muses – goddesses and patrons of art; centaurs – half humans, half horses; Cyclops – one eyed monsters; giants.

In Greek myths, the Gods often had affairs with real people, and that's how heroes, like Hercules – man of superhuman strength, who committed twelve labours, and Achilles – the hero of Trojan war, were born.

7.6 Are some of them famous even today?

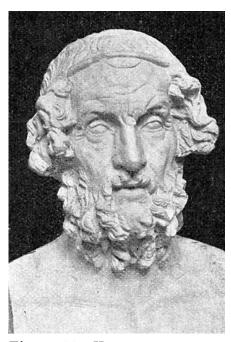


Figure 32 Homer

We know many Greek politicians, scientists, and artists. Possibly the most known person of this culture is **Homer**, the legendary blind poet, who composed two masterpieces of Greek literature: the poems **Iliad** and **Odyssey**. **Sophocles** and **Aristophanes** are still popular playwrights and their plays are considered to be among the greatest works of world literature. Another famous Greek is a mathematician **Pythagoras**, mostly known for his famous theorem about relations of the sides of right triangles. **Archimedes** made many amazing inventions and discoveries. The legend says that he discovered Archimedes Principle while taking a bath, and got so excited, that he ran out naked into the street crying "Eureka!" – "I have found it!" The philosopher **Socrates** taught to question everything, separating beliefs from proven facts. He even questioned the existence of gods, which got him in trouble: he was accused of corrupting the youth and was sentenced to death by taking poison. Other great philosophers include **Aristotle** (the teacher of **Alexander the Great**) and **Plato**. **Alexander the Great** is known for his conquest of the Middle East and Central Asia.

7.7 What is left of them today?

The whole modern country of Greece! They still speak the same language, though it has changed some, use the same alphabet and preserve their heritage.



Figure 33 The Lincoln Memorial in Washington D.C.

But Greek heritage is not limited to Greece only. It influenced Western culture greatly. That's why we call it the Cradle of Western Civilization. We use many Greek words in our everyday life, like democracy, philosophy, photography. In fact, the word alphabet comes from alpha and beta, the first two letters of the Greek alphabet. In mathematics, one of the greatest discoveries they made was about right-angled triangles which is still important in map making. Greek philosophers strongly influenced ideas in the West for many years and their ideas are still important in politics, religion, government, discussion and argument, and in how people should behave toward one another and in society as a whole. Greek architecture and art strongly influenced Western architecture and art. (What does Lincoln Memorial remind you of?) The foundation of our science came from Ancient Greece. The Greek style of sculpture is still used all over the world today for statues of famous people. The Greeks also invented the theater and many of their plays are still acted all over the world today. Many of their stories and poems are also read widely today. The Greeks were the ones who started the Olympic Games, back in 776 BC, in honor of the god Zeus at the town of Olympia. Soon their fun side became more important and they were not just religious festivals anymore. Games were held every four years until AD 394 and were later restarted in 1896. The first of the new Olympics was held in Greece in honor of their original home and they have grown to become popular worldwide.

de:Wikijunior Alte Zivilisationen/ Griechen² fr:Wikijunior:Les civilisations anciennes/La Grèce antique³

² https://de.wikibooks.org/wiki/Wikijunior%20Alte%20Zivilisationen%2F%20Griechen

 $^{3 \}qquad \text{https://fr.wikibooks.org/wiki/Wikijunior%3ALes\%20civilisations\%20anciennes\%2FLa\%20Gr\%C3\%48ce\%20antique}$

8 Hebrews

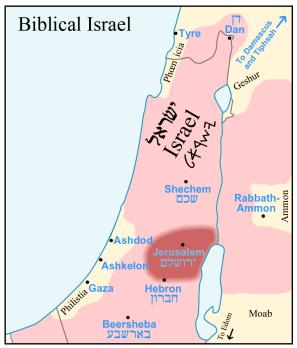


Figure 34 Map of Israel before it was divided

8.1 Who are Hebrews?

Hebrews were ancestors of Samaritans and Jews. They claim to be the descendants of the biblical Patriarch Abraham. They are known for their input into world culture, because their beliefs have influenced three major religions of the world. They are also known for their cultural and spiritual laws, rules, and morals. The Hebrews have influenced society today to a high degree.

8.2 What country did they live in?

Hebrews were nomadic people. They lived in the ancient Middle East. Around 1400 BC they settled in **Canaan**, the country on the eastern coast of Mediterranean sea, the territory of modern Israel, Jordan, Lebanon and Syria. Later this country was known as the kingdom of Israel and, after the death of King Solomon, was divided into Israel and Judea.

8.3 What did their buildings look like?

In the warm climate of the Middle East the house was not so important. Most of the life of the Hebrew family happened in the open air. Women did the cooking in the yard; stores were just open counters looking into the street. Stone was used for building houses. There were no large forests in the land of Canaan, so wood was extremely expensive.

When Hebrews were nomadic people, they lived in tents. But even when they settled, tents were very popular. Tents are often mentioned in the Torah¹, and even at the time of David and Solomon, living in a tent was common, especially for poor people.

Another option was living in a cave. The natural cave was enlarged and a wall was built in front, converting the cave into a sheltered home.

Wealthier people lived in the houses built of sun-dried mud bricks. The roofs of the houses were flat, so that people could stay outside in the cool evenings and sleep in summer. Domestic animals were kept on the first floor, together with people. There were no chimneys; smoke from cooking or heating fires escaped through the windows. The furniture was very simple. It included a few mats, spread upon the floor at night for sleeping, and rolled up during the day, or a kind of divan set against the wall; there were a table and chairs; a large jug for grain stood in the corner, and others for water, wine, oil, etc.; a niche in the wall held the lamp.



Figure 35 Western Wall

But what made Hebrews really proud was the **Jerusalem Temple**. There were two temples built: the First Temple was built by King Solomon. Cedar wood for the construction was brought from Lebanon, and the walls and floor of the temple were covered with gold. The Ark of the Covenant was kept in the Holy of Holies, a room at the end of the temple.

¹ https://en.wikibooks.org/wiki/%3Aw%3ATorah

The first Temple was destroyed in 586 BC, when the Jews were exiled into the Babylonian Captivity.

After Jews returned from Captivity in 536 BC, they started building the Second Temple. This temple stood till AD 70, when it was destroyed by Romans. Another Temple was built and also destroyed. The only part that was left is from Herod's Temple² and is the Outer Western Wall, a sacred site for Jewish people. The Western Temple Mount wall is sometimes called the Wailing Wall and was believed to be from the second Temple and is often prayed near to, by the Jews today. This is also a "Talmedic" tradition.

8.4 What did they eat?



Figure 36 Second century Hebrew manuscript of Ten Commandments

Hebrew food was similar to the food of other Mediterranean people: they ate homemade bread that the lady of the house would bake in the big clay ovens in the yard, lentils, goat cheese, olives, and fresh fruits. Meat and fish were available. The most popular drink was wine

But there was one difference about the food Hebrews ate: it had to be **Kosher**. Kosher applied to all different types of food. It applied to meat which had to come from correctly

² https://en.wikibooks.org/wiki/Herod%27s%20Temple

slaughtered animals. These animals had to have split hooves and had to chew their cud. The fish they ate had to have fins and scales. The wine had to be made and supervised by a Hebrew at all times because other cultures would put blood in it to help it ferment and eating or drinking blood is not Kosher. Some of the stricter Hebrews thought that meat should not be mixed with dairy, and that a person had to wait a few hours between having meat and dairy. This is a "Talmudic" tradition.

8.5 What did they wear?



Figure 37 Jewish noblemen in ancient Judah

Both men and women wore a tunic with a girdle, a robe on top of it, and a mantle (a sleeveless over garment) and a headdress. Men's and women's clothes were different in style and pattern. Women's garments were longer, with long sleeves.

Hebrew laws also had instructions about their clothing. They were supposed to wear tassels on the corners of their clothing, a commandment from the Bible. Their clothes were never a mix of wool and flax except for the high priest who was permitted to wear such a mixture. The priests also had special instructions about the clothing that they wore while they worked.

8.6 What did their writing look like?

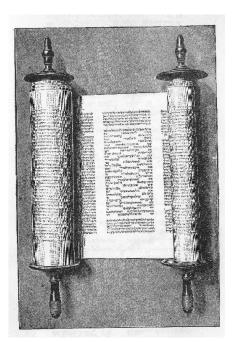


Figure 38 Torah Scroll

From very ancient times, the Hebrews began to write down their history, laws, and beliefs. The first five books or the **Torah**. The "Torah" was written in Hebrew. The books were written on large pieces of parchment and rolled into scrolls. These books were Genesis, Exodus, Leviticus, Numbers and Deuteronomy.

Hebrew was and is written right-to-left, with consonants and vowel points. The Hebrew script evolved over the course of their history so ancient Hebrew writing does not look the same as it does today. Here is an example of what ancient Hebrew writing looked like:



Figure 39

8.7 What did they believe?

Hebrews were among the first people in the world whose religion was monotheistic. Monotheism is the belief that there is only one God. All of their neighbors were polytheistic: they believed in many gods and goddesses that looked and behaved like humans. The idea that there is a single God who cannot be seen and is present everywhere and knows everybody's thoughts was very unusual at that time. YHWH, יהוה or Yahweh, pronounced Yah-way and translates to "I Am", is the original Hebrew name of the Heavenly Father and

the Jews believe saying his name is a forbidden. They use Adoni, pronounced Add-doe-nigh instead. He is also called El or Elohim in the Hebrew bible.

According to the *Torah*, the first person to start spreading the concept of one God was the patriarch Abraham. Monotheistic beliefs are currently found in many religions all over the world.

The Hebrews believed that they were God's chosen people and that the Torah contained God's laws which must be followed.

8.8 Are some of them famous even today?



Figure 40 Michelangelo Buonarrotti. Moses

Many biblical heroes are known today. The Bible became the most published book in the world, and, since so much of it was written about Hebrews, many Hebrew historical figures became famous. Many books, paintings and even movies are dedicated to them.

- Abraham, Isaac, and Jacob are the three patriarchs.
- Joseph Jacob's second youngest son born to him in his old age. According to the Torah he was sold into slavery and ended up in Egypt, where he worked for Pharaoh. His most famous job was interpreting Pharaoh's dreams, which led to him saving Egypt having a famine while the rest of the world was having one.
- Moses Considered by many people to be one of the greatest leaders of Jewish people, and according to the Torah he is called the most humble man that ever lived. The most notable according to the Torah he took the Hebrews out of slavery from Egypt, God through him brought 10 plagues to Egypt, split the Red Sea, received the Torah along with the **Ten Commandments** and the oral Jewish law, set up the Jewish courts, took them to the land of Canaan the land God promised to them through Abraham.
- **King David** One of three kings of ancient Israel and ruler of the largest territorial extent of ancient Israel. He was a significant military leader and lead the ancient Israelite armies in many successful battles. He wrote most of the songs in the **Book of Psalms**.
- **King Solomon** During his reign the kingdom of Israel reached its greatest prosperity, being one of the biggest powers in trade. He was known for his wisdom and justice. He also wrote songs in the **Book of Psalms**.
- Queen Esther -Or Hadassah, queen of Persia, according to the Esther she saved Jewish people from evil plans of Minister Haman to kill all Jews throughout the Persian Empire. This event is celebrated during the Jewish holiday of Purim.



Figure 41 Jesus speaking with Jewish teachers at age 12

• Jesus of Nazareth - Jesus is one of the most famous Hebrew of all. He was born in Bethlehem to Hebrew parents. He grew up in Nazareth, which is a part of Israel. He also became spiritual leader and many of his early followers were also Hebrew and are still famous today, such as the apostles Paul, Peter and John. Jesus of Nazareth is commonly known as Jesus Christ which is the name his followers chose after his death. Christos in Ancient Greek means anointed one.

8.9 What is left of them today?

Kingdom of Israel was destroyed by Assyrians in 722 BC. Judea lost its independence to Rome in the first century AD. Jews had to leave their country. For two thousand years they lived all over the world, preserving their religion, language and traditions. They survived through centuries of discrimination and prejudice and through the extermination of one third of the Jewish population of the world in the Second World War. In 1948 the state of Israel was established again.

de:Wikijunior Alte Zivilisationen/ Hebräer³

³ https://de.wikibooks.org/wiki/Wikijunior%20Alte%20Zivilisationen%2F%20Hebr%C3%A4er

9 Incas

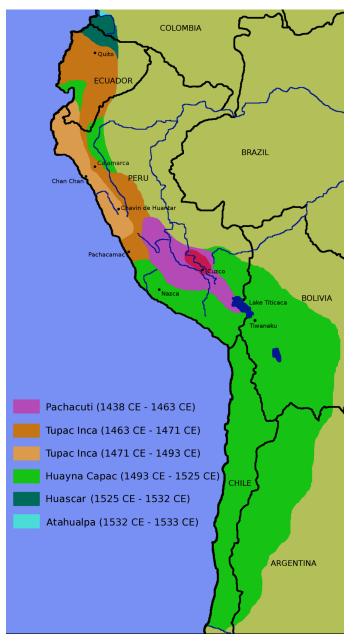


Figure 42 Inca territory.

The Inca lived in the Andes Mountains in South America. Their range stretched from southern Chile through Argentina, Bolivia, Peru and Ecuador and into southern Colombia.

The Inca were very warlike and often attacked their neighbors to take their land. In this way, the Inca Empire, which started out small, grew to be very large. In fact, the Inca Empire was the largest empire ever in South America, and one of the largest in the world.

9.1 What did their buildings look like?

The Inca lived in stone houses varying in size. They were all built in the Andes on flat plateaus. Their temples, however, were built on circular mounds made by the Inca, sort of like a slanted cylinder. At the top there was a plateau. On this plateau the main buildings were built.

A strange thing about the Inca was that they didn't use any iron tools to help them cut and shape the stone for their houses. Instead, they used round balls of stone to pound out blocks of stone for their buildings. The blocks of stone were not usually rectangles, but were very strange looking shapes that fit together much like the pieces of a puzzle. Many of the stone walls the Inca built are still so strong and well made that it is impossible to slide the blade of a knife between the stones.

9.2 What did they eat?



Figure 43 Corn.



Figure 44 Potatoes.

The Inca ate potatoes and corn. They drank llama milk and water and ate llamas and alpaca for their daily protein because they didn't have pigs, cows, sheep or turkeys. The Inca Empire had crops including **maize**, coca, beans, grains, **potatoes**, **sweet potatoes**, ulluco, oca, mashwa, pepper, tomatoes, peanuts, cashews, squash, cucumber, **quinoa**, gourd, cotton, talwi, carob, chirimoya, lúcuma, guayabo, and avocado.

9.3 What did they wear?

Typical Inca clothing would consist of a lightweight finely made poncho covered by a heavier, blanket-like poncho. They wore sandals and hats, some with fuzzy chinbands. Many rich Inca men wore large golden earrings as a symbol of how rich they were.

9.4 What did they believe?

The central god of the Inca religion was the sun-god *Inti*, the only god that had temples built for him. The sun-god was the father of the royal family. There were many gods among the Inca, but the sun-god outshone them all. The Inca also believed that there was a heaven, a hell, and a resurrection of the body after death. The Inca worshiped the dead, their ancestors, their king whom they regarded as divine, and nature and it's cycles.

9.5 What did their writing look like?

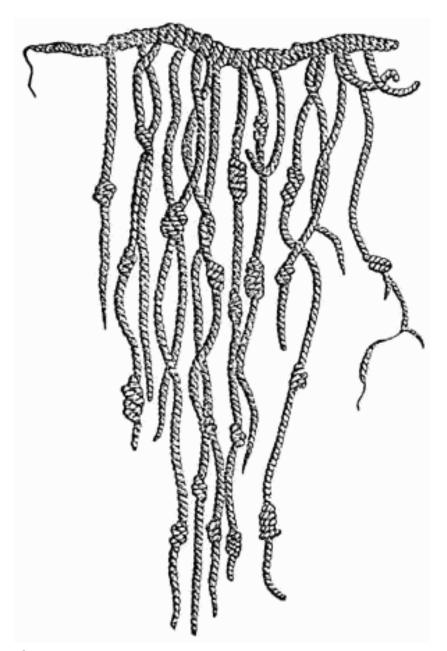


Figure 45 Quipu.

The Inca did not have a system of writing with letters or symbols. Instead, they used a special system called *quipu* (pronounced KEE-poo), tying knots in ropes of different colors. The ropes were kept on special belts that the *quipu* writers would always wear. The different colored ropes could show deaths, weddings, trade, and other things. Being a *quipu* writer took many years of schooling, and because very few learned, *quipu* readers were very important.

9.6 Are some of them famous even today?

Yma Sumac is a singer who performed Inca and South American folk songs beginning in the 1940s. She is claimed to be an Inca princess directly descended from Atahualpa.

9.7 What is left of them today?

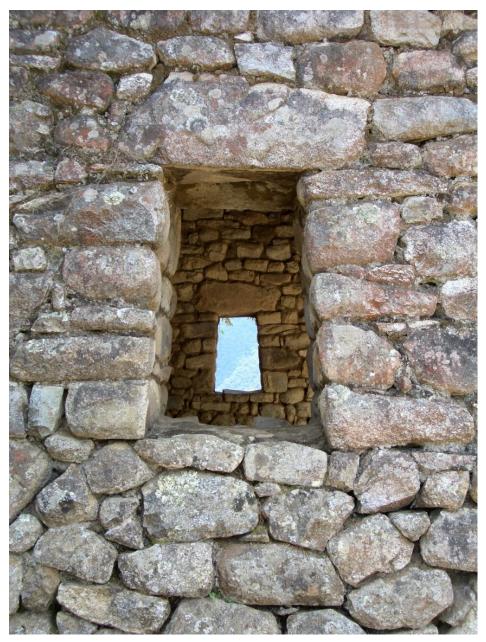


Figure 46 Stone windows at Macchupichu.

The Inca are famous for their abandoned cities in the Andes Mountains. Some major cities like Cuzco and Machu Picchu, located in Peru, are major tourist attractions. Although many cities have been found, there are still many hidden in the jungles and under the desert floor. Archaeologists hope to one day know more about these people through their amazing artifacts, so that you can have the opportunity to learn more about the Inca!

10 Mound Builders



Figure 47

10.1 Where did they Live?

The "Mound Builders" lived in what is today the eastern half of the United States and southern Canada, in North America.

Because the people who lived in these societies did not leave any written records, archaeologists look for similarities and differences between the mounds, and figure out which groups of Mound Builders interacted with each other.

10.2 What did their buildings look like?



Figure 48

The name for this society comes from the fact that they left large earthen mounds behind in what appears to be community centers of activity. Many of these earthen mounds have been removed by modern peoples in North America, but they were found in many of the same locations where current cities in the United States are now located. They also lived in Spiro which is now present day Oklahoma.

A major feature of most villages was a trading area where items could be exchanged for items that were made in places much more distant. It is known that these trading networks were quite large, and they may have even had contact with other major civilizations in North America like the Aztecs. Items such as obsidian knives have been found over 1000 miles from any known source of volcanic rock.

Often within these mounds, particularly some of the larger mounds, there have been the remains of what is assumed to be a major chief or king, based on the items that are found buried with the person. This was also a reason for why many of these mounds have disappeared, because early treasure hunters would dig through these mounds trying to find gold, silver, or other precious stones and jewelry.

10.3 When did they live there?

- Early Woodland Adena in Ohio, others in Illinois, Kentucky, West Virginia
- Middle Woodland Hopewell in Ohio, others in Illinois, Indiana, Missouri, Kentucky
- Late Woodland Effigy Mounds in Iowa, Illinois, Wisconsin, Michigan, and Minnesota
- Mississippian Cahokia Mounds in Illinois, Spiro Mounds in Oklahoma

10.4 What did they eat?

They are a wide variety of food items, depending on where they were living. Corn (maize) was brought into the area from Mexico and was widely grown together with other vegetables like beans and squash. They also hunted both small animals like rabbits and squirrels and larger game animals like bison and various types of deer. In some lake regions, they are

wild rice, and also ate fish either from the ocean or from freshwater lakes and rivers. They dried many foods to eat in the winter. And they also drank water from freshwater rivers.

10.5 What did they wear?

It is not completely clear how they dressed. If you look at the traditional clothing of their descendants, it was probably simple clothing made for protection from the weather. Their clothing was probably made mostly from animal skins. It may have also included plant fibers, and might have been colored with plant-based dyes.

10.6 What did their writing look like?



Figure 49

As far as we know, the Mound Builders never invented written language with an alphabet. There are, however, images which have been carved into rocks and in caves, as well as inscribed onto everyday objects like pottery. These can be found throughout North America. These images are called petroglyphs.

Often these symbols were arranged to tell a story, or note something of significance to the people who drew these symbols. Usually these symbols would be used to remind a tribal elder about a story that would then be passed on to the next generation, and unless that oral history has been preserved, the story is usually lost

The ceremonial masks, jewelry, and artifacts come from a wide range of places. The Hopewell mounds had copper from Lake Superior, mica from North Carolina, and shells from the Gulf Coast. This might show that the beliefs were held in a wide area, or it might only show that the Mound Builders traded over a wide area.

The first evidence of humans burying the dead comes from the Mound Builders.

10.7 Are some of them famous even today?

We don't know the name of a single Mound Builder. Because the Mound Builders did not use writing, no names are known today. But we are still researching them, hopefully we will find names.

10.8 What Happened To Them?

- There is some evidence (war, abandonment of some towns for small, stockaded settlements) that the civilization was in decline before the conquistadors arrived in Central America.
- The diseases brought by the conquistadors spread quickly through the Americas. Lots of people died from European diseases like smallpox, especially in Mississippian towns where people lived close together.
- By the time Europeans reached the Mississippi, many of the towns were empty.

10.9 What is left of them today?

- They spread the cultivation of corn, beans, and squashes throughout Eastern (and Central?) North America. These foods were the most important foods of many Native Americans, were important foods to the Europeans who settled the land, and are still important today. North Americans eat a lot of corn and beans. Some squashes (like pumpkins) are important symbols of fall and Thanksgiving in the US.
- They left many mounds, which archeologists still study today. Some of the mounds are set aside in parks and monuments, so that people can look at the mounds, and learn from them. Some of the mounds are burial mounds, which contain ornaments. Archeologists learn how people lived and dressed from what is left in the mounds.

It is believed that they are the ancestors of several Native American Indian groups in North America.

- The Mississippian cultures left no written records, because they did not have a writing system like we have. They could not write books.
- culture: stories, architecture, tools, and arts of Native Americans.
- Native American Art is known around the world today.
- Native American folk tales
- Native American religious beliefs

10.10 Who Lives There Now?

Settlers from England and Europe often built their own towns on or near abandoned mound builder towns, because they were in good locations for farming or trade. In some cases, they forced the Native Americans out before settling. Some cities that were built on or near mound builder towns are Cahokia, Illinois; Marquette, Iowa; and Chillicothe, Ohio.

Now, the people who live in these places are citizens of the USA or Canada. They study the history of Europe, and of the people who built the countries of North America. Their ancestors are mostly from Europe, Africa, and Asia.

Most of the people who live on or near mound builder towns don't even know it. Now, hundreds of years later, people are beginning to study the graves, towns, and temples of the mound builders.

- http://www.cahokiamounds.com/cahokia.html
- http://www.nps.gov/efmo/index.htm
- http://www.nps.gov/hocu/
- http://www.ohiohistory.org/places/newarkearthworks/index.cfm
- http://www.nativeamericans.com/MoundBuilders.htm
- http://www.cr.nps.gov/archeology/feature/feature.htm
- http://www.mississippian-artifacts.com/
- http://ngeorgia.com/history/early.html
- http://www.angelfire.com/wi/oneota/
- http://mcclungmuseum.utk.edu/permex/archaeol/archaeol.htm
- http://www.ah.dcr.state.nc.us/sections/hs/town/town.htm

de:Wikijunior Alte Zivilisationen/ Hügelbauer 1 fr:Wikijunior:Les civilisations anciennes/Les Mound Builders 2

https://de.wikibooks.org/wiki/Wikijunior%20Alte%20Zivilisationen%2F%20H%C3%BCgelbauer

11 Mayans



Figure 50 Temple of the Cross at Palenque in Southern Mexico.

The Maya were a Mesoamerican civilization. They had the most advanced writing system in the Americas prior to European contact. They used sophisticated mathematic systems and had complex and useful cyclical calendars. Spectacular art and monumental architecture were two other notable accomplishments of this civilization.

11.1 What country did they live in?

The ancient Mayans lived in what is now known as southern Mexico and northern Central America including Guatemala, Belize, Honduras, Yucatán Peninsula and El Salvador. Their descendants still live there today, and many of them speak the Mayan languages.

11.2 What did their buildings look like?

The Mayans were master architects, building pyramids and even entire cities, many of which are still standing today.

Mayan pyramids were made of stone. The stone was carved to create a stairstep design. On the top of each pyramid was a shrine dedicated to a particular deity. Rituals thought to influence the Gods were held in these shrines.



Figure 51 Pyramid of Kulkulkán at Chichén Itzá

Mayan cities grew around the pyramids. They consisted of plazas connected together by sacbeob (whiteway) causeways. There appears to have been little planning in their design; the topography of the region influenced the type of buildings constructed. For example, cities in the hills had tall towers, while cities built on limestone grew into large municipalities.

The largest plazas were at the heart of Mayan cities. They contained governmental and religious buildings, such as the royal acropolis, great pyramid temples, and occasionally ball-courts. Temples and observatories were always constructed so they followed the Mayan

interpretation of the orbits of the stars. Outside of this center were less important temples and shrines. At the outskirts lay the homes of the common people.

11.2.1 Building Materials

The Mayans lacked many tools, such as metal tools, pulleys, and perhaps even the wheel. They did, however, have an abundance of materials. The most common material was limestone, taken from local quarries. Limestone was easy to work, and only hardened once removed from its bed. In addition, it could also be used as mortar or stucco. Common homes used wooden poles, adobe (a mixture of straw and sandy clay), and thatch; however, houses made of limestone have been found as well. In the city of Comalcalco, fired-clay bricks have been found as a substitute for stone. The Mayan's used clay, stone, limestone, thatched hay, wooden poles, and metal to make common day houses.

11.3 What did they eat?

The Mayans grew a wide variety of crops, including corn (maize), Amaranth, manioc, and sunflower seeds. These crops were grown in permanent raised fields, terraces, forest gardens, and managed fallows. There was also harvesting of wild crops. The Mayans ground cacao and mixed it with water to make the first chocolate.

11.4 What did they wear?



Figure 52 The sculpture depicts a sacred ritual. The standing figure wears a headdress of Quetzal plumes. Mayan writing is seen at the top and right side.

When the king appeared in public, he wore white robes and a gold crown on top of his head, decorated with Quetzal (a type of bird) plumes.

During wartime, the Mayans wore masks, while commanders wore robes made of silver and gold. Some Mayan clothes were made of deer skin. Usually women made the clothes.

11.5 What did their writing look like?

The Mayans wrote using a series of glyphs (symbolic pictures), which were painted on ceramics, walls, or bark-paper codices (books), carved in wood or stone, or molded in stucco. Each glyph represented a word. Mayans wrote numbers vertically.

The Mayan script was used up until the arrival of the Spanish. Although many Mayan centers went into decline (or were completely abandoned) during or after this period, many Mayans still had the skill and knowledge of Mayan writing, and the early Spanish conquistadors knew of people who could still read and write the script. Unfortunately, the Spanish

however believed that the Mayan books were evil so by the end of the 16th century, almost all knowledge of the Mayan script was lost.

Attempts to decipher the Mayan script came in the 19th century. Investigators were soon able to decipher the Mayan numbers and portions of texts related to astronomy and the Mayan calender. Most of the Mayan script has since been deciphered, but work still continues today. The Mayan calendar ends at the year of 2012, when they believed the world would end.

11.6 What did they believe?

The Mayans believed that time was cyclical, that is, it goes in circles. The Mayan shaman interpreted these cycles by looking at the number relations of all their calendars. If the interpretations of the shaman showed bad times ahead, human sacrifices would be performed to make the gods happy. They left behind a prophesy that the world would end on December 21, 2012 and bring about the fifth cycle of the world.

According to Mayan mythology, there were thirteen heavens and nine underworlds, with one god for each. Natural elements, stars and planets, numbers, crops, days of the calendar and periods of time all had their own gods.

The creation story of the Mayans is found in the *Popol Vuh* ("Council Book" or "Book of the Community"). According to the book, the gods Tepee and Tucuman's decided that, in order to preserve their legacy, they had to make a race of beings who could worship them. Earth, along with the animals, was created. Man was first made out of mud but then he fell apart. Other gods were summoned and man was next created of wood but had no soul. Finally, man was made out of maize by even more gods.

The Mayans worshiped Gods and Goddesses and they believed to make the Gods and Goddesses happy they had to make human sacrifices.

11.7 What is left of them today?

The ancient Mayans abandoned their large cities suddenly. To this day, no one is still certain why. However, the Mayan people never died out; their descendants still live in Mexico and Central America. The Mayan's legends and royal lineage is written in a book called Popul Vuh. The word 'hurricane' comes from the name of a fearsome Mayan god named Hurakan who is mentioned in this book.

11.7.1 People

Mayans painted their bodies red, black, white, and blue and thought crossed eyes were cool. They tied objects to their babies' heads to give them crossed eyes. They tied boards to their babies' heads to flatten them too.

At the start of the 21st century, there were about 6 million Mayans living in the Mexican states of Yucatán, Campeche, Quintana Roo, Tabasco, and Chiapas, and in the Central

American countries of Belize, Guatemala, and the western portions of Honduras and El Salvador.

The largest group of modern Mayans is found in the Yucatán region of Mexico. They speak both "Yucatec Maya" and Spanish, and are generally integrated into Mexican culture. More traditional Mayans are found in Guatemala. Many of them wear traditional clothes and practice traditional customs. The most traditional Mayans are a group called the Lacandon, who avoided contact with outsiders until the late 20th century by living in small groups in the rain forests.

11.7.2 Cities



Figure 53 The city of Tikal

There are many Mayan buildings that were once part of cities still standing today. The most important ones are: Chichen Itza, Coba, Copán Kalakmul, Tikal, and Uxmal. These cites lay forgotten for centuries, until modern-day explorers rediscovered them. Archaeological surveys and excavations were conducted (and are still being conducted) on some of these sites, revealing more about Mayan culture. Today, some cities can be visited by tourists.

11.8 Are some of them famous even today?

There are indigenous people in Southern Mexico, Guatemala, and Honduras who are descended from the Maya. One of the most famous of them is Rigoberta Menchu, a Quichè

Indian. She wrote about the struggles of her people in her book I, Rigoberta Menchu. She received a Nobel Peace Prize.

UNKNOWN TEMPLATE pp-protected

yes

de:Wikijunior Alte Zivilisationen/ Mayas¹

¹ https://de.wikibooks.org/wiki/Wikijunior%20Alte%20Zivilisationen%2F%20Mayas

12 Norse

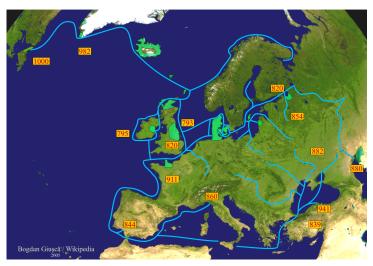


Figure 54 Routes that the Vikings took between the 8th century and the 10th century. The green shading marks their places of main settlement.

The Norse were a people in northern Europe. They are also often called Vikings. The Vikings were skilled sailors and sailed long distances on their ships. They even visited America hundreds of years before any other European went there.

During the Viking Age, Vikings often raided the British island and other parts of Europe. But they also traded with the rest of Europe.

12.1 What country did they live in?



Figure 55 Sognefjord, Norway



Figure 56 Scene from Iceland

The Scandinavians were many different kinds of people who had different homes. They lived in the areas that are now Denmark, Sweden, Norway, Iceland, Greenland and many small islands in the Baltic Sea, North Sea and Norwegian Sea. These places were their home countries. When the Viking Age began around the 9th century, they traveled far and wide across all of Europe, the Mediterranean and even down into the Middle East. Some settled in the places they traveled to, but their homes remained in the north. Norway, Sweden and Denmark were the homes to the Scandinavians before Iceland was discovered in the 9th century. Many people sought out Iceland as a place of refuge, and possible fortune (because of the available new lands) during the reign of Harald Fairhair. Many went to Iceland to escape punishment and sometimes they left for Iceland when they had been exiled.

Greenland was settled sparsely. In the Norse sagas they say that Erik the Red was exiled from Iceland for murder, and when travelling further west, found Greenland and named it Greenland. But regardless of his discovery, Eskimo tribes were already living there at the time.

Though each country was 'Scandinavian', there were many differences between the people, kings, customs and history of Denmark, Sweden, Norway and Iceland.

The word "Viking" is an Old Norse adjective meaning " to go on an adventure". people who travelled overseas from their native land were called Vikings.

12.2 What did their buildings look like?

The Norse lived mainly on farms, but some lived in towns and villages. The houses were made of whatever was available. Wood was preferred, but stone or blocks of turf were also used, as was wattle and daub, which was woven sticks with mud caked up to several feet thick on them, placed between posts to hold up the roof. Roofs are believed to have usually been thatched or of sod. Some roofs may have had tiles made of slate, limestone or wood. They usually had only one room, but a wealthy family could have up to four rooms. The farmhouse was usually larger than town houses, and there were other buildings that were part of the farm, for things like storage, livestock and the blacksmith. The houses were called long-houses because they were much longer than they were wide. They had a very steep pitch to their roofs so that most of the snow that fell in winter would slide off, and not cause the roof to collapse under its weight.

The cooking was done on a long open hearth, which usually ran down the centre of the main room. There was no chimney. A hole in the roof let much of the smoke out, but the houses would still be very smoky. Raised platforms along the long sides of the house would be used for seating during the day, and as beds for most of the household at night. Sometimes the head of the household, particularly in wealthier homes, would have a bed in a separate room, or in a small closet in the main hall. The homes of the wealthier Norse also decorated their homes with carving and paint.

In towns, half logs were often laid out between houses as a kind of path or road as the ground could become quite muddy. Some homes also had wattle fences erected around what we would call their front yard so they could keep a few livestock and not have them wander through the town.

Inside the home, there were no cupboards or wardrobes for keeping things in. They had hooks on the wall for hanging up items and chests to store things, which could also be used for seats. The woman in charge of the household would have the keys to these chests hung from her brooches; they were considered a sign of status. In addition, items (especially food) could be hung from the open rafters overhead, out of reach of the dogs, children, and mice.

The loom was used for making cloth for clothing and sails for the ships, and was a common item in most houses.

12.3 What did they eat?

The food they are for breakfast was porridge from ground grains mixed with goat's milk and honey. Many different foods have been found at Viking sites including berries, apples, fish, seal, pig, cow, lamb, grains, flat bread, turnips, herbs and more. Stews were a common food as all the ingredients, meat, herbs and vegetables, could be thrown in a pot hung over the fire. Flat bread was made from ground grain and liquid and eggs were added to the

flour until it became dough. This was then rolled out and cooked in a similar way that you would cook pancakes on an open fire. A common drink was mead, which was made from honey.

12.4 What did they wear?

Their garments were mainly made of wool and linen. Thread was spun using a spindle whorl and then woven into cloth using a drop weight loom. Tablet weaving and even embroidery was used to decorate garments. Women usually wore an under-dress, a dress and an apron. Men wore a shirt that reached to mid thigh and trousers. Both men and women used cloaks. Boots were made of leather. Since Vikings did not have pockets, the men had leather pouches on their belts and the women hung items from utility chains that were attached to brooches they wore at the top of their aprons. Children were dressed similarly to adults. Vikings also loved bright colours used natural things like bark and vegetation to dye their clothes. They had colours like orange, yellow, brown, green and blue as well as many others.

12.5 What did they believe?

The Vikings believed that their world was divided up into nine worlds, on three levels, all held together by the great tree, 'Yggsdrasil'. Perched upon the tree was the eagle 'Vidofnir'.

The top level consisted of:

- Asgard, home of the Aesir or Warrior Gods.
- Vanahiem, the home of the Vanir or Fertility Gods
- Alfeim, the home of the Light Elves.

The middle level or "Middle Earth" was connected to the Higher worlds by the great rainbow bridge 'Bifrost'. Inside this level, were the homes of:

- Midgard, home of the Humans.
- Nidavellir, home of the Dwarves.
- Jotunhiem, home of the Giants.
- Svartalfhiem, home of the Dark Elves.

Encircling this level, was the great serpent 'Jormungand', one of god Loki's misshapen offspring.

The bottom level included:

- Muspell, Realm of Fire.
- Niflhiem, Land of the Dead.
- In this land is the 'Niddhog'

12.6 What did their writing look like?



Figure 57 An example of the Elder Futhark

In pre-Christian times; the Vikings used an alphabet which was comprised of *Runes*. Their alphabet was called the *Futhark*, from the first five letters of their alphabet.

In later times, after most had converted to Christianity (from their earlier Pagan religion), they adopted most of the Latin Alphabet (one of the reasons they adopted it was due to the fact that most Christian writings were written in Latin). However, they kept two runes and adopted them to their Latin alphabet. They were Thorn (P) and Eth (D).

12.7 Are some of them famous even today?

Yes. One of the most famous Vikings was Leif Eriksson. He took fleet of ships and around the year 1000 sailed to Canada. He is known as one of the first Europeans to set foot in North America. Leif Eriksson was the second son of Erik Thorvalsson, or Eric the Red as we more commonly know him. Erik the Red discovered Greenland after being banished from both Iceland and Norway.

Another famous Viking King is **Harald Hardraada**, who attacked the North of England in 1066. **Harold I** of England defeated him in battle and repelled the invaders. Later on, when **William the Conqueror** of Normandy invaded, Harold lost the battle of Hastings and was shot in the eye with an arrow. This was the beginning of the line of French kings to rule England.

12.8 What is left of them today?

Descendants of the Vikings inhabit most of northern Europe even today. The Scandinavian countries of Sweden, Norway, Iceland, and Denmark openly claim Viking heritage and the royalty from those countries descend from the ancient Viking kings. The Vikings also were absorbed into the cultures of many other Northern European countries, especially those countries surrounding the Baltic Sea and the North Sea.

Many Germanic languages like English also have words that come from Norse traditions. For example, the days of the week were named after Norse gods. Tuesday was named after Tyr; Wednesday was named after Wodin, another name for Odin; Thursday was named after Thor; and Friday was named after Frige.

12.9 How do we know this?

We know this from carefully studying what they have left behind, in their garbage heaps (called *middens*), their graves, and in areas where their houses had been built. We also can read about their lives in the *sagas*, stories that they told about themselves. Several of them were written down by early Christian monks. We also have carvings they left behind on large rocks, called *rune-stones*, that were often raised in memory of a person or event. These rune-stones allow us to have an idea of what they looked like, and what they considered important enough to go to the expense and effort of raising a stone to remember.

Today, new technology, such as computer imaging and DNA sequencing, is allowing us to learn even more, even from very old finds, such as the Oseberg ship burial, which was found over a hundred years ago.

12.10 For More Reading

There are many great websites that have information about the Norsemen. Here are a few:

12.10.1 In Wikipedia

The Viking Wikipedia Article¹

12.10.2 Other Websites

BBC's History for Kids Site (Vikings)²

The Viking Answer Lady³

¹ http://en.wikipedia.org/wiki/Viking

² http://www.bbc.co.uk/schools/vikings/index.shtml

³ http://www.vikinganswerlady.com/

Hurstwic, Norse Re-enactors 4 de:Wikijunior Alte Zivilisationen/ Wikinger 5

⁴ http://www.hurstwic.org/

 $[\]label{eq:first-$

13 Persians

Persians were an ancient people living in western Asia. They founded the Achaemenid Empire, the biggest empire of the ancient world.

13.1 What country did they live in?

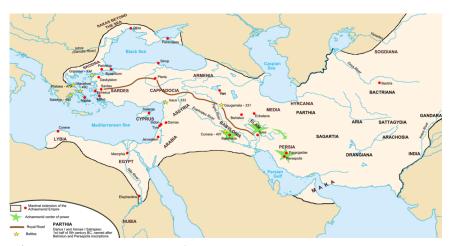


Figure 58 The Persian, Achaemenid Empire at its greatest

The Persian Empire started in the south of what is now Iran. It grew through military conquest to cover a huge region that roughly encompasses today's Iran, Iraq, Armenia, Afghanistan, Turkey, Bulgaria, many parts of Greece, Egypt, Syria, much of what is now Pakistan, Jordan, Israel, the West Bank, the Gaza Strip, Lebanon, Caucasia, Central Asia, Libya, and northern parts of Arabia. The empire eventually became the largest empire of the ancient world.

Persepolis was the ceremonial capital of Persia, the ruins of which is remaining today. Susa and Pasargadas were capital cities at different times in Persian history. They were all in what is now Iran. Another capital was Sardis, an ancient city in what is now south west of Turkey.

I'm literally about to pop. I'm gonna throw up

13.2 What did their buildings look like?

The ruins of one of their capitals, Persepolis, is remained today. It was made of huge stones connected by metal clamps, and covered by wooden roofs. The roofs was supported with tall columns made of stones or high-quality wood. Their buildings were grand and were created by skillful workers from all over the empire, such as Egypt and Babylon. They also decorated the walls of their palaces with lions, bulls, flowers, as well as beliefs of people from various nations of the empire. Later, Persians created buildings using mudbricks, with huge domes and barrel-vaulted chambers.

Persian tombs were carved into mountains.

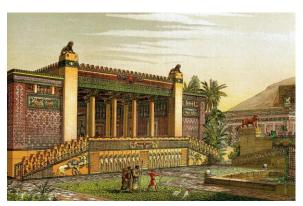


Figure 59 Persepolis



Figure 60 Ruins of Persepolis



Figure 61 Tomb of Cyrus the Great



Figure 62 Naqsh-e Rostam, carved into a mountain

13.3 What did they wear?



Figure 63 Persians and Medians in a court ceremony

The Persian king wore a **robe** of honor that was a large piece of fabric that was draped around him. For the king and other aristocracy, their clothes were often decorated with golden clothing ornaments. Some of these are in the form of roundels, while others are gold plaques with loops or rings on the back so they can be sewn onto the cloth. Rich people also liked to wear gold jewellery such as bracelets with animal head carvings.

Common people wore **coats** and **pants** made out of leather. Men's coats reached from their shoulders down to their knees and were fastened with a girdle. Their sleeves were somewhat tight and went down to their wrists.

Originally woman's clothing was quite similar to men's clothing but as time went their style changed. Initially their clothes were short and tight but when the style changed their clothes were made longer, more voluminous and were made out of softer materials.

Persian shoes were usually were pieces on plants that were wrapped around their feet and were tied up on the top. These would have look similar to moccasins. Persians also were red clothes to show respect to their husbands

13.4 What did their writing look like?



Figure 64 An Old Persian writing.

Old Persian was written from left to right in Old Persian cuneiform script. Old Persian cuneiform script was supposedly invented by King Darius I, one of ancient Persia's famous kings. There were 36 letters in their alphabet, although some of them essentially represented different syllables. For example, they had one symbol for "ka" and another symbol for "ku". They used these symbols even though they also had symbols that represented "a" and "u".

Persians used to write administrative documents in Aramaic language. Aramaic script was an early Semitic script.

13.5 What did they believe?



Figure 65 Carving of Faravahar, a symbol of Zoroastrianism

The Persian civilization spawned three major religions: Zoroastrianism¹, Mithraism, and Manichaeanism.

Zoroastrianism is one of the oldest religions of the world. Its prophet was Zoroaster, who lived around 18th century BC (although some believe as recent as 6th century BC). He rejected the old gods and introduced that a single wise god, **Ahura Mazda**, ruled the world. However, Ahura Mazda was often in battle with **Ahriman** (or Angra Mainyu), who was the prince of evil, lies, and destruction. On Earth, each person had to choose which side to support. It said that Ahura Mazda would conquer over the forces of evil, Ahriman, at the end. On that day, all the people would be judges for their actions. Those who did good would enter paradise. Those who did evil would be condemned to eternal suffering.

Zoroaster's teaching were later written in a book, the Avesta.

¹ https://en.wikibooks.org/wiki/Wikijunior%3AWorld%20Religions%2FZoroastrianism

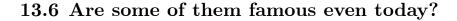




Figure 66 Cyrus the Great monument at Sydney Olympic Park

Perhaps the most famous Persian of all time is **Cyrus the Great** who founded the Persian Empire. He is known not simply because of his military accomplishments, but his leadership, and his treatment of his people, who used to call him "the Father". He respected the religions of the lands he conquered, and treated people equally. For example, after conquering Babylon, he freed the Jewish people who were captivated there, and helped them to return to Jerusalem and rebuild their temple, and therefore he is praised in the Bible.

Other famous Persian kings were **Cambyses** and **Darius the Great**, who according to himself, "fought 9 battles and took prisoners 9 kings" in one year, almost re-conquering the whole empire which was in chaos.

13.7 What is left of them today?

Persians are one of the few ancient civilizations who have made significant contributions to humanity from prehistoric times by their Persian empire all the way through to the modern day in their country **Iran**. Many Persians are now Muslims, although there are Jews, Christians, and Zoroastrians still living and practising their religion in Iran.

Achaemenid Persians were the first to divide their land into smaller states or provinces (called "satraps") and appointing a governor for each of them, who were under command of the king. They also created a **postal system**, a **road system**, a **professional army**, and chose an **official language** for communication throughout their empire. All of these were adopted in later empires and eventually remains in modern countries today.

14 Romans



Figure 67 The Roman Empire at its greatest extent in 116 AD

14.1 What country did they live in?

At the start, the Romans lived in a region that now forms part of Italy¹. Through conquest of nearby peoples, the Roman Empire expanded. At its peak, the empire controlled most of Western Europe, North Africa, Greece², the Balkans, and the Middle East. The capital Rome grew from a simple village to a thriving metropolis. Even today, some 2500 years later, Rome is still a major world city.

¹ https://en.wikibooks.org/wiki/Wikijunior%3AEurope%2FItaly

 $^{2 \}qquad \verb|https://en.wikibooks.org/wiki/Wikijunior%3AEurope%2FGreece| \\$

14.2 What did their buildings look like?



Figure 68 Remains of the top floors of an insula near the Capitolium and the Aracoeli in Rome.

Many public buildings built by the Romans were huge works of white marble complete with arches and grand architecture. The average house, by comparison, was smaller and plainer, being built of bricks and timber. Much of our extensive knowledge of Roman Buildings comes from ruins and remains left in the ground.

Inside a middle class home (a domus), there were many rooms, with distinct functions. These ranged in size, from small cubicles in which they slept, through medium sized rooms in which they eat, to large halls in which they would receive and entertain guests. The rooms in the house normally opened out onto a courtyard. Despite its often small size, the purpose of this courtyard was to provide light and air to the rooms. As well as a courtyard, most wealthy people would also have kept a garden behind the house, in which flowers, fruit, vegetables, and even grape vines would have been grown.

In the city of Rome most people lived in two or three-story apartment buildings called *Insulae*. Here a whole family lived in only one or two rooms, spending much of their time outside in the courtyards and streets. Water came from nearby public fountains and aqueducts.

The Romans also constructed many public buildings, including temples, marketplaces, forum, and amphitheaters. These public works also included things required for city living like aqueducts and sewers.

Military building was also undertaken, the largest construction being Hadrian's Wall at the northern Fringes of the Roman Empire. Even today, the remains of these roads are still visible in Northern England.

14.3 What did they eat?

Both the rich and poor ate bread and porridges made from wheat, barley and other grains. This was their main staple food. Some of the other common foods that they would have eaten were chicken and other birds, beans, lentils, walnuts, eggs, apples, cheese, milk, wine, figs, dates and grapes.

While most of their food would be familiar to us, Romans did have their share of strange or unusual feast items, including wild boar, peacock, snails, and a type of rodent called a dormouse. Another difference was that while the poor people and the woman ate their food while sitting in chairs, the rich men liked to have banquets together where they would lounge on their sides while they ate their meals.

Ancient Roman meals couldn't have included foods that came to Europe from America or from Asia in later centuries. For instance, they didn't have corn, nor tomatoes, nor potatoes, nor cocoa, and no ancient Roman ever tasted a turkey.

14.4 What did they wear?



Figure 69 A Roman man wearing a toga

People in Rome had three types of clothing. Firstly, they wore a loin cloth. This was worn like underwear. Then, over their loin cloth they would wear a tunic and women would

sometimes wear two tunics. A tunic was usually made out of wool but occasionally linen. It was a loose garment that fitted over a person's head and was joined at the shoulders and sides. It would resemble a nightgown in our society. Finally, on top of a man's tunic he would wear a toga whenever he went into public, if he could afford one. Togas were large pieces of wool fabric that were wrapped all around the body. Interestingly, only Roman citizens were permitted to wear togas. It was symbol of peace because Roman soldiers also didn't wear togas. Togas were decorated in different ways to indicate rank, like a uniform. For example, a purple fringed toga indicated that the person wearing it was a leader.

Women in Rome also had an outside garment that corresponded to the male toga. It was called a stola and was also made of a large piece of fabric but it was wrapped and attached differently. Woman also wore a warm shawl called a palla when they went out.

Fashion changed as the empire progressed. Initially in Rome both men and woman wore togas but that changed fairly early in the Roman empire. Also, cloaks that were like large ponchos were first primarily used by poor people and soldiers but eventually became the standard dress for even the wealthy. Togas in that era had become purely ceremonial.

Roman men and woman also wore shoes or sandals unless they were extremely poor. They were completely made of leather, even the soles. When visiting one another they would wear them into their friend's home but remove them before eating.

14.5 What did their writing look like?



Figure 70 A roman coin; note the common letters

Romans developed what is now called the Latin alphabet for their writing. The Latin alphabet is nearly the same as the current English alphabet but originally it only consisted of capital letters. Also, the Romans didn't use a few of the letters that are a part of the modern English alphabet such as j, x and w. The Latin alphabet is the basis for most European languages.

The Romans also invented a way to write the capital letters in cursive. They didn't use punctuation the way that we do today.

Roman numbers were written with letters as well. These are called Roman numerals.

- M = 1,000
- D = 500
- C = 100
- L = 50
- X = 10
- V = 5
- I = 1

2008 is written as MMVIII in Roman numerals.

When a smaller value followed a larger this indicated *addition*. E.g. VI means V+I = 5+1=6. But the other way around it meant subtraction: IV means V-I = 5-1=4.

This made it very hard to do maths with these numbers, and Arabic numbers (the ones we use today) began to be used in the Middle Ages. People found that banking and doing maths was much easier with these new number symbols.

14.6 What did they believe?

The Romans, like many other ancient civilizations, were polytheistic; this means they worshiped many gods. Each god or goddess, a female god, would be connected to a certain part of people's life. If you were a fisherman you might pray to Neptune, the god of the sea. However if you were a warrior you would pray to Mars the god of war. All these gods and goddesses had different stories. These long stories of the gods have lived on in writings on pots and in scripts, or books, by ancient people. Most of the Roman gods were taken from the Greek culture. For example, the Roman god Neptune was considered the same as the Greek god Poseidon. Today, the names of the Roman gods are still used as names for planets!

Romans were generally tolerant of other polytheistic religions and often adopted foreign gods into their religion including Egyptian gods. Emperors sometimes declared themselves to be descended from heroes or gods. Monotheists such as Christians, who believe in only one god, were distrusted because they refused to worship the emperors and were often persecuted.

14.7 Are some of them famous even today?



Figure 71 This 19th Century fresco imagines Cicero denouncing Catiline in the Senate. Cicero mentions in his first speech against Catiline that the other senators have stood up and moved away from him, leaving him alone.

Roman history and literature have had a strong and continuous influence on Western culture for thousands of years, so many Roman statesmen, poets, and philosophers remain famous today.

Julius Caesar is probably the most famous Roman of all time. He was a Roman military and political leader and one of the most influential men in world history. As a general, he led invasions of France and Britain. Most people in Rome thought Caesar was a hero, but his enemies said that he only cared about winning fame and power for himself. When the Senate ordered Caesar to disband his army, he was afraid of what they would do to him, so he began a civil war. Four years later, Caesar won the war and became dictator for life. A group led by Cassius and Brutus, who called themselves the Liberators, killed Caesar at a meeting of the Senate because they thought it was the only way to save the republic. However, Caesar's friends defeated the Liberators in the ensuing civil war, and the Roman Republic became the Roman Empire. Caesar is also famous for reforming the calendar and for several books he wrote about his military campaigns.

Marcus Tullius Cicero was another famous Roman statesman. Many of Cicero's books, speeches, and letters have survived, and we know more about him than any other Roman. Cicero didn't come from a noble family, but he rose rapidly in politics because of his talent for public speaking. Cicero began his career in public office as a quaestor, a low-level official who managed the finances of the state. Because the people of Sicily found him

to be honest and fair, they asked him to prosecute the corrupt governor of their island. Cicero prepared for a full trial, but after his opening speech, the governor saw that there was little chance of winning against Cicero and chose to leave the country. Cicero became known as Rome's greatest public speaker, and his successful prosecution entitled him to take the governor's seat in the Senate, giving him a freedom to speak that would not normally have been available to such a young member. Cicero gave some of his most famous speeches denouncing a plan by Catiline, an impoverished nobleman, to murder Rome's ruling class and seize power by force. Cicero was called "father of his country" for stopping the conspiracy. After the fall of the Roman Republic, the new rulers had him killed for speaking out against them. One of Cicero's most famous books is *On Duties*, which was considered the greatest work of moral philosophy through the Middle Ages and the Renaissance. When printing was invented, it was the second book to be printed after the Bible.

Vergil has been considered Rome's greatest poet ever since his own lifetime. He was born into a wealthy family, and spent his childhood on the family farm in northern Italy before being sent to large cities for school when he was 12. Vergil moved to Rome after the government seized his family's farm and he had to go to the capital to ask for it back. There, Vergil became a favourite of the emperor and other rich and important people. Vergil's most famous work is the *Aeneid*, a long poem about the founding of Rome that he worked on for the last 11 years of his life. When he was dying, he asked his friends to burn the draft, because he didn't want anyone to read his unfinished work. The emperor asked Vergil's friends to ignore his wishes and to prepare the poem for publication.

Another famous Roman was Pontius Pilate. He was the governor of the Roman ludaea (Judea) province from 26 AD until 36 AD. In modern times he is best known as the man who, according to the Christian Bible, presided over the trial of Jesus Christ and ordered his crucifixion.

14.8 What is left of them today?

At its pinnacle, the Roman Empire covered much of Europe, northern Africa, and some of the Middle East. There are many different ethnicities in these regions. Some of them are the direct descendants of Roman citizens while other people and ethnicities emerged through immigration into these areas from other regions. In Rome, the capital city of the Roman Empire, there are currently Italian people who have a blend of Roman heritage and other people that emigrated to the area after the Roman Empire dissolved.

Many modern European languages have evolved from Latin, the language of the Roman Empire. These are called Romance languages, and they include Italian, Spanish, and French. Today Romance languages are also spoken in many countries in South America and Africa.

Some other languages in Europe that didn't directly descend from Latin were influenced by it. For example, languages like English, Hungarian, and Turkish are all written with versions of the Latin alphabet, even if they had other writing systems of their own. The English language has been heavily influenced by Latin ever since 1066, when England was conquered by people who spoke French. In fact, over half of English words were borrowed

from French or Latin, including joy, charity, continue, army, animal, actor, reptile, and library.

14.9 Beauty in Ancient Rome

The use of cosmetics in ancient Rome was not exclusively for women. Men also used them to improve their appearance. Perfume and body waxing was acceptable for both men and women. During the Republic, men took less of an interest in their appearance so they would not be ridiculed. However, many wore makeup, combed their hair and looked after their bodies with baths and massages.

To remove excess hair was considered too effeminate for men, but to show all body hair was considered rude for the Roman taste. Because of that, they had found a middle ground. To remove it, they used resin paste or pumice. The elderly didn't do much to improve their appearance because it would have been considered ridiculous, as was seen firstly as a preparation for romantic attraction.

For men to wear trousers was a disgrace because it was something typical of neighboring peoples. Romans typically considered them barbarians.

Men used to have short hair but women instead choose between a great variety of hairstyles. Because of Julius Caesar who returned after a war and was blond and tanned, then to be blond became fashionable. Sometimes they used wigs which were made of hair which they cut from their Gallic slaves.

For the Roman women was very important to had the skin white and soft with the cheeks a little bit rosy.

For the teeth they used pumice power to whiten them. They had also fake teeth.

Baths made up of milk by donkeys were a very exclusive and expensive treatment to exfoliate the skin. Some of the important persons who had it were Cleopatra or Popea Sabina.

Plastic surgery was also known and used for example in scars.

14.10 Marriage in Ancient Rome

Romans didn't give a lot of importance to marriage, as we do today. Most couples simply lived together without any type of ceremony.

Only one of three couples married.

The oldest way of marriage was the *usus* which could come immediately into a divorce if the wife stayed out during three consecutive nights.

In Roman times, marriage was private. It didn't have any type of document or record as proof. However, the institution had certain legal effects, since the children had to inherit the father's name and fortune.

14.10.1 Women as property

Roman marriage could become legal in two ways:

- the *conventio in manum* form, in which the bride's father gave the property of his daughter to his future son-in-law.
- or the *sine manu*, in which the girl continued to be owned by the father and the husband only received the benefit. If she committed adultery, for example, the father could kill her even if the husband had forgiven her.

14.11 Slaves in Rome

The Romans took slaves from among the ones they took in battle or in conquered cities, among the children of slaves or children which were abandoned. Sometimes they bought slaves from other countries. Finally there was the case of men who were forced to be slaves as a result of debts.

The slavers (which were called *mangones* or *mercatores venalicii*) always followed the armies or bought their human merchandise in major markets of Rome and Delos. Ordinary slaves were sold on a rotating platform (*catasta*). A tablet (*titulus*) was around their necks as a sign indicating its origin, age, abilities and physical or mental defects, and the certification that were free of any crime. The best were kept in separate rooms in taverns, and showed only to wealthy clients.

The children of slave parents was given the name of *vernae*, as a distinction from the freeborn. All the ones belonging to one owner were called a family. The employees at residences of the city were urban families, while the ones who lived in a villa were called rustic families. However, it was common for slaves to serve in both.

In ancient times their number was small, because the houses were very simple, often made by the owner. But as they grew larger and more splendid, the number of slaves increased. There was one for almost every task, which was characteristic of a large house. When the population of Italy was estimated to be about six million people, there was a slave for every three inhabitants, and population in the city of Rome was much higher.

The list of slaves tied to some Roman houses is long: tailors, barbers, cooks, bakers, teachers, also musicians, dancers of both sexes and mimes and jugglers groups to divert the host and his guests, especially when they were at the table. There were buffoons who by their faults, weaknesses or thoughts made people laugh. The favorite of the ladies were the dwarfs trained to fight and dance.

Doctors and surgeons also were mostly slaves or free men, at least in Republican times, and the same happened with the private secretary of the lord of the house.

14.11.1 Slaves of rich people

The rich Roman was always accompanied by one or more slaves (pedisequus) which had to carry any object his owner may need like to the baths or to a party. They also carried a

torch at night. Another type of slaves were the *lectiarii* or the carriers of chairs. In the city, only ladies and senators were permitted to sit.

There were also the readers, which were the slaves who read to their owners while he was a the bath or at the table. There were also the ones who wrote documents and took care of the library of the house. The *cellarius* had the keys to the warehouse and the wine cellar.

The *procurator* was the principal in the family of slaves and was the one who managed the money and the expenses of the family.

The slave was absolute property of the house owner and had no legal protection against him.

14.12 Children in Ancient Rome

When a child was born in ancient Rome, the birth took place at home while the protection of the goddess Juno Lucina ("she is the goddess who brings children into light") was invoked.

The men did not attend births, not even the father of the child or the doctor who presented later. Everything was done by the midwife, except in the poorest families who couldn't afford any midwifes, since they used to be expensive. In that case, the woman had no choice but to be assisted by her own relatives.

It was the midwife who watched the baby to check its vitality and to find possible deformities. She announced the sex, but not with words but by signs, and cut the umbilical cord with a distance of four fingers from the womb. Because of this they didn't used any metal instruments. There were some alternatives like glass, ceramic or even a crust of hard bread. After that, she tied the cord with a wire of wool and cleaned and bathed the newborn.

Then, ceremonies began. Immediately a sacred meal was offered to Picumno and Pilumno, sons of Jupiter presiding over marriage and guardianship of children. To try to prevent the dangers since that time, at night three men met on the threshold, one armed with an ax, the second with a club and the third with a broom. The first two struck the door and the third was sweeping the floor, which was considered that the place was clean of evil spirits.

The child was placed at the foot of the *paterfamilias* (father or in his absence, the paternal grandfather, great grandfather or person in place). *Tollere FILIUM*, which meant to raise the newborn in his arms, meant he was recognizing as his, even if it was not his natural son, and because of that he was entitled to enjoy and spend all the rights and privileges as a member of a Roman family. This ceremony took place in *dies lustricus*, eight days after birth if it was a girl and nine when it was a boy.

The newborn (pupus) was then purified at the family altar in a ceremony called lustratio. The guests had to gave him his or her first toys (crepundia), small glass beads that were placed over the baby's shoulder so the metallic sound amused the child as a modern rattle. Toys were shaped like flowers, swords, axes and crescents, and also offered some special identification if the child got lost.

14.13 Shows and entertainment in Ancient Rome

Shows were one of the most important and characteristic features of Roman life, which occupied, on a schedule on the IV century, 176 days a year. Many came from the Republic, and others were initiated and added by the emperors. The extraordinary spectacles and shows were held on occasions such as anniversaries or triumphs. Along with free food distributions, were the most common ways of gain the sympathy of the people and to distract them from government issues and economic problems: *panem et circenses*, bread and circuses.

The organization of such events had many difficulties. One of them was to get animals for the shows and to train them. The emperors established a monopoly for hunting and for the possession of elephants and installed in Laurentum an elephant park, near Rome. In this regard there is an anecdote from Plutarch, who noted that in a show in Rome, (which had also dogs acting), an elephant missed a trick in the performance and was seen the next night rehearing the trick on his own.

Emperors also like gladiators fights and maintained gladiators training schools in Rome, and later in other places like some people of the Republic did on the past.

The imperial ceremonies were usually accompanied by meals for everyone, that could be served in the theater or in the circus, or maybe in outside in different points of the city. In these cases the emperor attended personally. In other occasions the emperor threw a type of coins called *missilia*, which gave some advantages to the ones who could get one of those.

Nero gave birds, groceries, tickets for the distribution of wheat, clothes, jewelry, paintings, slaves, cattle, trained animals, and finally, boats, blocks of flats and parcels of land. Elagabalus gave gold and silver, food, costumes, camels, donkeys, cattle and deer.

In Emerita Augusta (now Mérida, Spain) the shows were announced on posters painted in red and black that were distributed throughout the city, and in the intervals between races, they also threw *missilia* or *sparsiones*.

14.14 References

Classics Unveiled³

de:Wikijunior Alte Zivilisationen/ Römer⁴

³ http://www.classicsunveiled.com/

⁴ https://de.wikibooks.org/wiki/Wikijunior%20Alte%20Zivilisationen%2F%20R%C3%B6mer

15 Scythians

15.1 What country did they live in?



Figure 72

The Scythians were a group of ancient tribes of warriors who originally lived in the steppes to the north of the Black Sea, in what is now southern Siberia. They were cattle-breeding nomads, meaning that they did not stay in the same place for long. When cattle ate out all the grass around, they travelled to a different place, where the grass was fresh and untouched. They were also skilled horsemen and brave warriors. They were the first who used light cavalry as a main military force.

The horse was everything for a Scythe. They started riding horses when they were small children. Horses were not just transportation for Scythians; they were their protectors, providers and best friends. When a Scythian warrior died, his horse was buried with him.

Scythian women were brave warriors as well. Living in the steppes was dangerous as you have literally nowhere to hide. Scythian women had to be strong and know how to protect themselves.

15.2 What did their buildings look like?

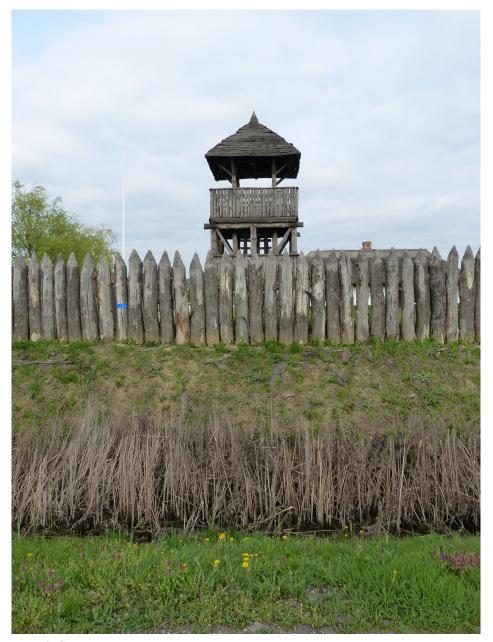


Figure 73 A Scythian outpost

Scythians did not have buildings. It does not make sense to build a house if you know that you are leaving soon. They lived in tents instead.

The only buildings they left behind them were kurgans – artificial hills, made of stones and earth, elevated on top of the tombs of nobilities. These tombs were filled with everything that a person could need in the afterlife: clothes, dishes, weapons, golden jewellery. They cremated their dead by covering the body in wax.

15.3 What did they eat?

The favourite drink of Scythes was horse milk, often mixed with blood. They are grains, fresh fruit, horse meat, and fish.

15.4 What did they wear?



Figure 74 Scythians preferred wearing trousers, because it is more comfortable for horse-riding

Both men and women wore clothes that were comfortable for riding horse: leather pants and jackets, short soft boots tied at the ankle, and felt pointed hoods. Both men and women wore their hair long and loose, and men had beards.



Figure 75 A gold Scythian neckpiece with many reliefs of animals. Scythians loved using animals in artworks, since they encountered them often



Figure 76 Scythian comb

Scythians also liked to decorate their clothes, horses and weapons with golden jewellery. Since Scythes were very close to nature, the main motif of their jewellery was animals. They loved to show animals in motion, because these images showed what Scythes valued most: strength, speed and freedom.

15.5 What did their writing look like?

Scythians did not develop any written form of their language. Though later, when they came in contact with other cultures, like the Greek colonies in the sea costs, they carved

some texts in stones, but these were mostly for religious reasons and for the tombs. We don't know what their language was like and cannot read their writings. Their writing used the Greek alphabet with some modifications.

15.6 What did they believe?

Because the Scythians lived in constant danger, comradeship between warriors was important. Unrelated warriors swore an oath of blood brotherhood, after which they were committed to defending each other.

Herodotus recorded the seven Scythian gods and their Greek equivalent: -The chief god is Tabiti, the goddess of the hearth (like Hestia)

- -Papaeus, almighty ruler of the heavens (like Zeus)
- -Api is Goddess of the earth (Gaea)
- -Goetosyrus (Apollo)
- -Argimpasa (Aphrodite)
- -Heracles
- -Ares

Many Scythian mummies have been discovered in the Altai Mountains. When the Scythians buried their dead, they took care to provide the corpse with the essentials they thought they needed for the afterlife.

They usually dug a deep hole and built a wooden structure at the bottom. For important people these resembled log cabins that were lined and floored with dark felt – the roofs were covered with layers of larch, birch bark and moss. Inside the tomb, the body was placed in a log trunk coffin, with some of their prized possessions and other objects. Outside the tomb chamber, they placed slaughtered horses, facing east.

15.7 References

de:Wikijunior Alte Zivilisationen/ Skythen¹

UNKNOWN TEMPLATE Wikijunior article stub

¹ https://de.wikibooks.org/wiki/Wikijunior%20Alte%20Zivilisationen%2F%20Skythen

16 Contributors

```
Edits User
       1 - revi^1
       2 AdRiley<sup>2</sup>
     67 Adrignola<sup>3</sup>
       6 Alakazam38<sup>4</sup>
       4 Aldnonymous<sup>5</sup>
       2 AlvaroMolina<sup>6</sup>
       4 Andrew Kelly<sup>7</sup>
       1 Andrew Watt<sup>8</sup>
       1 Annheslin<sup>9</sup>
          Anthurium^{10}
       1
       1 Appush<sup>11</sup>
       1 Arthurvogel<sup>12</sup>
       5 Artix Kreiger<sup>13</sup>
       1 Ashaio<sup>14</sup>
       2 Aspend17^{15}
     27 Atcovi<sup>16</sup>
       1 Attilios<sup>17</sup>
       5 Avicennasis<sup>18</sup>
     21 \quad Az1568^{19}
       1 \quad \mathrm{BKalesti}^{20}
       3 BRUTE<sup>21</sup>
```

```
https://en.wikibooks.org/wiki/User:-revi
2
   https://en.wikibooks.org/wiki/User:AdRiley
3
   https://en.wikibooks.org/wiki/User:Adrignola
   https://en.wikibooks.org/wiki/User:Alakazam38
   https://en.wikibooks.org/wiki/User:Aldnonymous
   https://en.wikibooks.org/wiki/User:AlvaroMolina
    https://en.wikibooks.org/wiki/User:Andrew_Kelly
    https://en.wikibooks.org/wiki/User:Andrew_Watt
    https://en.wikibooks.org/w/index.php%3ftitle=User:Annheslin&action=edit&redlink=1
   https://en.wikibooks.org/w/index.php%3ftitle=User:Anthurium&action=edit&redlink=1
   https://en.wikibooks.org/w/index.php%3ftitle=User:Appush&action=edit&redlink=1
   https://en.wikibooks.org/wiki/User:Arthurvogel
   https://en.wikibooks.org/wiki/User:Artix_Kreiger
   https://en.wikibooks.org/wiki/User:Ashaio
   https://en.wikibooks.org/w/index.php%3ftitle=User:Aspend17&action=edit&redlink=1
   https://en.wikibooks.org/wiki/User:Atcovi
   https://en.wikibooks.org/w/index.php%3ftitle=User:Attilios&action=edit&redlink=1
   https://en.wikibooks.org/wiki/User:Avicennasis
   https://en.wikibooks.org/wiki/User:Az1568
20 https://en.wikibooks.org/w/index.php%3ftitle=User:BKalesti&action=edit&redlink=1
21 https://en.wikibooks.org/wiki/User:BRUTE
```

- 1 Baker abdalhaq²²
- 1 Banana04131²³
- 1 Bananas~enwikibooks²⁴
- 1 Bart133²⁵
- 5 Belteshazzar²⁶
- 1 Berthold Werner²⁷
- 1 Blahblahblahvhbghbgiwbgwg²⁸
- 2 Boneheadmx~enwikibooks²⁹
- 1 Brentlabonte221³⁰
- 2 Bronwyn³¹
- $3 \quad \text{Bvcxz}^{32}$
- 2 Califman831~enwikibooks³³
- 17 Canaen~enwikibooks³⁴
- 5 Cengime³⁵
- 2 Chazz³⁶
- 1 Chrisb97³⁷
- 1 Ciraric~enwikibooks³⁸
- 1 Claudia700~enwikibooks³⁹
- 1 CodemanX~enwikibooks⁴⁰
- 1 CommonsDelinker⁴¹
- 2 ComputerGuy890100⁴²
- 1 Concerer 40^{43}
- 1 Cplakidas⁴⁴

```
https://en.wikibooks.org/w/index.php%3ftitle=User:Baker_abdalhaq&action=edit&redlink=
23
    https://en.wikibooks.org/wiki/User:Banana04131
    https://en.wikibooks.org/w/index.php%3ftitle=User:Bananas~enwikibooks&action=edit&
24
    redlink=1
25
  https://en.wikibooks.org/wiki/User:Bart133
    https://en.wikibooks.org/w/index.php%3ftitle=User:Belteshazzar&action=edit&redlink=1
    https://en.wikibooks.org/w/index.php%3ftitle=User:Berthold_Werner&action=edit&
    redlink=1 https://en.wikibooks.org/w/index.php%3ftitle=User:Blahblahblahvhbghbgiwbgwg&action=
28
    edit&redlink=1
    https://en.wikibooks.org/wiki/User:Boneheadmx~enwikibooks
29
   https://en.wikibooks.org/w/index.php%3ftitle=User:Brentlabonte221&action=edit&
30
31 https://en.wikibooks.org/w/index.php%3ftitle=User:Bronwyn&action=edit&redlink=1
32 https://en.wikibooks.org/w/index.php%3ftitle=User:Bvcxz&action=edit&redlink=1
   https://en.wikibooks.org/w/index.php%3ftitle=User:Califman831~enwikibooks&action=
33
    edit&redlink=1
34 https://en.wikibooks.org/wiki/User:Canaen~enwikibooks
35 https://en.wikibooks.org/w/index.php%3ftitle=User:Cengime&action=edit&redlink=1
36 https://en.wikibooks.org/wiki/User:Chazz
37 https://en.wikibooks.org/wiki/User:Chrisb97
   https://en.wikibooks.org/w/index.php%3ftitle=User:Ciraric~enwikibooks&action=edit&
   redlink=1 https://en.wikibooks.org/w/index.php%3ftitle=User:Claudia700~enwikibooks&action=edit&
39
redlink=1
40 https://en.wikibooks.org/wiki/User:CodemanX~enwikibooks
41 https://en.wikibooks.org/wiki/User:CommonsDelinker
42 https://en.wikibooks.org/wiki/User:ComputerGuy890100
43 https://en.wikibooks.org/w/index.php%3ftitle=User:Concerer40&action=edit&redlink=1
44 https://en.wikibooks.org/w/index.php%3ftitle=User:Cplakidas&action=edit&redlink=1
```

- 1 Curtaintoad⁴⁵
- 8 Cwmccabe~enwikibooks⁴⁶
- 3 Darklama⁴⁷
- 3 Debolars⁴⁸
- 5 Defender⁴⁹
- 17 Derbeth⁵⁰
- 1 Diaspro427⁵¹
- 2 Dirk Hünniger⁵²
- 1 Ebbi xx^{53}
- 1 Eegeebs~enwikibooks⁵⁴
- 1 Eliezer~enwikibooks⁵⁵
- 1 EnaamA⁵⁶
- 1 Enaam $^{\sim}$ enwikibooks 57
- 3 Esteban16⁵⁸
- $2 \quad \text{Etams}^{59}$
- 2 Eurodyne⁶⁰
- 1 Everlong⁶¹
- 2 Fernando2812l⁶²
- 1 Francisco Benavente⁶³
- 1 Frben003⁶⁴
- 6 Freydis Heimdallson⁶⁵
- 1 Frozen Wind⁶⁶
- 1 Fruggo⁶⁷
- 6 Geocachernemesis 68

https://en.wikibooks.org/wiki/User:Geocachernemesis

```
https://en.wikibooks.org/wiki/User:Curtaintoad
                   https://en.wikibooks.org/w/index.php%3ftitle=User:Cwmccabe~enwikibooks&action=edit&
46
                   https://en.wikibooks.org/wiki/User:Darklama
                   https://en.wikibooks.org/w/index.php%3ftitle=User:Debolars&action=edit&redlink=1
                   https://en.wikibooks.org/wiki/User:Defender
                   https://en.wikibooks.org/wiki/User:Derbeth
                   https://en.wikibooks.org/wiki/User:Dirk_H%25C3%25BCnniger
                   https://en.wikibooks.org/w/index.php%3ftitle=User:Ebbixx&action=edit&redlink=1
                   \verb|https://en.wikibooks.org/w/index.php%3ftitle=User:Eegeebs~enwikibooks&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&acti
                   \label{link-1} redlink=1 \\ https://en.wikibooks.org/w/index.php%3ftitle=User:Eliezer~enwikibooks\&action=edit\&tooks.org/w/index.php%3ftitle=User:Eliezer~enwikibooks&action=edit\&tooks.org/w/index.php%3ftitle=User:Eliezer~enwikibooks&action=edit\&tooks.org/w/index.php%3ftitle=User:Eliezer~enwikibooks&action=edit\&tooks.org/w/index.php%3ftitle=User:Eliezer~enwikibooks&action=edit\&tooks.org/w/index.php%3ftitle=User:Eliezer~enwikibooks&action=edit\&tooks.org/w/index.php%3ftitle=User:Eliezer~enwikibooks&action=edit\&tooks.org/w/index.php%3ftitle=User:Eliezer~enwikibooks&action=edit\&tooks.org/w/index.php%3ftitle=User:Eliezer~enwikibooks&action=edit&tooks.org/w/index.php%3ftitle=User:Eliezer~enwikibooks&action=edit&tooks.org/w/index.php%3ftitle=User:Eliezer~enwikibooks&action=edit&tooks.org/w/index.php%3ftitle=User:Eliezer~enwikibooks&action=edit&tooks.org/w/index.php%3ftitle=User:Eliezer~enwikibooks&action=edit&tooks.org/w/index.php%3ftitle=User:Eliezer~enwikibooks&action=edit&tooks.org/w/index.php%3ftitle=User:Eliezer~enwikibooks&action=edit&tooks.org/w/index.php%3ftitle=User:Eliezer~enwikibooks.org/w/index.php%3ftitle=User:Eliezer~enwikibooks.org/w/index.php%3ftitle=User:Eliezer~enwikibooks.org/w/index.php%3ftitle=User:Eliezer~enwikibooks.org/w/index.php%3ftitle=User:Eliezer~enwikibooks.org/w/index.php%3ftitle=User:Eliezer~enwikibooks.org/w/index.php%3ftitle=User:Eliezer~enwikibooks.org/w/index.php%3ftitle=User:Eliezer~enwikibooks.org/w/index.php%3ftitle=User:Eliezer~enwikibooks.org/w/index.php%3ftitle=User:Eliezer~enwikibooks.org/w/index.php%3ftitle=User:Eliezer~enwikibooks.org/w/index.php%3ftitle=User:Eliezer~enwikibooks.org/w/index.php%3ftitle=User:Eliezer~enwikibooks.org/w/index.php%3ftitle=User:Eliezer~enwikibooks.org/w/index.php%3ftitle=User:Eliezer~enwikibooks.org/w/index.php%3ftitle=User:Eliezer~enwikibooks.org/w/index.php%3ftitle=User:Eliezer~enwikibooks.org/w/index.php%3ftitle=User:Eliezer~enwikibooks.org/w/index.php%3ftitle=User:Eliezer~enwikibooks.org/w/index.php%3ftitle=User:Eliezer~enwikibooks.org/w/index
55
                     redlink=1
                   https://en.wikibooks.org/wiki/User:EnaamA
56
                   https://en.wikibooks.org/w/index.php%3ftitle=User:Enaam~enwikibooks&action=edit&
58 https://en.wikibooks.org/wiki/User:Esteban16
59 \quad \mathtt{https://en.wikibooks.org/wiki/User:Etams}
60 https://en.wikibooks.org/wiki/User:Eurodyne
                  https://en.wikibooks.org/wiki/User:Everlong
                   https://en.wikibooks.org/wiki/User:Fernando28121
                   \verb|https://en.wikibooks.org/w/index.php%3ftitle=User:Francisco_Benavente&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&action=edit&acti
                     redlink=1
                 https://en.wikibooks.org/w/index.php%3ftitle=User:Frben003&action=edit&redlink=1
                   https://en.wikibooks.org/w/index.php%3ftitle=User:Freydis_Heimdallson&action=edit&
                     redlink=1
               https://en.wikibooks.org/wiki/User:Frozen_Wind
                   https://en.wikibooks.org/wiki/User:Fruggo
```

- 23 Gillian.mcbride⁶⁹
- 1 Glaisher⁷⁰
- 1 Goblineat4⁷¹
- 3 Green Giant⁷²
- 2 Hagindaz⁷³
- 3 HakanIST⁷⁴
- $7 \quad \text{Hefflv}^{75}$
- 5 Hello5959us⁷⁶
- 2 Herbys bot⁷⁷
- 46 Herbythyme⁷⁸
- 1 Hethrir⁷⁹
- 2 Hippias⁸⁰
- 1 Huw9mq 48^{81}
- 35 ImageObserver⁸²
- 5 Intranetusa⁸³
- 1 InverseHypercube⁸⁴
- 1 Iste Praetor⁸⁵
- $6 \quad Ixfd64^{86}$
- 1 JGSecondari⁸⁷
- 1 JackPotte⁸⁸
- 1 JacobCampbell⁸⁹
- 1 $Jaxl^{90}$
- $1 \quad \text{Jcwf}^{91}$
- 1 Jesus the son^{92}
- 41 Jguk⁹³

```
https://en.wikibooks.org/w/index.php%3ftitle=User:Gillian.mcbride&action=edit&
69
70 https://en.wikibooks.org/wiki/User:Glaisher
71 https://en.wikibooks.org/w/index.php%3ftitle=User:Goblineat4&action=edit&redlink=1
72 https://en.wikibooks.org/wiki/User:Green_Giant
73 https://en.wikibooks.org/wiki/User:Hagindaz
74 https://en.wikibooks.org/wiki/User:HakanIST
75 \quad \mathtt{https://en.wikibooks.org/wiki/User:Heffly}
76 \quad \texttt{https://en.wikibooks.org/w/index.php\%3ftitle=User:Hello5959us\&action=edit\&redlink=1}
77 https://en.wikibooks.org/wiki/User:Herbys_bot
78 https://en.wikibooks.org/wiki/User:Herbythyme
79 https://en.wikibooks.org/wiki/User:Hethrir
80 https://en.wikibooks.org/w/index.php%3ftitle=User:Hippias&action=edit&redlink=1
81 https://en.wikibooks.org/wiki/User:Huw9mq48
82 https://en.wikibooks.org/wiki/User:ImageObserver
83 \quad \texttt{https://en.wikibooks.org/w/index.php\%3ftitle=User:Intranetusa\&action=edit\&redlink=1}
https://en.wikibooks.org/w/index.php%3ftitle=User:InverseHypercube&action=edit&
85 https://en.wikibooks.org/wiki/User:Iste_Praetor
86 \quad \mathtt{https://en.wikibooks.org/wiki/User:Ixfd64}
87 \quad \texttt{https://en.wikibooks.org/w/index.php\%3ftitle=User:JGSecondari\&action=edit\&redlink=1}
88 https://en.wikibooks.org/wiki/User:JackPotte
89 \quad \texttt{https://en.wikibooks.org/w/index.php\%3ftitle=User:JacobCampbell\&action=edit\&redlink=1}
90 https://en.wikibooks.org/wiki/User:Jaxl
91 https://en.wikibooks.org/wiki/User:Jcwf
92 https://en.wikibooks.org/w/index.php%3ftitle=User:Jesus_the_son&action=edit&redlink=1
93 https://en.wikibooks.org/wiki/User:Jguk
```

- 1 Jianhui67⁹⁴
- 1 Jimmiekruggerfosser⁹⁵
- 1 Jitrixis⁹⁶
- $2 ext{ Joevb}^{97}$
- 1 JohnSchwartz⁹⁸
- 140 Jomegat⁹⁹
 - 2 Jorge Morais¹⁰⁰
 - 1 Judith M¹⁰¹
 - 4 Julie~enwikibooks¹⁰²
 - 1 Kash~enwikibooks¹⁰³
 - 16 Kayau¹⁰⁴
 - 8 Kfasimpaur¹⁰⁵
 - $1 \quad \text{Killed0st}^{106}$
 - $9 ext{ Klartext}^{107}$
 - 3 Kmitschele~enwikibooks¹⁰⁸
 - 2 Krbopilouscrips¹⁰⁹
 - 1 Krischik¹¹⁰
 - 2 Kyewei¹¹¹
 - 6 Laleena¹¹²
 - 7 Lalita 1999^{113}
- 31 Leaderboard¹¹⁴
- 1 Leslyestell¹¹⁵
- 1 Linus Schrewe¹¹⁶
- 2 Lolatyourface.x3¹¹⁷

```
94 https://en.wikibooks.org/wiki/User:Jianhui67
        https://en.wikibooks.org/w/index.php%3ftitle=User:Jimmiekruggerfosser&action=edit&
95
96 https://en.wikibooks.org/wiki/User:Jitrixis
97 https://en.wikibooks.org/w/index.php%3ftitle=User:Joevb&action=edit&redlink=1
         https://en.wikibooks.org/w/index.php%3ftitle=User:JohnSchwartz&action=edit&redlink=1
         https://en.wikibooks.org/wiki/User:Jomegat
100 https://en.wikibooks.org/wiki/User:Jorge_Morais
101 https://en.wikibooks.org/w/index.php%3ftitle=User:Judith_M&action=edit&redlink=1
redlink=1 https://en.wikibooks.org/w/index.php%3ftitle=User:Kash~enwikibooks&action=edit&
          redlink=1
104 https://en.wikibooks.org/wiki/User:Kayau
105 https://en.wikibooks.org/wiki/User:Kfasimpaur
106 https://en.wikibooks.org/w/index.php%3ftitle=User:Killed0st&action=edit&redlink=1
107 https://en.wikibooks.org/wiki/User:Klartext
108 ~\rm https://en.wikibooks.org/w/index.php\%3ftitle=User:Kmitschele~enwikibooks\&action=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation=edit\&ation
         redlink=1
https://en.wikibooks.org/w/index.php%3ftitle=User:Krbopilouscrips&action=edit&
redlink=1
110 https://en.wikibooks.org/wiki/User:Krischik
111 https://en.wikibooks.org/w/index.php%3ftitle=User:Kyewei&action=edit&redlink=1
112 https://en.wikibooks.org/wiki/User:Laleena
113 https://en.wikibooks.org/w/index.php%3ftitle=User:Lalita1999&action=edit&redlink=1
114 https://en.wikibooks.org/wiki/User:Leaderboard
115 https://en.wikibooks.org/wiki/User:Leslyestell
116 \ \text{https://en.wikibooks.org/w/index.php\%3ftitle=User:Linus\_Schrewe\&action=edit\&redlink=1.0}
```

https://en.wikibooks.org/w/index.php%3ftitle=User:Lolatyourface.x3&action=edit&

redlink=1

- 5 Lord Voldemort~enwikibooks¹¹⁸
- 10 Lovepigs¹¹⁹
- 3 Mateo1983¹²⁰
- 5 Matiia¹²¹
- $1 \quad \text{Medium} 69^{122}$
- 4 MichaelFrey¹²³
- 7 Mike Zhu¹²⁴
- 8 Mike.lifeguard¹²⁵
- 1 Mjhsrm26¹²⁶
- $1 \quad Morza^{127}$
- 1 Mott~enwikibooks¹²⁸
- 4 Mr Shore¹²⁹
- 7 N1person¹³⁰
- 13 Neoptolemus¹³¹
- 2 Nymos^{132}
- 17 Osteveliam¹³³
- 1 Pacobena¹³⁴
- 27 Panic $2k4^{135}$
- 2 Parsi~enwikibooks¹³⁶
- 54 Pi zero¹³⁷
- 8 Pinkpigs¹³⁸
- 2 Pmlineditor¹³⁹
- 1 PokestarFan¹⁴⁰
- 134 QuiteUnusual¹⁴¹
 - 1 Radi X^{142}

```
118 https://en.wikibooks.org/wiki/User:Lord_Voldemort~enwikibooks
119 https://en.wikibooks.org/w/index.php%3ftitle=User:Lovepigs&action=edit&redlink=1
120 https://en.wikibooks.org/wiki/User:Mateo1983
121 https://en.wikibooks.org/wiki/User:Matiia
122 https://en.wikibooks.org/wiki/User:Medium69
123 https://en.wikibooks.org/wiki/User:MichaelFrey
124 https://en.wikibooks.org/w/index.php%3ftitle=User:Mike_Zhu&action=edit&redlink=1
125 https://en.wikibooks.org/wiki/User:Mike.lifeguard
126 https://en.wikibooks.org/wiki/User:Mjhsrm26
127 https://en.wikibooks.org/wiki/User:Morza
128 \hspace{0.2in} \texttt{https://en.wikibooks.org/w/index.php\%3ftitle=User:Mott^enwikibooks\&action=edit\&articles} \\ 128 \hspace{0.2in} \texttt{https://en.wikibooks.org/w/index.php\%3ftitle=User:Mott^enwikibooks.org/w/index.php\%3ftitle=User:Mott^enwikibooks.org/w/index.php\%3ftitle=User:Mott^enwikibooks.org/w/index.php\%3ftitle=User:Mott^enwikibooks.org/w/index.php\%3ftitle=User:Mott^enwikibooks.org/w/index.php\%3ftitle=User:Mott^enwikibooks.org/w/index.php\%3ftitle=User:Mott^enwikibooks.org/w/index.php\%3ftitle=User:Mott^enwikibooks.org/w/index.php\%3ftitle=User:Mott^enwikibooks.org/w/index.php\%3ftitle=User:Mott^enwikibooks.org/w/index.php\%3ftitle=User:Mott^enwikibooks.org/w/index.php\%3ftitle=User:Mott^enwikibooks.org/w/index.php\%3ftitle=User:Mott^enwikibooks.org/w/index.php\%3ftitle=User:Mott^enwikibooks.org/w/index.php\%3ftitle=User:Mott^enwikibooks.org/w/index.php\%3ftitle=User:Mott^enwikibooks.org/w/index.php\%3ftitle=User:Mott^enwikibooks.org/w/index.php\%3ftitle=User:Mott^enwikibooks.org/w/index.php\%3ftitle=User:Mott^enwikibooks.org/w/index.php\%3ftitle=User:Mott^enwikibooks.org/w/index.php\%3ftitle=User:Mott^enwikibooks.org/w/index.php\%3ftitle=User:Mott^enwikibooks.org/w/index.php\%3ftitle=User:Mott^enwikibooks.org/w/index.php\%3ftitle=User:Mott^enwikibooks.org/w/index.php\%3ftitle=User:Mott^enwikibooks.org/w/inde
          redlink=1
129 https://en.wikibooks.org/wiki/User:Mr_Shore
130 https://en.wikibooks.org/wiki/User:N1person
131 https://en.wikibooks.org/wiki/User:Neoptolemus
132 https://en.wikibooks.org/wiki/User:Nymos
133 https://en.wikibooks.org/wiki/User:Osteveliam
134 \ \text{https://en.wikibooks.org/w/index.php\%3ftitle=User:Pacobena\&action=edit\&redlink=1}
135 https://en.wikibooks.org/wiki/User:Panic2k4
136 \  \  \, \text{https://en.wikibooks.org/w/index.php\%3ftitle=User:Parsi~enwikibooks\&action=edit\&articles.pdf} \\
redlink=1
137 https://en.wikibooks.org/wiki/User:Pi_zero
138 https://en.wikibooks.org/w/index.php%3ftitle=User:Pinkpigs&action=edit&redlink=1
139 https://en.wikibooks.org/wiki/User:Pmlineditor
140 https://en.wikibooks.org/wiki/User:PokestarFan
141 https://en.wikibooks.org/wiki/User:QuiteUnusual
142 https://en.wikibooks.org/wiki/User:RadiX
```

- $1 \quad Ramac^{143}$
- 2 RealityBot¹⁴⁴
- 14 Recent Runes¹⁴⁵
- $1 \quad \text{Red4tribe}^{146}$
- 1 Reguyla¹⁴⁷
- 2 Renamed user wZdBmxEPfs¹⁴⁸
- 35 Rmawhorter¹⁴⁹
- 26 Robert Horning¹⁵⁰
- 6 RockLaura¹⁵¹
- 3 Rodpt2003¹⁵²
- 7 Roslyn~enwikibooks¹⁵³
- 3 Runologe¹⁵⁴
- 2 Ryanlerch~enwikibooks¹⁵⁵
- 1 SB Johnny¹⁵⁶
- 12 SV Resolution¹⁵⁷
- 1 Sapo~enwikibooks¹⁵⁸
- 6 Savh¹⁵⁹
- 1 ShakespeareFan00¹⁶⁰
- 13 Shanel¹⁶¹
- 1 Siebrand¹⁶²
- 1 Sigma 7¹⁶³
- 1 SimRPGman¹⁶⁴
- $1 \quad \text{Skeet}^{165}$
- 8 Sluffs¹⁶⁶

```
143 \ {\tt https://en.wikibooks.org/wiki/User:Ramac}
144 https://en.wikibooks.org/w/index.php%3ftitle=User:RealityBot&action=edit&redlink=1
145 https://en.wikibooks.org/wiki/User:Recent_Runes
146 https://en.wikibooks.org/wiki/User:Red4tribe
147 https://en.wikibooks.org/wiki/User:Reguyla
edit&redlink=1
149 https://en.wikibooks.org/wiki/User:Rmawhorter
150 https://en.wikibooks.org/wiki/User:Robert_Horning
151 https://en.wikibooks.org/w/index.php%3ftitle=User:RockLaura&action=edit&redlink=1
152 https://en.wikibooks.org/w/index.php%3ftitle=User:Rodpt2003&action=edit&redlink=1
https://en.wikibooks.org/w/index.php%3ftitle=User:Roslyn~enwikibooks&action=edit&
154 \hspace{0.1in} \texttt{https://en.wikibooks.org/w/index.php\%3ftitle=User:Runologe\&action=edit\&redlink=1}
\frac{1}{155} \text{ https://en.wikibooks.org/w/index.php%3ftitle=User:Ryanlerch~enwikibooks\&action=edit&} \\ \frac{1}{155} \frac{1
           redlink=1
156 https://en.wikibooks.org/wiki/User:SB_Johnny
157 https://en.wikibooks.org/wiki/User:SV_Resolution
158 https://en.wikibooks.org/wiki/User:Sapo~enwikibooks
159 https://en.wikibooks.org/wiki/User:Savh
160 https://en.wikibooks.org/wiki/User:ShakespeareFan00
161 https://en.wikibooks.org/wiki/User:Shanel
162 https://en.wikibooks.org/wiki/User:Siebrand
163 https://en.wikibooks.org/wiki/User:Sigma_7
164 https://en.wikibooks.org/wiki/User:SimRPGman
165 https://en.wikibooks.org/w/index.php%3ftitle=User:Skeet&action=edit&redlink=1
166 https://en.wikibooks.org/wiki/User:Sluffs
```

- 2 Slugomanporter¹⁶⁷
- 1 Sonia¹⁶⁸
- 1 Starchildmom¹⁶⁹
- $1 \quad Stardust 89^{170}$
- 4 Strange quark¹⁷¹
- 1 $Stryn^{172}$
- $7 \quad \text{Syum} 90^{173}$
- $5 \quad \text{T-wolf8}^{174}$
- 4 TayyabSaeed¹⁷⁵
- $5 \quad \text{Tegel}^{176}$
- 2 The one with the face 177
- 1 TheMagikCow¹⁷⁸
- 2 ThePacker¹⁷⁹
- 3 Thenub 314^{180}
- 2 Tropicalkitty¹⁸¹
- 3 Van der Hoorn¹⁸²
- $3 \quad Vermont^{183}$
- 5 Webaware¹⁸⁴
- 1 Wikigirl 98^{185}
- 4 Willy Wirz¹⁸⁶
- 2 Wutsje¹⁸⁷
- 25 Xania¹⁸⁸
- $100 ext{ Xixtas}^{189}$
 - 2 Xxagile¹⁹⁰
 - 1 Zellfaze¹⁹¹

```
https://en.wikibooks.org/w/index.php%3ftitle=User:Slugomanporter&action=edit&redlink=
168 https://en.wikibooks.org/wiki/User:Sonia
169 https://en.wikibooks.org/wiki/User:Starchildmom
170 https://en.wikibooks.org/w/index.php%3ftitle=User:Stardust89&action=edit&redlink=1
171 https://en.wikibooks.org/wiki/User:Strange_quark
172 https://en.wikibooks.org/wiki/User:Stryn
173 https://en.wikibooks.org/wiki/User:Syum90
174 https://en.wikibooks.org/w/index.php%3ftitle=User:T-wolf8&action=edit&redlink=1
175 https://en.wikibooks.org/wiki/User:TayyabSaeed
176 https://en.wikibooks.org/wiki/User:Tegel
177 ~ \texttt{https://en.wikibooks.org/w/index.php\%3} \\ \bar{\texttt{ftitle=User:The\_one\_with\_the\_face\&action=edit\&alpha}. \\ \\ \text{https://en.wikibooks.org/w/index.php\%3} \\ \bar{\texttt{ftitle=User:The\_one\_with\_the\_face\&action=edit\&alpha}. \\ \\ \text{https://en.wikibooks.org/w/index.php.} \\ \bar{\texttt{ftitle=User:The\_one\_with\_the\_one\_with\_the\_one\_with\_the\_one\_with\_the\_one\_with\_the\_one\_with\_the\_one\_with\_the\_one\_with\_the\_one\_with\_the\_one\_with\_the\_one\_with\_the\_one\_with\_the\_one\_with\_the\_one\_with\_the\_one\_with\_the\_one\_with\_the\_one\_with\_the\_one\_with\_the\_one\_with\_the\_one\_with\_the\_one\_with\_the\_one\_with\_the\_one\_with\_the\_one\_with\_the\_one\_with\_the\_one\_with\_the\_one\_with\_the\_with\_the\_one\_with\_the\_one\_with\_the\_one\_with\_the\_one\_with\_the\_one\_with\_the\_one\_with\_the\_one\_with\_the\_one\_with\_the\_one\_with\_the\_with\_the\_one\_with\_the\_one\_with\_the\_one\_with\_the\_one\_with\_the\_one\_with\_the\_with\_the\_one\_with\_the\_with\_the\_with\_the\_with\_the\_one\_w
           redlink=1
178 https://en.wikibooks.org/wiki/User:TheMagikCow
179 https://en.wikibooks.org/wiki/User:ThePacker
180 https://en.wikibooks.org/wiki/User:Thenub314
181 https://en.wikibooks.org/wiki/User:Tropicalkitty
182 https://en.wikibooks.org/wiki/User:Van_der_Hoorn
183 https://en.wikibooks.org/wiki/User:Vermont
184 https://en.wikibooks.org/wiki/User:Webaware
185 https://en.wikibooks.org/wiki/User:Wikigirl98
186 https://en.wikibooks.org/w/index.php%3ftitle=User:Willy_Wirz&action=edit&redlink=1
187 https://en.wikibooks.org/wiki/User:Wutsje
188 https://en.wikibooks.org/wiki/User:Xania
189 https://en.wikibooks.org/wiki/User:Xixtas
190 https://en.wikibooks.org/wiki/User:Xxagile
191 https://en.wikibooks.org/wiki/User:Zellfaze
```

- 1 Zidel 333^{192}
- $17 \quad ZxxZxxZ^{193}$
- 1 ~riley¹⁹⁴
- $1 \quad \text{Érico}^{195}$

¹⁹² https://en.wikibooks.org/wiki/User:Zidel333

¹⁹³ https://en.wikibooks.org/wiki/User:ZxxZxxZ

¹⁹⁴ https://en.wikibooks.org/wiki/User:~riley

¹⁹⁵ https://en.wikibooks.org/wiki/User:%25C3%2589rico

List of Figures

- GFDL: Gnu Free Documentation License. http://www.gnu.org/licenses/fdl.
- cc-by-sa-3.0: Creative Commons Attribution ShareAlike 3.0 License. http://creativecommons.org/licenses/by-sa/3.0/
- cc-by-sa-2.5: Creative Commons Attribution ShareAlike 2.5 License. http://creativecommons.org/licenses/by-sa/2.5/
- cc-by-sa-2.0: Creative Commons Attribution ShareAlike 2.0 License. http://creativecommons.org/licenses/by-sa/2.0/
- cc-by-sa-1.0: Creative Commons Attribution ShareAlike 1.0 License. http://creativecommons.org/licenses/by-sa/1.0/
- cc-by-2.0: Creative Commons Attribution 2.0 License. http://creativecommons.org/licenses/by/2.0/
- cc-by-2.0: Creative Commons Attribution 2.0 License. http://creativecommons.org/licenses/by/2.0/deed.en
- cc-by-2.5: Creative Commons Attribution 2.5 License. http://creativecommons.org/licenses/by/2.5/deed.en
- cc-by-3.0: Creative Commons Attribution 3.0 License. http://creativecommons.org/licenses/by/3.0/deed.en
- GPL: GNU General Public License. http://www.gnu.org/licenses/gpl-2.0.txt
- LGPL: GNU Lesser General Public License. http://www.gnu.org/licenses/lgpl. html
- PD: This image is in the public domain.
- ATTR: The copyright holder of this file allows anyone to use it for any purpose, provided that the copyright holder is properly attributed. Redistribution, derivative work, commercial use, and all other use is permitted.
- EURO: This is the common (reverse) face of a euro coin. The copyright on the design of the common face of the euro coins belongs to the European Commission. Authorised is reproduction in a format without relief (drawings, paintings, films) provided they are not detrimental to the image of the euro.
- LFK: Lizenz Freie Kunst. http://artlibre.org/licence/lal/de
- CFR: Copyright free use.

• EPL: Eclipse Public License. http://www.eclipse.org/org/documents/epl-v10.php

Copies of the GPL, the LGPL as well as a GFDL are included in chapter Licenses¹⁹⁶. Please note that images in the public domain do not require attribution. You may click on the image numbers in the following table to open the webpage of the images in your webbrower.

1	BotMultichill, Emijrpbot, Faebot, Hazard-Bot, Kilom691,	
	Slobot, Xixtas	
2	Alfio, JarektBot, Orgullobot, Ras67, Thelmadatter	
3	Infrogration, New Orleans	
4	Bryan Derksen, Cwbm (commons), El Comandante, Infrog-	
	mation, JMCC1, JarektBot, Madman2001, Simon Burchell,	
	Zapyon	
5	ArndBot, Bohème, Carlomorino, EDUCA33E, Emijrp-	
	bot, G.dallorto, Hazard-Bot, JMCC1, JarektBot, Jas-	
	trow, KTo288, Kevyn, Martin H., Miniwark, Olivier,	
	Sumerophile commonswiki, The Evil IP address, Wst	
6	Jastrow ¹⁹⁷ ,	
	Jastrow ¹⁹⁸	
7	Charlymccreary ¹⁹⁹ , Charlymccreary ²⁰⁰	
8	QuartierLatin1968,The Ogre,Dbachmann	
9	Dominique grassigli ²⁰¹	
10	original picture : Fabrice Philibert-Caillat (Fphilibert ²⁰²)	
	of the modification: Eric Gaba (Sting ²⁰³), original picture:	
	Fabrice Philibert-Caillat (Fphilibert ²⁰⁴)	
	of the modification: Eric Gaba (Sting ²⁰⁵)	
11	ArndBot, Dbachmann, FrescoBot, JarektBot, Un1c0s	
	bot commonswiki	
12	A. Brady	
13	Docu, Gabor commonswiki, JarektBot, Kane5187, Un1c0s	
	bot commonswiki	
14	en:User:Alanmak Alan Mak ²⁰⁶	
15	Fanghong, Hazard-Bot, HéctorTabaré, JarektBot, Matt314,	
	Saperaud commonswiki, Sl, SteinsplitterBot	
16	User:Para ²⁰⁷ , User:Para ²⁰⁸	
17	Aotake, Chamaeleon commonswiki, Erin Silversmith, Jarek-	
	tBot, Kakurady, Remember the dot, Shizhao	
18	Users Plugwash ²⁰⁹ , Aoineko ²¹⁰ on en.wikipedia ²¹¹	
19	Jacques Descloitres, MODIS Rapid Response Team,	
	NASA/GSFC	

¹⁹⁷ http://commons.wikimedia.org/wiki/User:Jastrow

¹⁹⁸ https://commons.wikimedia.org/wiki/User:Jastrow

 $^{199 \}hspace{0.1in} \textbf{http://commons.wikimedia.org/w/index.php?title=User:Charlymccreary&action=edit&action$ redlink=1 https://commons.wikimedia.org/w/index.php?title=User:Charlymccreary&action=edit&

redlink=1
201 https://fr.wikipedia.org/wiki/User:Dominique_grassigli

²⁰² http://commons.wikimedia.org/w/index.php?title=User:Fphilibert&action=edit&redlink=1

²⁰³ http://commons.wikimedia.org/wiki/User:Sting

 $^{204 \ \}text{https://commons.wikimedia.org/w/index.php?title=User:Fphilibert\&action=edit\&redlink=1}$

 $^{205 \ \}mathtt{https://commons.wikimedia.org/wiki/User:Sting}$

 $^{206 \ \}mathtt{https://en.wikipedia.org/wiki/User:Alanmak_Alan_Mak}$

²⁰⁷ http://commons.wikimedia.org/wiki/User:Para

²⁰⁸ https://commons.wikimedia.org/wiki/User:Para

²⁰⁹ https://en.wikipedia.org/wiki/User:Plugwash

²¹⁰ https://en.wikipedia.org/wiki/User:Aoineko

²¹¹ http://en.wikipedia.org

20	Steve F-E-Cameron (Merlin-UK ²¹²), Steve F-E-Cameron (Merlin-UK ²¹³)	
21	Ricardo Liberato ²¹⁴	
22	Metropolitan Museum of Art	
23	The original uploader was Titi Sitria ²¹⁵ at French Wikipedia ²¹⁶ .	
24	A \oplus ineko ²¹⁷	
25	en:User:MykReeve ²¹⁸	
26	Berthold Werner ²¹⁹ , Berthold Werner ²²⁰	
27	ArndBot, Briangotts, Cplakidas, David Kernow common-	
	swiki, Emijrpbot, Epìdosis, Hazard-Bot, ImageObserver,	
	JarektBot, Orgullobot	
28	Allo002, Emijrpbot, Eusebius, Marcus Cyron, Schlurcher-	
	Bot, Shakko, YaCBot	
29	UnknownUnknown artist	
30	UnknownUnknown artist	
31	Agon S. Buchholz (asb ²²¹)	
32	Bibi Saint-Pol, DenghiùComm, Fokion Alexis, G.dallorto,	
	Gabor commonswiki, Graphium, JarektBot, Jastrow,	
	SieBot, Xenophon	
33	David Bjorgen ²²² , David Bjorgen ²²³	
34	Alkhulaqi commonswiki, AnonMoos, Dexbot, Emijrpbot,	
	Hazard-Bot, JarektBot, Karlfk, Qoan, Quasipalm, SieBot,	
	Sumerophile commonswiki, Talmoryair, Zoupan, Zykasaa	
35	Wayne McLean ²²⁴ (jgritz ²²⁵)	
36	UnknownUnknown author	
37	THE HISTORY OF COSTUME By Braun & Schneider	
38	Andrzej 22, ArthurBot, Dovi, Geofrog, Jacklee, <u>Jarekt</u> Bot,	
	Jat, Llywrch, Paddy, Ranveig, Valley2city, Wst,	
39	, on the basis of a web image 226	
40	Patricio.lorente	
41	AndreasPraefcke, Bukk, David.Monniaux, Jane023, Jarekt-	
	Bot, MGA73bot2, Revent, SieBot, Tangopaso, Wereon, Wst,	
	Zolo	

²¹² http://commons.wikimedia.org/wiki/User:Merlin-UK

²¹³ https://commons.wikimedia.org/wiki/User:Merlin-UK

 $^{214 \ \}text{http://liberato.org}$

²¹⁵ https://en.wikipedia.org/wiki/fr:User:Titi_Sitria

 $^{216 \ {\}tt https://en.wikipedia.org/wiki/fr:}$

²¹⁷ https://fr.wikipedia.org/wiki/Utilisateur:Aoineko

 $^{218 \ \}mathtt{https://en.wikipedia.org/wiki/User:MykReeve}$

 $^{219 \ \}mathtt{http://commons.wikimedia.org/wiki/User:Berthold_Werner}$

²²⁰ https://commons.wikimedia.org/wiki/User:Berthold_Werner

²²¹ https://de.wikipedia.org/wiki/Benutzer:Asb

 $^{222 \ \}text{http://commons.wikimedia.org/w/index.php?title=User:Cybjorg\&action=edit\&redlink=1}$

 $^{223 \ \}text{https://commons.wikimedia.org/w/index.php?title=User:Cybjorg\&action=edit\&redlink=1}$

²²⁴ http://www.waynemclean.com

²²⁵ https://en.wikipedia.org/wiki/User:Jgritz

 $^{226 \ \}mathtt{http://www.katapi.org.uk/BAndS/MesheStele.htm}$

42	Andre Engels, Bryan Derksen, Emijrpbot, Hazard-Bot, Huhsunqu, JarektBot, JohnnyMrNinja, Karlfk, Look2See1, Nard the Bard, QQuantum, Spesh531, Zenyu commonswiki,	
43	Conscious, Dbenbenn, DieBuche, JarektBot, Joadl, Johann	
	Jaritz, Lemmikkipuu	
44	Scott Bauer, USDA ARS	
45	Dynamax commonswiki, El Comandante, Hyacinth,	
	JMCC1, JarektBot, Jdx, Marcomogollon, NicoScribe, Phoenix-forgotten commonswiki, Sreejithk2000	
46	663highland, AgainErick, Emijrpbot, Haylli, JarektBot, Jerome Charles Potts, MGA73bot2, R-E-AL, Salimfadhley, Tano4595	
47	Heironymous Rowe, JarektBot, Nyttend, RHorning	
48	user:RHorning ²²⁷ , user:RHorning ²²⁸	
49	Complex01, EChastain, Glenn, Huebi commonswiki, Jarek-	
	tBot, MGA73bot2, SteinsplitterBot	
50	Peter Andersen ²²⁹ , Peter Andersen ²³⁰	
51	Glenn, Haylli, JarektBot, JuTa, Olivier, Para, Solipsist commonswiki, SteinsplitterBot, Xenophon, YiFeiBot	
52	El Comandante, FSII, Gospodar svemira, HenkvD, Infrog-	
	mation, JarektBot, Mu, Origamiemensch, Quibik, Ranveig, YaCBot	
53	Colocho, FlickreviewR, Glenn, JarektBot, KolbertBot, Nil-	
	faBot, Petrusbarbygere, Simon Burchell	
54	Bogdan	
55	en:User:Worldtraveller ²³¹ ,	
56	Jutta234 ²³² , Jutta234 ²³³	
57	Runologe ²³⁴ , Runologe ²³⁵	
58	Fabienkhan ²³⁶ , Fabienkhan ²³⁷	
59	Emijrpbot, FrescoBot, Hazard-Bot, JMCC1, Jarekt, Jarek-	
	tBot, Look2See1, Pentocelo commonswiki, SchlurcherBot,	
	Turkmen, Wiki-uk, ZxxZxxZ	
60	Elnaz Sarbar	
61	Bontenbal, Emijrpbot, JarektBot, MGA73bot2, P199,	
	Wrightbus	
62	SchlurcherBot,	
63	Mostafameraji ²³⁸ , Mostafameraji ²³⁹	
64	Fr. Spiegel	

²²⁷ http://commons.wikimedia.org/wiki/User:RHorning

²²⁸ https://commons.wikimedia.org/wiki/User:RHorning

²²⁹ http://commons.wikimedia.org/wiki/User:Peter_Andersen

²³⁰ https://commons.wikimedia.org/wiki/User:Peter_Andersen

²³¹ https://en.wikipedia.org/wiki/User:Worldtraveller

 $^{232 \ \}mathtt{http://commons.wikimedia.org/wiki/User:Jutta234}$

²³³ https://commons.wikimedia.org/wiki/User:Jutta234

 $^{234 \ \}mathtt{http://commons.wikimedia.org/wiki/User:Runologe}$

²³⁵ https://commons.wikimedia.org/wiki/User:Runologe

²³⁶ http://commons.wikimedia.org/wiki/User:Fabienkhan

²³⁷ https://commons.wikimedia.org/wiki/User:Fabienkhan

²³⁸ http://commons.wikimedia.org/wiki/User:Mostafameraji

 $^{239 \ \}texttt{https://commons.wikimedia.org/wiki/User:Mostafameraji}$

65	Franco Pecchio ²⁴⁰ from Milano, Italy	
66	Siamax ²⁴¹ , Siamax ²⁴²	
67	Jani Niemenmaa ²⁴³ , Jani Niemenmaa ²⁴⁴	
68	user:Lalupa ²⁴⁵ , user:Lalupa ²⁴⁶	
69	FrescoBot, JarektBot, Pbroks13	
70	originally uploaded by CharlesS ²⁴⁷ in 2004	
71	Alonso de Mendoza, Amahoney, Bibi Saint-Pol, Bjankuloski06en, Bogomolov.PL, BotMultichill, Bukk, Camster, Cathy Richards, CommonsDelinker, Cristiano64, DaniusArcenus, DieBuche, Donarreiskoffer, Ecummenic, FSII, Gryffindor, Henrykus, JarektBot, Jbribeiro1, Jonathan Groß, Jtneill, Mattes, Mechamind90, Mys 721tx, Nuclear-Warfare, RussBot, SchlurcherBot, SieBot, Stas1995, Steerpike, YaCBot	
72	Dbachmann	
73	Elekes Andor ²⁴⁸ , Elekes Andor ²⁴⁹	
74	English: Epiktetos (signed) Français : Épictète (signature)	
75	Д.Колосов	
76	Albedo-ukr, Emijrpbot, G.dallorto, Hazard-Bot, ImageObserver, JarektBot, Kaganer, Man vyi, Shakko, Slavik IVANOV, Solon, Xenophon	

²⁴⁰ https://www.flickr.com/people/78368745@NOO

 $^{241 \ \}mathtt{http://commons.wikimedia.org/wiki/User:Siamax}$

 $^{242 \ \}mathtt{https://commons.wikimedia.org/wiki/User:Siamax}$

²⁴³ http://commons.wikimedia.org/wiki/User:Jniemenmaa

²⁴⁴ https://commons.wikimedia.org/wiki/User:Jniemenmaa

²⁴⁵ http://commons.wikimedia.org/wiki/User:Lalupa

 $^{246 \ \}mathtt{https://commons.wikimedia.org/wiki/User:Lalupa}$

 $^{247 \ \}mathtt{https://en.wikipedia.org/wiki/nl:gebruiker:CharlesS}$

²⁴⁸ http://commons.wikimedia.org/wiki/User:Elekes_Andor

 $^{249 \ \}mathtt{https://commons.wikimedia.org/wiki/User:Elekes_Andor}$

17 Licenses

17.1 GNU GENERAL PUBLIC LICENSE

V----- 2 00 I---- 0007

Copyright © 2007 Free Software Foundation, Inc. http://fsf.org/

Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed. Preamble

The GNU General Public License is a free, copyleft license for software and other kinds of works

The licenses for most software and other practical works are designed to take away your freedom to share and change the works. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change all versions of a program-to make sure it remains free software for all its users. We, the Free Software Foundation, use the GNU General Public License for most of our software; it applies also to any other work released this way by its authors. You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for them if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs, and that you know you can do these things.

To protect your rights, we need to prevent others from denying you these rights or asking you to surrender the rights. Therefore, you have certain responsibilities if you distribute copies of the software, or if you modify it: responsibilities to respect the freedom of others.

For example, if you distribute copies of such a program, whether gration for a fee, you must pass on to the recipients the same freedoms the you received. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

Developers that use the GNU GPL protect your rights with two steps (1) assert copyright on the software, and (2) offer you this License giving you legal permission to copy, distribute and/or modify it.

For the developers' and authors' protection, the GPL clearly explains that there is no warranty for this free software. For both users' and authors' sake, the GPL requires that modified versions be marked as changed, so that their problems will not be attributed erroneously to authors of previous versions.

Some devices are designed to deny users access to install or run modified versions of the software inside them, although the manufacturer can do so. This is fundamentally incompatible with the aim of protecting users' freedom to change the software. The systematic pattern of such abuse occurs in the area of products for individuals to use, which is precisely where it is most unacceptable. Therefore, we have designed this version of the GPL to prohibit the practice for those products. If such problems arise substantially in other domains, we stand ready to extend this provision to those domains in future versions of the GPL, as needed to protect the freedom of users.

Finally, every program is threatened constantly by software patents. States should not allow patents to restrict development and use of software on general-purpose computers, but in those that do, we wish to avoid the special danger that patents applied to a free program could make it effectively proprietary. To prevent this, the GPL assures that patents cannot be used to render the program non-free.

The precise terms and conditions for copying, distribution and modification follow. TERMS AND CONDITIONS 0. Definitions.

"This License" refers to version 3 of the GNU General Public License

"Copyright" also means copyright-like laws that apply to other kinds

"The Program" refers to any copyrightable work licensed under this License. Each licensee is addressed as "you". "Licensees" and "recipients" may be individuals or organizations.

To "modify" a work means to copy from or adapt all or part of the work in a fashion requiring copyright permission, other than the making of an exact copy. The resulting work is called a "modified version" of the earlier work or a work "based on" the earlier work.

A "covered work" means either the unmodified Program or a work based on the Program.

To "propagate" a work means to do anything with it that, without per mission, would make you directly or secondarily liable for infringemen under applicable copyright law, except executing it on a computer o modifying a private copy. Propagation includes copying, distributio (with or without modification), making available to the public, and is some countries other activities as well.

To "convey" a work means any kind of propagation that enables other parties to make or receive copies. Mere interaction with a user through a computer network, with no transfer of a copy, is not conveying.

An interactive user interface displays "Appropriate Legal Notices" to the extent that it includes a convenient and prominently visible feature that (1) displays an appropriate copyright notice, and (2) tells the user that there is no warranty for the work (except to the extent that warranties are provided), that licensees may convey the work under this License, and how to view a copy of this License. If the interface presents a list of user commands or options, such as a menu, a prominent item in the list meets this criterion. 1. Source Code.

The "source code" for a work means the preferred form of the work for making modifications to it. "Object code" means any non-source form

A "Standard Interface" means an interface that either is an official standard defined by a recognized standards body, or, in the case of interfaces specified for a particular programming language, one that is widely used among developers working in that language.

The "System Libraries" of an executable work include anything, other than the work as a whole, that (a) is included in the normal form of packaging a Major Component, but which is not part of that Major Component, and (b) serves only to enable use of the work with that Major Component, or to implement a Standard Interface for which an implementation is available to the public in source code form. A "Major Component", in this context, means a major essential component (kernel, window system, and so on) of the specific operating system (if any) on which the executable work runs, or a compiler used to produce the work, or an object code interpreter used to run it.

The "Corresponding Source" for a work in object code form means all the source code needed to generate, install, and (for an executable work) run the object code and to modify the work, including scripts to control those activities. However, it does not include the work's System Libraries, or general-purpose tools or generally available free programs which are used unmodified in performing those activities but which are not part of the work. For example, Corresponding Source includes interface definition files associated with source files for the work, and the source code for shared libraries and dynamically linked subprograms that the work is specifically designed to require, such as by intimate data communication or control flow between those subprograms and other parts of the work.

The Corresponding Source need not include anything that users can regenerate automatically from other parts of the Corresponding Source.

The Corresponding Source for a work in source code form is that same work. 2. Basic Permissions.

All rights granted under this License are granted for the term of copyright on the Program, and are irrevocable provided the stated conditions are met. This License explicitly affirms your unlimited permission to run the unmodified Program. The output from running a covered work is covered by this License only if the output, given its content, constitutes a covered work. This License acknowledges your rights of fair use or other equivalent, as provided by copyright law.

You may make, run and propagate covered works that you do not coneye, without conditions so long as your license otherwise remains in force. You may convey covered works to others for the sole purpose of having them make modifications exclusively for you, or provide you with facilities for running those works, provided that you comply with the terms of this License in conveying all material for which you do not control copyright. Those thus making or running the covered works for you must do so exclusively on your behalf, under your direction and control, on terms that prohibit them from making any copies of your copyrighted material outside their relationship with you.

Conveying under any other circumstances is permitted solely under the conditions stated below. Sublicensing is not allowed; section IC makes it unnecessary. 3. Protecting Users' Legal Rights From Anti-Circumvention Law.

No covered work shall be deemed part of an effective technological measure under any applicable law fulfilling obligations under article 11 of the WIPO copyright treaty adopted on 20 December 1996, or similar laws prohibiting or restricting circumvention of such measures.

When you convey a covered work, you waive any legal power to forbid circumvention of technological measures to the extent such circumvention is effected by exercising rights under this License with respect to the covered work, and you disclaim any intention to limit operation or modification of the work as a means of enforcing, against the work's users, your or third parties' legal rights to forbid circumvention of technological measures. 4. Convering Verbatim Copies.

You may convey verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and apportately publish on each copy an appropriate copyright notice; keep intact all notices stating that this License and any non-permissive terms added in accord with section 7 apply to the code; keep intact all notices of the absence of any warranty; and give all recipients a copy of this License along with the Program.

You may charge any price or no price for each copy that you convey, and you may offer support or warranty protection for a fee. 5. Conveying Modified Source Versions.

You may convey a work based on the Program, or the modifications to produce it from the Program, in the form of source code under the terms of section 4, provided that you also meet all of these conditions:

* a) The work must carry prominent notices stating that you modified it, and giving a relevant date. * b) The work must carry prominent notices stating that it is released under this License and any conditions added under section 4 to 'Keep intact all notices'. * c) You must license the entire work, as a whole, under this License to anyone who comes into possession of a copy. This License will therefore apply, along with any applicable section 7 additional terms, to the whole of the work, and all its parts, regardless of how they are packaged. This License gives no permission to license the work in any other way, but it does nirvalidate such permission if you have separately received it. * d) If the work has interactive user interfaces, each must display Apporpriate Legal Notices, however, if the Program has interactive interfaces that do not display Appropriate Legal Notices, your work need not make them do so.

A compilation of a covered work with other separate and independent works, which are not by their nature extensions of the covered work, and which are not combined with it such as to form a larger program, in or on a volume of a storage or distribution medium, is called an "aggregate" if the compilation and its resulting copyright are not used to limit the access or legal rights of the compilations users beyond what the individual works permit. Inclusion of a covered work in an aggregate does not cause this License to apply to the other parts of the aggregate. 6. Conveying Non-Source Forms.

You may convey a covered work in object code form under the terms of sections 4 and 5, provided that you also convey the machine-readable Corresponding Source under the terms of this License, in one of these ways:

* a) Convey the object code in, or embodied in, a physical product (including a physical distribution medium), accompanied by the Corresponding Source fixed on a durable physical medium customarily used for software interchange. * b) Convey the object code in, or embodied in, a physical product (including a physical distribution medium), accompanied by a written offer, valid for at least three years and valid for as long as you offer spare parts or customer support for that product model, to give anyone who possesses the object code either (1) a copy of the Corresponding Source for all the software in the product that is covered by this License, on a durable physical medium customarily used for software interchange, for a price no more than your reasonable cost of physically performing this conveying of source, or (2) access to copy the Corresponding Source from a network server at no charge. * C) Convey individual copies of the object code with a copy of the written offer to provide the Corresponding Source. This alternative is allowed only occasionally and noncommercially, and only if you received the object code with sub-section 6b. * d) Convey the object code by offering access from a designated place (gratis or for a charge), and offer equivalent access to the Corresponding Source in the same way through the same place at no further charge. You need not require recipients to copy the Corresponding Source along with the object code. If the place to copy the object code is a network server, the Corresponding Source may be on a

different server (operated by you or a third party) that supports equivalent copying facilities, provided you maintain clear directions next to the object code saying where to find the Corresponding Source. Regardless of what server hosts the Corresponding Source, you remain obligated to ensure that it is available for as long as needed to satisfy these requirements. *e) Convey the object code using peer-to-peer transmission, provided you inform other peers where the object code and Corresponding Source of the work are being offered to the general public at no charge under subsection 6d.

A separable portion of the object code, whose source code is excluded from the Corresponding Source as a System Library, need not be included in conveying the object code work.

A "User Product" is either (1) a "consumer product", which means any tangible personal property which is normally used for personal, family, or household purposes, or (2) anything designed or sold for incorporation into a dwelling. In determining whether a product is a consumer product, doubtful cases shall be resolved in favor of coverage. For a particular product received by a particular user, "normally used" refers to a typical or common use of that class of product, regardless of the status of the particular user or of the way in which the particular user actually uses, or expects or is expected to use, the product. A product is a consumer product regardless of whether the product has substantial commercial, industrial or non-consumer uses, unless such uses represent the only significant mode of use of the product.

"Installation Information" for a User Product means any methods, procedures, authorization keys, or other information required to install and execute modified versions of a covered work in that User Product from a modified version of its Corresponding Source. The information must suffice to ensure that the continued functioning of the modified object code is in no case prevented or interfered with solely because modification has been made.

If you convey an object code work under this section in, or with, or specifically for use in, a User Product, and the conveying occurs as part of a transaction in which the right of possession and use of the User Product is transferred to the recipient in perpetuity or for a fixed term (regardless of how the transaction is characterized), the Corresponding Source conveyed under this section must be accompanied by the Installation Information. But this requirement does not apply if neither you nor any third party retains the ability to install modified object code on the User Product (for example, the work has been installed in ROM).

The requirement to provide Installation Information does not include a requirement to continue to provide support service, warranty, or updates for a work that has been modified or installed by the recipient, or for the User Product in which it has been modified or installed. Access to a network may be denied when the modification itself materially and adversely affects the operation of the network or violates the rules and protocols for communication across the network.

Corresponding Source conveyed, and Installation Information provided, in accord with this section must be in a format that is publicly documented (and with an implementation available to the public in source code form), and must require no special password or key for unpacking, reading or copying. 7. Additional Terms.

"Additional permissions" are terms that supplement the terms of this License by making exceptions from one or more of its conditions. Additional permissions that are applicable to the entire Program shall be treated as though they were included in this License, to the extent that they are valid under applicable law. If additional permissions apply only to part of the Program, that part may be used separately under those permissions, but the entire Program remains governed by this License without regard to the additional permissions.

When you convey a copy of a covered work, you may at your option remove any additional permissions from that copy, or from any part of it. (Additional permissions may be written to require their own removal in certain cases when you modify the work.) You may place additional permissions on material, added by you to a covered work, for which you have or can give appropriate copyright permission.

Notwithstanding any other provision of this License, for material you add to a covered work, you may (if authorized by the copyright holders of that material) supplement the terms of this License with terms:

* a) Disclaiming warranty or limiting liability differently from the terms of sections 15 and 16 of this License; or * b) Requiring preservation of specified reasonable legal notices or author attributions in that material or in the Appropriate Legal Notices displayed by works containing it; or * c) Prohibiting misrepresentation of the origin of that material, or requiring that modified versions of such material be marked in reasonable ways as different from the original version; or * d) Limiting the use for publicity purposes of names of licensors or authors of the material; or * c) Declining to grant rights under trademark law for use of some trade names, trademarks, or service marks; or * f) Requiring indemnification of licensors and authors of that material by amone who conveys the material (or modified versions of it) with contractual assumptions of liability to the recipient, for any liability that these contractual assumptions directly impose on those licensors and authors.

All other non-permissive additional terms are considered "further restrictions" within the meaning of section 10. If the Program as you received it, or any part of it, contains a notice stating that it is governed by this License along with a term that is a further restriction, you may remove that term. If a license document contains a further restriction but permits relicensing or conveying under this License, you may add to a covered work material governed by the terms of that license document, provided that the further restriction does not survive such relicensing or conveying.

If you add terms to a covered work in accord with this section, you must place, in the relevant source files, a statement of the additional terms that apply to those files, or a notice indicating where to find the applicable terms.

Additional terms, permissive or non-permissive, may be stated in the form of a separately written license, or stated as exceptions; the above requirements apply either way. 8. Termination.

You may not propagate or modify a covered work except as expressly provided under this License. Any attempt otherwise to propagate or modify it is void, and will automatically terminate your rights under this License (including any patent licenses granted under the third paragraph of section 11).

However, if you cease all violation of this License, then your license from a particular copyright holder is reinstated (a) provisionally, unless and until the copyright holder explicitly and finally terminates

your license, and (b) permanently, if the copyright holder fails to notify you of the violation by some reasonable means prior to 60 days after the cessation.

Moreover, your license from a particular copyright holder is reinstated permanently if the copyright holder notifies you of the violation by some reasonable means, this is the first time you have received notice of violation of this License (for any work) from that copyright holder, and you cure the violation prior to 30 days after your receipt of the notice.

Termination of your rights under this section does not terminate the licenses of parties who have received copies or rights from you under this License. If your rights have been terminated and not permanently reinstated, you do not qualify to receive new licenses for the same material under section 10. 9. Acceptance Not Required for Having Conies.

You are not required to accept this License in order to receive or run a copy of the Program. Ancillary propagation of a covered work occurring solely as a consequence of using peer-to-peer transmission to receive a copy likewise does not require acceptance. However, nothing other than this License grants you permission to propagate or modify any covered work. These actions infringe copyright if you do not accept this License. Therefore, by modifying or propagating a covered work, you indicate your acceptance of this License to do so. 10. Automatic Licensing of Downstream Recipients.

Each time you convey a covered work, the recipient automatically receives a license from the original licensors, to run, modify and propagate that work, subject to this License. You are not responsible for enforcing compliance by third parties with this License.

An "entity transaction" is a transaction transferring control of an organization, or substantially all assets of one, or subdividing an organization, are merging organizations. If propagation of a covered work results from an entity transaction, each party to that transaction who receives a copy of the work also receives whetever licenses to the work the party's predecessor in interest had or could give under the previous pragraph, plus a right to possession of the Corresponding Source of the work from the predecessor in interest, if the predecessor has it or can get it with reasonable efforts.

You may not impose any further restrictions on the exercise of the rights granted or affirmed under this License. For example, you may not impose a license fee, royalty, or other charge for exercise of rights granted under this License, and you may not initiate litigation (including a cross-claim or counterclaim in a lawsuit) alleging that any patent claim is infringed by making, using, selling, offering for sale, or importing the Program or any portion of it. 11. Patents.

A "contributor" is a copyright holder who authorizes use under this License of the Program or a work on which the Program is based. The work thus licensed is called the contributor's "contributor version".

A contributor's "essential patent claims" are all patent claims owned or controlled by the contributor, whether already acquired or hereafter acquired, that would be infringed by some manner, permitted by this License, of making, using, or selling its contributor version, but do not include claims that would be infringed only as a consequence of further modification of the contributor version. For purposes of this definition, "control" includes the right to grant patent sublicenses in a manner consistent with the requirements of this License.

Each contributor grants you a non-exclusive, worldwide, royalty-free patent license under the contributor's essential patent claims, to make, use, sell, offer for sale, import and otherwise run, modify and propagate the contents of its contributor version.

In the following three paragraphs, a "patent license" is any express agreement or commitment, however denominated, not to enforce a patent (such as an express permission to practice a patent or covenant not to sue for patent infringement). To "grant" such a patent license to a party means to make such an agreement or commitment not to enforce a patent against the party.

If you convey a covered work, knowingly relying on a patent license, and the Corresponding Source of the work is not available for anyour to copy, free of charge and under the terms of this License, through a publicly available network server or other readily accessible means, then you must either (1) cause the Corresponding Source to be so available, or (2) arrange to deprive yourself of the benefit of the patent license for this particular work, or (3) arrange, in a manner consistent with the requirements of this License, to extend the patent license to downstream recipients. "Knowingly relying" means you have actual knowledge that, but for the patent license, your conveying the covered work in a country, or your recipient's use of the covered work in a country, would infringe one or more identifiable patents in that country that you have reason to believe are valid.

If, pursuant to or in connection with a single transaction or arrangement, you convey, or propagate by procuring conveyance of, a covered work, and grant a patent license to some of the parties receiving the covered work authorizing them to use, propagate, modify or convey a specific copy of the covered work, then the patent license you grant is automatically extended to all recipients of the covered work and works

A patent license is "discriminatory" if it does not include within the scope of its coverage, prohibits the secretice of, or is conditioned on the non-exercise of one or more of the rights that are specifically granted under this License. You may not convey a covered work if you are a party to an arrangement with a third party that is in the business of distributing software, under which you make payment to the third party based on the extent of your activity of conveying the work, and under which the third party grants, to any of the parties who would receive the covered work from you. a discriminatory patent license (a) in connection with copies of the covered work conveyed by you (or copies made from those copies), or (b) primarily for and in connection with specific products or compilations that contain the covered work, unless you entered into that arrangement, or that patent license was granted, prior to 28 March 2007.

Nothing in this License shall be construed as excluding or limiting any implied license or other defenses to infringement that may otherwise be available to you under applicable patent law. 12. No Surrender of Others' Freedom.

If conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot convey a covered work so as to satisfy simultaneously your obligations, under this License and any other pertinent obligations, then as a consequence you may not convey it at all. For example, if you agree to terms that obligate you to collect a royalty for further conveying from those to whom you convey the Program, the only way you could satisfy both those terms and this License would be to refrain entirely from conveying the Program. 13. Use with the GNU Affero General Public License.

Notwithstanding any other provision of this License, you have permission to link or combine any covered work with a work licensed under version 3 of the GNU Affero General Public License into a single combined work, and to convey the resulting work. The terms of this License will continue to apply to the part which is the covered work, but the special requirements of the GNU Affero General Public License, section 13, concerning interaction through a network will apply to the combination as such. 14. Revised Versions of this License.

The Free Software Foundation may publish revised and/or new versions of the GNU General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies that a certain numbered version of the GNU General Public License or any later version" applies to it, you have the option of following the terms and conditions either of that numbered version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of the GNU General Public License, you may choose any version ever published by the Free Software Foundation.

If the Program specifies that a proxy can decide which future versions of the GNU General Public License can be used, that proxy's public statement of acceptance of a version permanently authorizes you to choose that version for the Program.

Later license versions may give you additional or different permissions However, no additional obligations are imposed on any author or copyright holder as a result of your choosing to follow a later version. 15 Disclaimer of Warranty.

THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM POVED DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SER.

IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MODIFIES AND/OR CONVEYS THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCLEDATAL, OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OF THEN PERMITES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS, EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. 17. Interpretation of Sections 15 and 16.

If the disclaimer of warranty and limitation of liability provided above cannot be given local legal effect according to their terms, reviewing courts shall apply local law that most closely approximates an absolute waiver of all civil liability in connection with the Program, unless a warranty or assumption of liability accompanies a copy of the Program in return for a fee

END OF TERMS AND CONDITIONS How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively state the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the program's name and a brief idea of what it does.> Copyright (C) < year> < name of author>

This program is free software: you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation, either version 3 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with this program. If not, see http://www.gnu.org/licenses/>.

Also add information on how to contact you by electronic and pap mail.

If the program does terminal interaction, make it output a short notice like this when it starts in an interactive mode:

<program> Copyright (C) < year> < name of author> This program comes with ABSOLUTELY NO WARRANTY; for details type 'show w'. This is free software, and you are welcome to redistribute it under certain conditions; type 'show c' for details.

The hypothetical commands 'show w' and 'show c' should show the appropriate parts of the General Public License. Of course, your program's commands might be different; for a GUI interface, you would use an "about box".

You should also get your employer (if you work as a programmer) or school, if any, to sign a "copyright disclaimer" for the program, if necessary. For more information on this, and how to apply and follow the GNU GPL, see http://www.gnu.org/licenses/>.

The GNU General Public License does not permit incorporating your program into proprietary programs. If your program is a subroutine library, you may consider it more useful to permit linking proprietary applications with the library. If this is what you want to do, use the GNU Lesser General Public License instead of this License. But first, please read "http://www.gnu.org/philosophy/why-not-lgp.html>.

17.2 GNU Free Documentation License

V------ 1 2 2 N--------- 2006

Copyright © 2000, 2001, 2002, 2007, 2008 Free Software Foundation, Inc. http://fsf.org/

Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed. 0. PREAMBLE

The purpose of this License is to make a manual, textbook, or other functional and useful document "free" in the sense of freedom: to assure everyone the effective freedom to copy and redistribute it, with or without modifying it, either commercially or noncommercially. Secondarily, this License preserves for the author and publisher a way to get credit for their work, while not being considered responsible for modifications made by others.

This License is a kind of "copyleft", which means that derivative works of the document must themselves be free in the same sense. It complements the GNU General Public License, which is a copyleft license designed for free software.

We have designed this License in order to use it for manuals for free software, because free software needs free documentation: a free program should come with manuals providing the same freedoms that the software does. But this License is not limited to software manuals; it can be used for any textual work, regardless of subject matter or whether it is published as a printed book. We recommend this License principally for works whose purpose is instruction or reference. 1. APPLICABILITY AND DEFINITIONS

This License applies to any manual or other work, in any medium, that contains a notice placed by the copyright holder saying it can be distributed under the terms of this License. Such a notice grants a world-wide, royalty-free license, unlimited in duration, to use that work under the conditions stated herein. The "Document", below, refers to any such manual or work. Any member of the public is a licensee, and is addressed as "you". You accept the license if you copy, modify or distribute the work in a way requiring permission under copyright law.

A "Modified Version" of the Document means any work containing the Document or a portion of it, either copied verbatim, or with modifications and/or translated into another language.

A "Secondary Section" is a named appendix or a front-matter section of the Document that deals exclusively with the relationship of the publishers or authors of the Document to the Document's overall subject (or to related matters) and contains nothing that could fall directly within that overall subject. (Thus, if the Document is in part a textbook of mathematics, a Secondary Section may not explain any mathematics). The relationship could be a matter of historical connection with the subject or with related matters, or of legal, commercial, philosophical, ethical or political position regarding them.

The "Invariant Sections" are certain Secondary Sections whose titles are designated, as being those of Invariant Sections, in the notice that asys that the Document is released under this License. If a section does not fit the above definition of Secondary then it is not allowed to be designated as Invariant. The Document may contain zero Invariant Sections. If the Document does not identify any Invariant Sections then there are none.

The "Cover Texts" are certain short passages of text that are listed, as Front-Cover Texts or Back-Cover Texts, in the notice that says that the Document is released under this License. A Front-Cover Text may be at most 5 words, and a Back-Cover Text may be at most 25 words.

A "Transparent" copy of the Document means a machine-readable copy, represented in a format whose specification is available to the general public, that is suitable for revising the document straightforwardly with generic text editors or (for images composed of pixels) generic paint programs or (for drawings) some widely available drawing editor, and that is suitable for input to text formatters or for automatic translation to a variety of formats suitable for input to text formatters. A copy made in an otherwise Transparent file format whose markup, are been arranged to thwart or discourage subsequent modification by readers is not Transparent. An image format is not Transparent if used for any substantial amount of text. A copy that is not 'Transparent' is called 'Opaque'.

Examples of suitable formats for Transparent copies include plain ASCII without markup, Texinfo input format, LaTeX input format, SGML or XML using a publicly available DTD, and standard-conforming simple HTML, PostScript or DFP designed for human modification. Examples of transparent image formats include PNG, XCF and JFC, Opaque formats include proprietary formats that can be read and edited only by proprietary word processors, SGML or XML for which the DTD and/or processing tools are not generally available, and the machine-generated HTML, PostScript or PDF produced by some word processors for output purposes only.

The "Title Page" means, for a printed book, the title page itself, plus such following pages as are needed to hold, legibly, the material this License requires to appear in the title page. For works in formats which do not have any title page as such, "Title Page" means the text near the most prominent appearance of the work's title, preceding the beginning of the body of the text.

The "publisher" means any person or entity that distributes copies of the Document to the public.

A section "Entitled XYZ" means a named subunit of the Document whose title either is precisely XYZ or contains XYZ in parentheses

following text that translates XYZ in another language. (Here XYZ stands for a specific section name mentioned below, such as "Acknowledgements", 'Dedications', 'Endorsements', or 'History'.) To 'Preserve the Title' of such a section when you modify the Document means that it remains a section "Entitled XYZ" according to this definition.

The Document may include Warranty Disclaimers next to the notice which states that this License applies to the Document. These Waranty Disclaimers are considered to be included by reference in this License, but only as regards disclaiming warranties: any other implication that these Warranty Disclaimers may have is void and has no effect on the meaning of this License. 2. VERBATIM COPYING

You may copy and distribute the Document in any medium, either commercially or noncommercially, provided that this License, the copyright notices, and the license notice saying this License applies to the Document are reproduced in all copies, and that you add nother conditions whatsoever to those of this License. You may not use technical measures to obstruct or control the reading or further copying of the copies you make or distribute. However, you may accept compensation in exchange for copies. If you distribute a large enough number of copies you must also follow the conditions in section 3.

You may also lend copies, under the same conditions stated above, an you may publicly display copies. 3. COPYING IN QUANTITY

If you publish printed copies (or copies in media that commonly have printed covers) of the Document, numbering more than 100, and the Document's license notice requires Cover Texts, you must enclose the copies in covers that carry, clearly and legibly, all these Cover Texts Front-Cover Texts on the front cover, and Back-Cover Texts on the back cover. Both covers must also clearly and legibly identify you as the publisher of these copies. The front cover must present the full title with all words of the title equally prominent and visible. You may add other material on the covers in addition. Copying with changes limited to the covers, as long as they preserve the title of the Document and satisfy these conditions, can be treated as verbatim copying in other respects.

If the required texts for either cover are too voluminous to fit legibly, you should put the first ones listed (as many as fit reasonably) on the actual cover, and continue the rest onto adjacent pages.

If you publish or distribute Opaque copies of the Document numbering more than 100, you must either include a machine-readable Transparent copy along with each Opaque copy, or state in or with each Opaque copy a computer-network location from which the general network-using public has access to download using public-standard network protocols a complete Transparent copy of the Document, free of added material. If you use the latter option, you must take reasonably prudent steps, when you begin distribution of Opaque copies in quantity, to ensure that this Transparent copy will remain thus accessible at the stated location until at least one year after the last time you distribute an Opaque copy (directly or through your agents or retailers) of that edition to the public.

It is requested, but not required, that you contact the authors of the Document well before redistributing any large number of copies, to give them a chance to provide you with an updated version of the Document. 4. MODIFICATIONS

You may copy and distribute a Modified Version of the Document under the conditions of sections 2 and 3 above, provided that you release the Modified Version under percisely this License, with the Modified Version filling the role of the Document, thus licensing distribution and modification of the Modified Version to whoever possesses a copy of it. In addition, you must do these things in the Modified Version:

and modification of the Modined version to whoever possesses a copy of it. In addition, you must do these things in the Modified Version:

* A. Use in the Title Page (and on the covers, if any) a title distinct from that of the Document, and from those of previous versions (which should, if there were any, be listed in the History section of the Document). You may use the same title as a previous version if the original publisher of that version gives permission. * B. List on the Title Page, as authors, one or more persons or entities responsible for authorship of the modifications in the Modified Version, together with at least five of the principal authors of the Document (all of its principal authors, if it has fewer than five), unless they release you from this requirement. * C. State on the Title page the name of the publisher of the Modified Version, as the publisher. * B. Preserve all the copyright notices of the Document. * E. Add an appropriate copyright notice for your modifications adjacent to the other copyright notices. * F. Include, immediately after the copyright notices, a license notice giving the public permission to use the Modified Version under the terms of this License, in the form shown in the Addendum below. * G. Preserve in that license notice that lists of Invariant Section under the terms of this License, in the form shown in the Addendum below. * G. Preserve in that license notice that lists of Invariant Section under the terms of this License, in the form shown in the Addendum below. * G. Preserve in that license notice the full lists of Invariant Sections and required Cover Texts given in the Document's license notice. * H. Include an unaltered copy of this License. * I. Preserve the section Entitled "Mistory" Preserve is Title, and add to it an item stating at least the title, year, new authors, and publisher of the Modified Version as given on its Title Page, then add an item describing the Modified Version as stated in the previous sentence. * J. Preserve the network location, i

in their titles. Section numbers or the equivalent are not considered part of the section titles. * M. Delete any section Entitled "Endorsements". Such a section may not be included in the Modified Version. * N. Do not retitle any existing section to be Entitled "Endorsements" or to conflict in title with any Invariant Section. * O. Preserve any Warranty Disclaimers.

If the Modified Version includes new front-matter sections or appendices that qualify as Secondary Sections and contain no material copied from the Document, you may at your option designate some or all of these sections as invariant. To do this, add their titles to the list of Invariant Sections in the Modified Version's license notice. These titles must be distinct from any other section titles.

You may add a section Entitled "Endorsements", provided it contains nothing but endorsements of your Modified Version by various parties—for example, statements of peer review or that the text has been approved by an organization as the authoritative definition of a standard.

You may add a passage of up to five words as a Front-Cover Text, and a passage of up to 25 words as a Back-Cover Text, to the end of the list of Cover Texts in the Modified Version. Only one passage of Front-Cover Text and one of Back-Cover Text may be added by or through arrangements made by) any one entity. If the Document already includes a cover text for the same cover, previously added by you or by arrangement made by the same entity you are acting on behalf of, you may not add another; but you may replace the old one, on explicit permission from the previous publisher that added the old one.

The author(s) and publisher(s) of the Document do not by this License give permission to use their names for publicity for or to assert or imply endorsement of any Modified Version. 5. COMBINING DOCUMENTS

You may combine the Document with other documents released under this License, under the terms defined in section 4 above for modified versions, provided that you include in the combination all of the Invariant Sections of all of the original documents, unmodified, and list them all as Invariant Sections of your combined work in its license notice, and that you preserve all their Warranty Disclaimers.

The combined work need only contain one copy of this License, and multiple identical Invariant Sections may be replaced with a single copy. If there are multiple Invariant Sections with the same name but different contents, make the title of each such section unique by adding at the end of it, in parentheses, the name of the original author or publisher of that section if known, or else a unique number. Make the same adjustment to the section titles in the list of Invariant Sections in the license notice of the combined work.

In the combination, you must combine any sections Entitled "History" in the various original documents, forming one section Entitled "History"; likewise combine any sections Entitled "Acknowledgements", and any sections Entitled "Dedications". You must delete all sections Entitled "Endorsements" 6. COLLECTIONS OF DOCUMENTS.

You may make a collection consisting of the Document and other documents released under this License, and replace the individual copies of this License in the various documents with a single copy that is included in the collection, provided that you follow the rules of this License for verbatim copying of each of the documents in all other respects.

You may extract a single document from such a collection, and distribute it individually under this License, provided you insert a copy of this License into the extracted document, and follow this License in all other respects regarding verbatim copying of that document. 7. AGGREGATION WITH INDEPENDENT WORKS

A compilation of the Document or its derivatives with other separate and independent documents or works, in or on a volume of a storage or distribution medium, is called an "aggregate" if the copyright resulting from the compilation is not used to limit the legal rights of the compilation's users beyond what the individual works permit. When the Document is included in an aggregate, this License does not apply to the other works in the aggregate which are not themselves derivative works of the Document.

If the Cover Text requirement of section 3 is applicable to these copies of the Document, then if the Document is less than one half of the entire aggregate, the Document's Cover Texts may be placed on covers that bracket the Document within the aggregate, or the electronic equivalent of covers if the Document is in electronic form. Otherwise they must appear on printed covers that bracket the whole aggregate. 8. TRANSLATION

Translation is considered a kind of modification, so you may distribute translations of the Document under the terms of section 4. Replacing Invariant Sections with translations requires special permission from their copyright holders, but you may include translations of some or all Invariant Sections in addition to the original versions of these Invariant Sections. You may include a translation of this License, and all the license notices in the Document, and any Warranty Disclaimers, provided that you also include the original English version of this License and the original versions of those notices and disclaimers. In case of a disagreement between the translation and the original version of this License or a notice or disclaimer, the original version will prevail.

If a section in the Document is Entitled "Acknowledgements", "Dedications", or "History", the requirement (section 4) to Preserve its Title

(section 1) will typically require changing the actual title. 9. TERMINATION

You may not copy, modify, sublicense, or distribute the Document except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense, or distribute it is void, and will automatically terminate your rights under this License.

However, if you cease all violation of this License, then your license from a particular copyright holder is reinstated (a) provisionally, unless and until the copyright holder explicitly and finally terminates your license, and (b) permanently, if the copyright holder fails to notify you of the violation by some reasonable means prior to 60 days after the cessation.

Moreover, your license from a particular copyright holder is reinstated permanently if the copyright holder notifies you of the violation by some reasonable means, this is the first time you have received notice of violation of this License (for any work) from that copyright holder, and you cure the violation prior to 30 days after your receipt of the notice.

Termination of your rights under this section does not terminate the licenses of parties who have received copies or rights from you under this License. If your rights have been terminated and not permanently reinstated, receipt of a copy of some or all of the same material does not give you any rights to use it. 10. FUTURE REVISIONS OF THIS LICENSE

The Free Software Foundation may publish new, revised versions of the GNU Free Documentation License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns. See http://www.gnu.org/copyleft/.

Each version of the License is given a distinguishing version number. If the Document specifies that a particular numbered version of this License "or any later version" applies to it, you have the option of following the terms and conditions either of that specified version or of any later version that has been published (not as a draft) by the Free Software Foundation. If the Document does not specify a version number of this License, you may choose any version ever published (not as a draft) by the Free Software Foundation. If the Document specifies that a proxy can decide which future versions of this License can be used, that proxy's public statement of acceptance of a version permanently authorizes you to choose that version for the Document.

11. RELICENSING

"Massive Multiauthor Collaboration Site" (or "MMC Site") means any World Wide Web server that publishes copyrightable works and also provides prominent facilities for anybody to edit those works. A public wiki that anybody can edit is an example of such a server. A "Massive Multiauthor Collaboration" or "MMC") contained in the site means any set of copyrightable works thus published on the MMC site.

"CC-BY-SA" means the Creative Commons Attribution-Share Allike 3.0 license published by Creative Commons Corporation, a not-forprofit corporation with a principal place of business in San Francisco, California, as well as future copyleft versions of that license published by that same organization.

"Incorporate" means to publish or republish a Document, in whole or in part, as part of another Document.

An MMC is "eligible for relicensing" if it is licensed under this License, and if all works that were first published under this License somewhere other than this MMC, and subsequently incorporated in whole or in part into the MMC. (1) had no cover texts or invariant sections, and (2) were thus incorporated prior to November 1, 2008.

The operator of an MMC Site may republish an MMC contained in the site under CC-BY-SA on the same site at any time before August I, 2009, provided the MMC is eligible for relicensing. ADDENDUM: How to use this License for your documents

To use this License in a document you have written, include a copy of the License in the document and put the following copyright and license notices just after the title page:

Copyright (C) YEAR YOUR NAME. Permission is granted to copy, distribute and/or modify this document under the terms of the GNU Free Documentation License, Version 1.3 or any later version published by the Free Software Foundation; with no Invariant Sections, no Front-Cover Texts, and no Back-Cover Texts. A copy of the license is included in the section entitled "GNU Free Documentation License".

If you have Invariant Sections, Front-Cover Texts and Back-Cover Texts, replace the "with ... Texts." line with this:

with the Invariant Sections being LIST THEIR TITLES, with the Front-Cover Texts being LIST, and with the Back-Cover Texts being LIST.

If you have Invariant Sections without Cover Texts, or some other combination of the three, merge those two alternatives to suit the situation.

If your document contains nontrivial examples of program code, we recommend releasing these examples in parallel under your choice of free software license, such as the GNU General Public License, to permit their use in free software.

17.3 GNU Lesser General Public License

GNU LESSER GENERAL PUBLIC LICENSE

Version 3, 29 June 2007

Copyright © 2007 Free Software Foundation, Inc. <http://fsf.org/>

Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

This version of the GNU Lesser General Public License incorporates the terms and conditions of version 3 of the GNU General Public License, supplemented by the additional permissions listed below. 0. Additional Definitions.

As used herein, "this License" refers to version 3 of the GNU Lesser General Public License, and the "GNU GPL" refers to version 3 of the GNU General Public License.

"The Library" refers to a covered work governed by this License, other than an Application or a Combined Work as defined below.

An "Application" is any work that makes use of an interface provided by the Library, but which is not otherwise based on the Library. Defining a subclass of a class defined by the Library is deemed a mode of using an interface provided by the Library.

A "Combined Work" is a work produced by combining or linking an Application with the Library. The particular version of the Library with which the Combined Work was made is also called the "Linked Version".

The "Minimal Corresponding Source" for a Combined Work means the Corresponding Source for the Combined Work, excluding any source code for portions of the Combined Work that, considered in isolation, are based on the Application, and not on the Linked Version.

The "Corresponding Application Code" for a Combined Work means the object code and/or source code for the Application, including any data and utility programs needed for reproducing the Combined Work from the Application, but excluding the System Libraries of the Combined Work. 1. Exception to Section 3 of the GNU GPL.

You may convey a covered work under sections 3 and 4 of this License without being bound by section 3 of the GNU GPL. 2. Conveying Modified Versions.

If you modify a copy of the Library, and, in your modifications, a facility refers to a function or data to be supplied by an Application that uses the facility (other than as an argument passed when the facility is invoked), then you may convey a copy of the modified version:

- * a) under this License, provided that you make a good faith effort to ensure that, in the event an Application does not supply the function or data, the facility still operates, and performs whatever part of its purpose remains meaningful, or * b) under the GNU GPL, with none of the additional permissions of this License applicable to that copy.
- 3. Object Code Incorporating Material from Library Header Files.

The object code form of an Application may incorporate material from a header file that is part of the Library. You may convey such object code under terms of your choice, provided that, if the incorporated material is not limited to numerical parameters, data structure layouts and accessors, or small macros, inline functions and templates (ten or fewer lines in length), you do both of the following:

- * a) Give prominent notice with each copy of the object code that the Library is used in it and that the Library and its use are covered by this License. * b) Accompany the object code with a copy of the GNU GPL and this license document.
- 4. Combined Works.

You may convey a Combined Work under terms of your choice that, taken together, effectively do not restrict modification of the portions of the Library contained in the Combined Work and reverse engineering for debugging such modifications, if you also do each of the follow-

* a) Give prominent notice with each copy of the Combined Work that the Library is used in it and that the Library and its use are covered by this License. * b) Accompany the Combined Work with a copy of the GNU GPL and this license document. * c) For a Combined Work that displays copyright notices during execution, include the copyright notice for the Library among these notices, as well as a reference directing the user to the copies of the GNU GPL and this license document. * d) Do one of the following: o) Convey the Minimal Corresponding Source under the terms of this License, and the Corresponding Application Code in a form suitable for, and under terms that permit, the user to recombine or relink the Application with a modified version of the Linked Version to produce a modified Combined Work, in the manner specified by section 6 of the GNU GPL for conveying Corresponding Source. o 1) Use a suitable shared Combined Work, in the manner specified by section 6 of the GNU GPL for conveying Corresponding Source. o 1) Use a suitable shared to the user's computer system, and (b) will operate properly with a modified version of the Library that is interface-compatible with the Library conduction of the GNU GPL, and only to the extent that such information to 6 of the GNU GPL, and only to the extent that such information of 6 of the GNU GPL, and only to the extent that such information work of the GNU GPL, and only to the extent that such information work of the GNU GPL, and only to the extent that such information work of the GNU GPL, and only to the extent that such information work of the GNU GPL, and only to the extent that such information under section 6 of the GNU GPL for some symplection would of the Combined Work produced by recombining or relinking the Application of the Combined Work produced by recombining or relinking the Application of the Combined Work produced by recombining or relinking the Application of the GNU GPL for conveying Gorresponding Source.

Combined Libraries.

You may place library facilities that are a work based on the Library side by side in a single library together with other library facilities that are not Applications and are not covered by this License, and convey such a combined library under terms of your choice, if you do both of

* a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any other library facilities, conveyed under the terms of this License. * b) Give prominent notice with the combined library that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.

6. Revised Versions of the GNU Lesser General Public License.

The Free Software Foundation may publish revised and/or new versions of the GNU Lesser General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Library as you received it specifies that a certain numbered version of the GNU Lesser General Public License "or any later version" applies to it, you have the option of following the terms and conditions either of that published version or of any later version published by the Free Software Foundation. If the Library as you received it does not specify a version number of the GNU Lesser General Public License, you may choose any version of the GNU Lesser General Public License ever published by the Free Software Foundation.

If the Library as you received it specifies that a proxy can decide whether future versions of the GNU Lesser General Public License shall apply, that proxy's public statement of acceptance of any version is permanent authorization for you to choose that version for the Library.