Mesopotamia

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Map showing the extent of Mesopotamia

**Mesopotamia** ([/ˌmɛsəpəˈteɪmiə/](https://en.wikipedia.org/wiki/Help%3AIPA_for_English), [Ancient Greek](https://en.wikipedia.org/wiki/Ancient_Greek): Μεσοποταμία "[land] between rivers"; from Ancient Armenian Միջագետք (Mijagetq); [Arabic](https://en.wikipedia.org/wiki/Arabic_language): بلاد الرافدين‎‎ *bilād ar-rāfidayn*; [Kurdish](https://en.wikipedia.org/wiki/Kurdish_language): میزۆپۆتامیا‎; [Persian](https://en.wikipedia.org/wiki/Persian_language): میان‌رودان‎‎ *Mayan rodān*; [Syriac](https://en.wikipedia.org/wiki/Syriac_language): ܒܝܬ ܢܗܪܝܢ‎ [*Beth Nahrain*](https://en.wikipedia.org/wiki/Beth_Nahrain) "land of rivers") is a name for the area of the [Tigris–Euphrates river system](https://en.wikipedia.org/wiki/Tigris%E2%80%93Euphrates_river_system), in modern days roughly corresponding to most of [Iraq](https://en.wikipedia.org/wiki/Iraq) plus [Kuwait](https://en.wikipedia.org/wiki/Kuwait), the eastern parts of [Syria](https://en.wikipedia.org/wiki/Syria), Southeastern [Turkey](https://en.wikipedia.org/wiki/Turkey), and regions along the [Turkish-Syrian](https://en.wikipedia.org/wiki/Syria%E2%80%93Turkey_border) and [Iran–Iraq borders](https://en.wikipedia.org/wiki/Iran%E2%80%93Iraq_border).

Widely considered to be one of the [cradles of civilization](https://en.wikipedia.org/wiki/Cradles_of_civilization) by the [Western world](https://en.wikipedia.org/wiki/Western_world), [Bronze Age](https://en.wikipedia.org/wiki/Bronze_Age) Mesopotamia included [Sumer](https://en.wikipedia.org/wiki/Sumer) and the [Akkadian](https://en.wikipedia.org/wiki/Akkadian_Empire), [Babylonian](https://en.wikipedia.org/wiki/Babylonia), and[Assyrian](https://en.wikipedia.org/wiki/Assyria) empires, all native to the territory of modern-day Iraq. In the [Iron Age](https://en.wikipedia.org/wiki/Iron_Age), it was controlled by the [Neo-Assyrian](https://en.wikipedia.org/wiki/Neo-Assyrian_Empire) and [Neo-Babylonian Empires](https://en.wikipedia.org/wiki/Neo-Babylonian_Empire).

The Sumerians and Akkadians (including Assyrians and Babylonians) dominated Mesopotamia from the beginning of [written history](https://en.wikipedia.org/wiki/Recorded_history) (c. 3100 BC) to the fall of Babylon in 539 BC, when it was conquered by the [Achaemenid Empire](https://en.wikipedia.org/wiki/Achaemenid_Empire). It fell to [Alexander the Great](https://en.wikipedia.org/wiki/Alexander_the_Great) in 332 BC, and after his death, it became part of the Greek Seleucid.

Around 150 BC, Mesopotamia was under the control of the [Parthian Empire](https://en.wikipedia.org/wiki/Parthian_Empire). Mesopotamia became a battleground between the [Romans](https://en.wikipedia.org/wiki/Ancient_Rome) and Parthians, with western parts of Mesopotamia coming under ephemeral Roman control. In AD 226, eastern part of it fell to the Sassanid Persians. Division of Mesopotamia between Roman (Byzantine from AD 395) and Sassanid Empires lasted until the 7th century [Muslim conquest of Persia](https://en.wikipedia.org/wiki/Muslim_conquest_of_Persia) of the [Sasanian Empire](https://en.wikipedia.org/wiki/Sasanian_Empire) and [Muslim conquest of the Levant](https://en.wikipedia.org/wiki/Muslim_conquest_of_the_Levant) from Byzantines. A number of primarily neo-Assyrian and Christian native Mesopotamian states existed between the 1st century BC and 3rd century AD, including [Adiabene](https://en.wikipedia.org/wiki/Adiabene), [Osroene](https://en.wikipedia.org/wiki/Osroene), and [Hatra](https://en.wikipedia.org/wiki/Hatra).

Mesopotamia is the site of the earliest developments of the [Neolithic Revolution](https://en.wikipedia.org/wiki/Neolithic_Revolution) from around 10,000 BC. It has been identified as having "inspired some of the most important developments in human history including the invention of the [wheel](https://en.wikipedia.org/wiki/Wheel), the planting of the first cereal [crops](https://en.wikipedia.org/wiki/Crop) and the development of [cursive](https://en.wikipedia.org/wiki/Cursive) script, [mathematics](https://en.wikipedia.org/wiki/Mathematics), [astronomy](https://en.wikipedia.org/wiki/Astronomy) and [agriculture](https://en.wikipedia.org/wiki/Agriculture)."

Etymology

Map showing the [Tigris–Euphrates river system](https://en.wikipedia.org/wiki/Tigris%E2%80%93Euphrates_river_system), which surrounds Mesopotamia

The regional toponym *Mesopotamia* comes from the [ancient Greek](https://en.wikipedia.org/wiki/Ancient_Greek) root words μέσος (*meso*) "middle" and ποταμός (*potamos*) "river" and literally means "(Land) between two/the rivers". It is used throughout the Greek [Septuagint](https://en.wikipedia.org/wiki/Septuagint) (ca. 250 BC) to translate the Hebrew equivalent *Naharaim*. An even earlier Greek usage of the name *Mesopotamia* is evident from [*The Anabasis of Alexander*](https://en.wikipedia.org/wiki/The_Anabasis_of_Alexander), which was written in the late 2nd century AD, but specifically refers to sources from the time of [Alexander the Great](https://en.wikipedia.org/wiki/Alexander_the_Great). In the *Anabasis*, Mesopotamia was used to designate the land east of the [Euphrates](https://en.wikipedia.org/wiki/Euphrates) in north [Syria](https://en.wikipedia.org/wiki/Syria). The [Aramaic](https://en.wikipedia.org/wiki/Aramaic_language) term *biritum/birit narim* corresponded to a similar geographical concept. Later, the term Mesopotamia was more generally applied to all the lands between the Euphrates and the [Tigris](https://en.wikipedia.org/wiki/Tigris), thereby incorporating not only parts of Syria but also almost all of Iraq and southeastern [Turkey](https://en.wikipedia.org/wiki/Turkey). The neighboring steppes to the west of the Euphrates and the western part of the [Zagros Mountains](https://en.wikipedia.org/wiki/Zagros_Mountains) are also often included under the wider term Mesopotamia.

A further distinction is usually made between Northern or [Upper Mesopotamia](https://en.wikipedia.org/wiki/Upper_Mesopotamia) and Southern or Lower Mesopotamia. Upper Mesopotamia, also known as the *Jazira*, is the area between the Euphrates and the Tigris from their sources down to [Baghdad](https://en.wikipedia.org/wiki/Baghdad). Lower Mesopotamia consists of southern Iraq, [Kuwait](https://en.wikipedia.org/wiki/Kuwait) and parts of western Iran. In modern academic usage, the term Mesopotamia often also has a chronological connotation. It is usually used to designate the area until the [Muslim conquests](https://en.wikipedia.org/wiki/Muslim_conquests), with names like Syria, Jazirah, and Iraq being used to describe the region after that date. It has been argued that these later euphemisms are [Eurocentric](https://en.wikipedia.org/wiki/Eurocentrism) terms attributed to the region in the midst of various 19th-century Western encroachments.

Geography

*Main article:*[*Geography of Mesopotamia*](https://en.wikipedia.org/wiki/Geography_of_Mesopotamia)

Known world of the Mesopotamian, Babylonian, and Assyrian cultures from documentary sources

Mesopotamia encompasses the land between the [Euphrates](https://en.wikipedia.org/wiki/Euphrates) and [Tigris](https://en.wikipedia.org/wiki/Tigris) rivers, both of which have their headwaters in the [Armenian Highlands](https://en.wikipedia.org/wiki/Armenian_Highlands). Both rivers are fed by numerous tributaries, and the entire river system drains a vast mountainous region. Overland routes in Mesopotamia usually follow the Euphrates because the banks of the Tigris are frequently steep and difficult. The climate of the region is semi-arid with a vast desert expanse in the north which gives way to a 15,000 square kilometers (5,800 sq mi) region of marshes, lagoons, mud flats, and reed banks in the south. In the extreme south, the Euphrates and the Tigris unite and empty into the [Persian Gulf](https://en.wikipedia.org/wiki/Persian_Gulf).

The arid environment which ranges from the northern areas of rain-fed agriculture to the south where irrigation of agriculture is essential if a surplus [energy returned on energy invested](https://en.wikipedia.org/wiki/Energy_returned_on_energy_invested) (EROEI) is to be obtained. This irrigation is aided by a high water table and by melting snows from the high peaks of the northern [Zagros Mountains](https://en.wikipedia.org/wiki/Zagros_Mountains) and from the Armenian Highlands, the source of the Tigris and Euphrates Rivers that give the region its name. The usefulness of irrigation depends upon the ability to mobilize sufficient labor for the construction and maintenance of canals, and this, from the earliest period, has assisted the development of urban settlements and centralized systems of political authority.

Agriculture throughout the region has been supplemented by nomadic pastoralism, where tent-dwelling nomads herded sheep and goats (and later camels) from the river pastures in the dry summer months, out into seasonal grazing lands on the desert fringe in the wet winter season. The area is generally lacking in building stone, precious metals and timber, and so historically has relied upon long-distance trade of agricultural products to secure these items from outlying areas. In the marshlands to the south of the area, a complex water-borne fishing culture has existed since prehistoric times, and has added to the cultural mix.

Periodic breakdowns in the cultural system have occurred for a number of reasons. The demands for labor has from time to time led to population increases that push the limits of the ecological carrying capacity, and should a period of climatic instability ensue, collapsing central government and declining populations can occur. Alternatively, military vulnerability to invasion from marginal hill tribes or nomadic pastoralists has led to periods of trade collapse and neglect of irrigation systems. Equally, centripetal tendencies amongst city states has meant that central authority over the whole region, when imposed, has tended to be ephemeral, and localism has fragmented power into tribal or smaller regional units. These trends have continued to the present day in Iraq.

History

One of 18 [Statues of Gudea](https://en.wikipedia.org/wiki/Statues_of_Gudea), a ruler around 2090 BC

*Main article:*[*History of Mesopotamia*](https://en.wikipedia.org/wiki/History_of_Mesopotamia)*. Further information:*[*History of Iraq*](https://en.wikipedia.org/wiki/History_of_Iraq)*,*[*History of the Middle East*](https://en.wikipedia.org/wiki/History_of_the_Middle_East)*, and*[*Chronology of the ancient Near East*](https://en.wikipedia.org/wiki/Chronology_of_the_ancient_Near_East)

The pre-history of the [Ancient Near East](https://en.wikipedia.org/wiki/Ancient_Near_East) begins in the [Lower Paleolithic](https://en.wikipedia.org/wiki/Lower_Paleolithic) period, but writing began with a pictographic script in the Uruk IV period (ca. 4th millennium BC), and the documented record of actual historical events — and the ancient history of lower Mesopotamia — commence in the mid-third millennium BC with cuneiform records of early dynastic kings, and ends with either the arrival of the [Achaemenid Empire](https://en.wikipedia.org/wiki/Achaemenid_Empire) in the late 6th century BC, or with the Muslim conquest and the establishment of the Caliphate in the late 7th century AD, from which point the region came to be known as [Iraq](https://en.wikipedia.org/wiki/History_of_Iraq). During this period Mesopotamia housed some of the world's most ancient highly developed and socially complex states.

The region was one of the [four riverine civilizations](https://en.wikipedia.org/wiki/River_valley_civilization) where [writing](https://en.wikipedia.org/wiki/Writing) was invented, along with the [Nile](https://en.wikipedia.org/wiki/Nile) valley in [Egypt](https://en.wikipedia.org/wiki/Egypt), the [Indus Valley Civilization](https://en.wikipedia.org/wiki/Indus_Valley_Civilization) in the [Indian subcontinent](https://en.wikipedia.org/wiki/Indian_subcontinent), and the [Yellow River](https://en.wikipedia.org/wiki/Yellow_River) in [China](https://en.wikipedia.org/wiki/China). Mesopotamia housed historically important cities such as [Uruk](https://en.wikipedia.org/wiki/Uruk), [Nippur](https://en.wikipedia.org/wiki/Nippur), [Nineveh](https://en.wikipedia.org/wiki/Nineveh), [Assur](https://en.wikipedia.org/wiki/Assur) and [Babylon](https://en.wikipedia.org/wiki/Babylon), as well as major territorial states such as the city of [Eridu](https://en.wikipedia.org/wiki/Eridu), the Akkadian kingdoms, the [Third Dynasty of Ur](https://en.wikipedia.org/wiki/Third_Dynasty_of_Ur), and the various [Assyrian](https://en.wikipedia.org/wiki/Assyria) empires. Some of the important historical Mesopotamian leaders were [Ur-Nammu](https://en.wikipedia.org/wiki/Ur-Nammu) (king of Ur), [Sargon of Akkad](https://en.wikipedia.org/wiki/Sargon_of_Akkad) (who established the Akkadian Empire), [Hammurabi](https://en.wikipedia.org/wiki/Hammurabi) (who established the Old Babylonian state), [Ashur-uballit II](https://en.wikipedia.org/wiki/Ashur-uballit_II) and [Tiglath-Pileser I](https://en.wikipedia.org/wiki/Tiglath-Pileser_I) (who established the Assyrian Empire).

Studies have reported that most [Irish](https://en.wikipedia.org/wiki/Irish_people) and [Britons](https://en.wikipedia.org/wiki/British_people) are descendants of farmers who left modern day [Iraq](https://en.wikipedia.org/wiki/Iraq) and [Syria](https://en.wikipedia.org/wiki/Syria) 10,000 years ago. Genetic researchers say they have found compelling evidence that four out of five (80% of) [white](https://en.wikipedia.org/wiki/White_people) [Europeans](https://en.wikipedia.org/wiki/Europe) can trace their roots to the [Near East](https://en.wikipedia.org/wiki/Near_East). In another study, scientists analyzed [DNA](https://en.wikipedia.org/wiki/DNA) from the 8,000-year-old remains of early farmers found at an ancient graveyard in [Germany](https://en.wikipedia.org/wiki/Germany). They compared the genetic signatures to those of modern populations and found similarities with the DNA of people living in today's [Turkey](https://en.wikipedia.org/wiki/Turkey) and [Iraq](https://en.wikipedia.org/wiki/Iraq).

**Periodization**

* Pre- and protohistory
	+ [Pre-Pottery Neolithic A](https://en.wikipedia.org/wiki/Pre-Pottery_Neolithic_A) (10,000–8700 BC)
	+ [Pre-Pottery Neolithic B](https://en.wikipedia.org/wiki/Pre-Pottery_Neolithic_B) (8700–6800)
	+ [Hassuna](https://en.wikipedia.org/wiki/Hassuna_culture) (~6000 bc–? BC), [Samarra](https://en.wikipedia.org/wiki/Samarra_culture) (~5700 BC–4900 BC) and [Halaf cultures](https://en.wikipedia.org/wiki/Halaf_culture) (~6000 BC–5300 BC) cultures
	+ [Ubaid period](https://en.wikipedia.org/wiki/Ubaid_period) (~5900–4400 BC)
	+ [Uruk period](https://en.wikipedia.org/wiki/Uruk_period) (~4400–3100 BC)
	+ [Jemdet Nasr period](https://en.wikipedia.org/wiki/Jemdet_Nasr_period) (~3100–2900 BC)
* Early Bronze Age
	+ [Early Dynastic period](https://en.wikipedia.org/wiki/Early_Dynastic_Period_%28Mesopotamia%29) (~2900–2350 BC)
	+ [Akkadian Empire](https://en.wikipedia.org/wiki/Akkadian_Empire) (~2350–2100 BC)
	+ [Third Dynasty of Ur](https://en.wikipedia.org/wiki/Third_Dynasty_of_Ur) (2112–2004 BC)
	+ Early Assyrian kingdom (24th to 18th century BC)
* Middle Bronze Age
	+ Early [Babylonia](https://en.wikipedia.org/wiki/Babylonia) (19th to 18th century BC)
	+ [First Babylonian Dynasty](https://en.wikipedia.org/wiki/First_Babylonian_Dynasty) (18th to 17th century BC)
	+ [Minoan eruption](https://en.wikipedia.org/wiki/Minoan_eruption) (c. 1620 BC)
* Late Bronze Age
	+ Old Assyrian period (16th to 11th century BC)
	+ Middle Assyrian period (c. 1365 BC–1076 BC)
	+ [Kassites](https://en.wikipedia.org/wiki/Kassites) in [Babylon](https://en.wikipedia.org/wiki/Babylon), (c. 1595 BC–1155 BC)
	+ [Late Bronze Age collapse](https://en.wikipedia.org/wiki/Late_Bronze_Age_collapse) (12th to 11th century BC)
* [Iron Age](https://en.wikipedia.org/wiki/Iron_Age)
	+ [Syro-Hittite states](https://en.wikipedia.org/wiki/Syro-Hittite_states) (11th to 7th century BC)
	+ [Neo-Assyrian Empire](https://en.wikipedia.org/wiki/Neo-Assyrian_Empire) (10th to 7th century BC)
	+ [Neo-Babylonian Empire](https://en.wikipedia.org/wiki/Neo-Babylonian_Empire) (7th to 6th century BC)
* [Classical antiquity](https://en.wikipedia.org/wiki/Classical_antiquity)
	+ [Persian Babylonia](https://en.wikipedia.org/wiki/Babylonia#Persian_Babylonia), [Achaemenid Assyria](https://en.wikipedia.org/wiki/Achaemenid_Assyria) (6th to 4th century BC)
	+ [Seleucid](https://en.wikipedia.org/wiki/Seleucid_Empire) Mesopotamia (4th to 3rd century BC)
	+ [Parthian Babylonia](https://en.wikipedia.org/wiki/Parthian_Empire) (3rd century BC to 3rd century AD)
	+ [Osroene](https://en.wikipedia.org/wiki/Osroene) (2nd century BC to 3rd century AD)
	+ [Adiabene](https://en.wikipedia.org/wiki/Adiabene) (1st to 2nd century AD)
	+ [Hatra](https://en.wikipedia.org/wiki/Hatra) (1st to 2nd century AD)
	+ [Roman Mesopotamia](https://en.wikipedia.org/wiki/Mesopotamia_%28Roman_province%29) (2nd to 7th centuries AD), [Roman Assyria](https://en.wikipedia.org/wiki/Assyria_%28Roman_province%29) (2nd century AD)
* [Late Antiquity](https://en.wikipedia.org/wiki/Late_Antiquity)
	+ [Asōristān](https://en.wikipedia.org/wiki/As%C5%8Drist%C4%81n) (3rd to 7th century AD)
	+ Muslim conquest (mid-7th century AD)

Language and writing

One of the [Nimrud ivories](https://en.wikipedia.org/wiki/Nimrud_ivories) shows a lion eating a man. Neo-Assyrian period, 9th to 7th centuries BC.

The earliest language written in Mesopotamia was [Sumerian](https://en.wikipedia.org/wiki/Sumerian_language), an [agglutinative](https://en.wikipedia.org/wiki/Agglutinative_language) [language isolate](https://en.wikipedia.org/wiki/Language_isolate). Along with Sumerian, [Semitic languages](https://en.wikipedia.org/wiki/Semitic_languages) were also spoken in early Mesopotamia. [Subartuan](https://en.wikipedia.org/wiki/Subartu) a language of the Zagros, perhaps related to the [Hurro-Urartuan language family](https://en.wikipedia.org/wiki/Hurro-Urartian_languages) is attested in personal names, rivers and mountains and in various crafts. [Akkadian](https://en.wikipedia.org/wiki/Akkadian_language) came to be the dominant language during the [Akkadian Empire](https://en.wikipedia.org/wiki/Akkadian_Empire) and the [Assyrian](https://en.wikipedia.org/wiki/Assyria) empires, but Sumerian was retained for administrative, religious, literary and scientific purposes. Different varieties of Akkadian were used until the end of the [Neo-Babylonian](https://en.wikipedia.org/wiki/Neo-Babylonian_Empire) period. [Old Aramaic](https://en.wikipedia.org/wiki/Old_Aramaic_language), which had already become common in Mesopotamia, then became the official provincial administration language of first the [Neo-Assyrian Empire](https://en.wikipedia.org/wiki/Neo-Assyrian_Empire), and then the [Achaemenid Empire](https://en.wikipedia.org/wiki/Achaemenid_Empire): the official e[lect](https://en.wikipedia.org/wiki/Variety_%28linguistics%29) is called [Imperial Aramaic](https://en.wikipedia.org/wiki/Old_Aramaic_language#Imperial_Aramaic). Akkadian fell into disuse, but both it and Sumerian were still used in temples for some centuries. The last Akkadian texts date from the late 1st century AD.

Early in Mesopotamia's history (around the mid-4th millennium BC) [cuneiform](https://en.wikipedia.org/wiki/Cuneiform) was invented for the Sumerian language. Cuneiform literally means "wedge-shaped", due to the triangular tip of the stylus used for impressing signs on wet clay. The standardized form of each cuneiform sign appears to have been developed from [pictograms](https://en.wikipedia.org/wiki/Pictogram). The earliest texts (7 archaic tablets) come from the [É](https://en.wikipedia.org/wiki/%C3%89_%28temple%29), a temple dedicated to the goddess Inanna at Uruk, from a building labeled as Temple C by its excavators.

The early [logographic](https://en.wikipedia.org/wiki/Logogram) system of cuneiform script took many years to master. Thus, only a limited number of individuals were hired as [scribes](https://en.wikipedia.org/wiki/Scribe) to be trained in its use. It was not until the widespread use of a [syllabic](https://en.wikipedia.org/wiki/Syllabary) script was adopted under Sargon's rule that significant portions of Mesopotamian population became literate. Massive archives of texts were recovered from the archaeological contexts of Old Babylonian scribal schools, through which literacy was disseminated.

During the third millennium BC, there developed a very intimate cultural symbiosis between the Sumerian and the Akkadian language users, which included widespread [bilingualism](https://en.wiktionary.org/wiki/bilingualism). The influence of Sumerian on Akkadian (and vice versa) is evident in all areas, from lexical borrowing on a massive scale, to syntactic, morphological, and phonological convergence. This has prompted scholars to refer to Sumerian and Akkadian in the third millennium as a [sprachbund](https://en.wikipedia.org/wiki/Sprachbund). Akkadian gradually replaced Sumerian as the spoken language of Mesopotamia somewhere around the turn of the 3rd and the 2nd millennium BC (the exact dating being a matter of debate), but Sumerian continued to be used as a sacred, ceremonial, literary, and scientific language in Mesopotamia until the 1st century AD.

**Literature**

*Main article:*[*Akkadian literature*](https://en.wikipedia.org/wiki/Akkadian_literature)

Libraries were extant in towns and temples during the Babylonian Empire. An old Sumerian proverb averred that "he who would excel in the school of the scribes must rise with the dawn." Women as well as men learned to read and write, and for the [Semitic](https://en.wikipedia.org/wiki/Semitic_languages) Babylonians, this involved knowledge of the extinct Sumerian language, and a complicated and extensive syllabary.

A considerable amount of Babylonian literature was translated from Sumerian originals, and the language of religion and law long continued to be the old agglutinative language of Sumer. Vocabularies, grammars, and interlinear translations were compiled for the use of students, as well as commentaries on the older texts and explanations of obscure words and phrases. The characters of the syllabary were all arranged and named, and elaborate lists were drawn up.

Many Babylonian literary works are still studied today. One of the most famous of these was the [Epic of Gilgamesh](https://en.wikipedia.org/wiki/Epic_of_Gilgamesh), in twelve books, translated from the original Sumerian by a certain [Sîn-lēqi-unninni](https://en.wikipedia.org/wiki/S%C3%AEn-l%C4%93qi-unninni), and arranged upon an astronomical principle. Each division contains the story of a single adventure in the career of [Gilgamesh](https://en.wikipedia.org/wiki/Gilgamesh). The whole story is a composite product, although it is probable that some of the stories are artificially attached to the central figure.

Science and technology

**Mathematics**

*Main article:*[*Babylonian mathematics*](https://en.wikipedia.org/wiki/Babylonian_mathematics)

Mesopotamian mathematics and science was based on a [sexagesimal](https://en.wikipedia.org/wiki/Sexagesimal) (base 60) [numeral system](https://en.wikipedia.org/wiki/Numeral_system). This is the source of the 60-minute hour, the 24-hour day, and the 360-[degree](https://en.wikipedia.org/wiki/Degree_%28angle%29) circle. The Sumerian calendar was based on the seven-day week. This form of mathematics was instrumental in early [map-making](https://en.wikipedia.org/wiki/History_of_cartography). The Babylonians also had theorems on how to measure the area of several shapes and solids. They measured the circumference of a circle as three times the diameter and the area as one-twelfth the square of the circumference, which would be correct if  were fixed at 3. The volume of a cylinder was taken as the product of the area of the base and the height; however, the volume of the [frustum](https://en.wikipedia.org/wiki/Frustum) of a cone or a square pyramid was incorrectly taken as the product of the height and half the sum of the bases. Also, there was a recent discovery in which a tablet used  as 25/8 (3.125 instead of 3.14159~). The Babylonians are also known for the Babylonian mile, which was a measure of distance equal to about seven modern miles (11 km). This measurement for distances eventually was converted to a time-mile used for measuring the travel of the Sun, therefore, representing time.

**Astronomy**

*Main article:*[*Babylonian astronomy*](https://en.wikipedia.org/wiki/Babylonian_astronomy)

From [Sumerian](https://en.wikipedia.org/wiki/Sumer) times, temple priesthoods had attempted to associate current events with certain positions of the planets and stars. This continued to Assyrian times, when [Limmu](https://en.wikipedia.org/wiki/Limmu) lists were created as a year by year association of events with planetary positions, which, when they have survived to the present day, allow accurate associations of relative with absolute dating for establishing the history of Mesopotamia.

The Babylonian astronomers were very adept at mathematics and could predict [eclipses](https://en.wikipedia.org/wiki/Eclipse_cycle) and [solstices](https://en.wikipedia.org/wiki/Solstice#Solstice_determination). Scholars thought that everything had some purpose in astronomy. Most of these related to religion and omens. Mesopotamian astronomers worked out a 12-month calendar based on the cycles of the moon. They divided the year into two seasons: summer and winter. The origins of astronomy as well as astrology date from this time.

During the 8th and 7th centuries BC, Babylonian astronomers developed a new approach to astronomy. They began studying philosophy dealing with the ideal nature of the early [universe](https://en.wikipedia.org/wiki/Universe) and began employing an internal logic within their predictive planetary systems. This was an important contribution to astronomy and the [philosophy of science](https://en.wikipedia.org/wiki/Philosophy_of_science) and some scholars have thus referred to this new approach as the first scientific revolution. This new approach to astronomy was adopted and further developed in Greek and Hellenistic astronomy.

In Seleucid and Parthian times, the astronomical reports were thoroughly scientific; how much earlier their advanced knowledge and methods were developed is uncertain. The Babylonian development of methods for predicting the motions of the planets is considered to be a major episode in the [history of astronomy](https://en.wikipedia.org/wiki/History_of_astronomy#Mesopotamia).

The only Greek Babylonian astronomer known to have supported a [heliocentric](https://en.wikipedia.org/wiki/Heliocentrism) model of planetary motion was [Seleucus of Seleucia](https://en.wikipedia.org/wiki/Seleucus_of_Seleucia) (b. 190 BC). Seleucus is known from the writings of [Plutarch](https://en.wikipedia.org/wiki/Plutarch). He supported Aristarchus of Samos' heliocentric theory where the [Earth rotated](https://en.wikipedia.org/wiki/Earth%27s_rotation) around its own axis which in turn revolved around the [Sun](https://en.wikipedia.org/wiki/Sun). According to [Plutarch](https://en.wikipedia.org/wiki/Plutarch), Seleucus even proved the heliocentric system, but it is not known what arguments he used (except that he correctly theorized on tides as a result of Moon's attraction).

Babylonian astronomy served as the basis for much of [Greek](https://en.wikipedia.org/wiki/Ancient_Greek_astronomy), [classical Indian](https://en.wikipedia.org/wiki/Indian_astronomy), Sassanian, [Byzantine](https://en.wikipedia.org/wiki/Byzantine_Empire), [Syrian](https://en.wikipedia.org/wiki/Syria), [medieval Islamic](https://en.wikipedia.org/wiki/Astronomy_in_the_medieval_Islamic_world), [Central Asian](https://en.wikipedia.org/wiki/Central_Asia), and [Western European](https://en.wikipedia.org/wiki/Western_Europe) astronomy.

**Medicine**

The oldest Babylonian texts on [medicine](https://en.wikipedia.org/wiki/Medicine) date back to the [Old Babylonian](https://en.wikipedia.org/wiki/First_Babylonian_Dynasty) period in the first half of the [2nd millennium BC](https://en.wikipedia.org/wiki/2nd_millennium_BC). The most extensive Babylonian medical text, however, is the *Diagnostic Handbook* written by the *ummânū*, or chief scholar, [Esagil-kin-apli](https://en.wikipedia.org/wiki/Esagil-kin-apli) of [Borsippa](https://en.wikipedia.org/wiki/Borsippa), during the reign of the Babylonian king [Adad-apla-iddina](https://en.wikipedia.org/wiki/Adad-apla-iddina) (1069-1046 BC).

Along with contemporary [Egyptian medicine](https://en.wikipedia.org/wiki/Ancient_Egyptian_medicine), the Babylonians introduced the concepts of [diagnosis](https://en.wikipedia.org/wiki/Medical_diagnosis), [prognosis](https://en.wikipedia.org/wiki/Prognosis), [physical examination](https://en.wikipedia.org/wiki/Physical_examination), and [prescriptions](https://en.wikipedia.org/wiki/Medical_prescription). In addition, the *Diagnostic Handbook* introduced the methods of therapy and [aetiology](https://en.wikipedia.org/wiki/Aetiology) and the use of [empiricism](https://en.wikipedia.org/wiki/Empiricism), [logic](https://en.wikipedia.org/wiki/Logic), and [rationality](https://en.wikipedia.org/wiki/Rationality) in diagnosis, prognosis and therapy. The text contains a list of medical [symptoms](https://en.wikipedia.org/wiki/Symptom) and often detailed empirical [observations](https://en.wikipedia.org/wiki/Observation) along with logical rules used in combining observed symptoms on the body of a [patient](https://en.wikipedia.org/wiki/Patient) with its diagnosis and prognosis.

The symptoms and diseases of a patient were treated through therapeutic means such as [bandages](https://en.wikipedia.org/wiki/Bandage), [creams](https://en.wikipedia.org/wiki/Cream_%28pharmaceutical%29) and [pills](https://en.wikipedia.org/wiki/Pill_%28pharmacy%29). If a patient could not be cured physically, the Babylonian physicians often relied on [exorcism](https://en.wikipedia.org/wiki/Exorcism) to cleanse the patient from any [curses](https://en.wikipedia.org/wiki/Curse). Esagil-kin-apli's *Diagnostic Handbook* was based on a logical set of [axioms](https://en.wikipedia.org/wiki/Axiom) and assumptions, including the modern view that through the examination and [inspection](https://en.wikipedia.org/wiki/Inspection) of the symptoms of a patient, it is possible to determine the patient's [disease](https://en.wikipedia.org/wiki/Disease), its aetiology, its future development, and the chances of the patient's recovery.

Esagil-kin-apli discovered a variety of [illnesses](https://en.wikipedia.org/wiki/Illness) and diseases and described their symptoms in his *Diagnostic Handbook*. These include the symptoms for many varieties of [epilepsy](https://en.wikipedia.org/wiki/Epilepsy) and related [ailments](https://en.wikipedia.org/wiki/Ailment) along with their diagnosis and prognosis.

**Technology**

Mesopotamian people invented many technologies including metal and copper-working, glass and lamp making, textile weaving, flood control, water storage, and irrigation. They were also one of the first [Bronze Age](https://en.wikipedia.org/wiki/Bronze_Age)societies in the world. They developed from copper, bronze, and gold on to iron. Palaces were decorated with hundreds of kilograms of these very expensive metals. Also, copper, bronze, and iron were used for armor as well as for different weapons such as swords, daggers, spears, and [maces](https://en.wikipedia.org/wiki/Mace_%28club%29).

According to a recent hypothesis, the [Archimedes' screw](https://en.wikipedia.org/wiki/Archimedes%27_screw) may have been used by Sennacherib, King of Assyria, for the water systems at the [Hanging Gardens of Babylon](https://en.wikipedia.org/wiki/Hanging_Gardens_of_Babylon) and [Nineveh](https://en.wikipedia.org/wiki/Nineveh) in the 7th century BC, although mainstream scholarship holds it to be a [Greek](https://en.wikipedia.org/wiki/Ancient_Greece) invention of later times. Later, during the Parthian or Sasanian periods, the [Baghdad Battery](https://en.wikipedia.org/wiki/Baghdad_Battery), which may have been the world's first battery, was created in Mesopotamia.

Religion and philosophy

*Main article:*[*Ancient Mesopotamian religion*](https://en.wikipedia.org/wiki/Ancient_Mesopotamian_religion)

The [Burney Relief](https://en.wikipedia.org/wiki/Burney_Relief), [First Babylonian Dynasty](https://en.wikipedia.org/wiki/First_Babylonian_Dynasty), around 1800 BC

[Ancient Mesopotamian religion](https://en.wikipedia.org/wiki/Ancient_Mesopotamian_religion) was the first recorded. Mesopotamians believed that the world was a flat disc, surrounded by a huge, holed space, and above that, [heaven](https://en.wikipedia.org/wiki/Heaven). They also believed that water was everywhere, the top, bottom and sides, and that the [universe](https://en.wikipedia.org/wiki/Universe) was born from this enormous sea. In addition, Mesopotamian religion was [polytheistic](https://en.wikipedia.org/wiki/Polytheism). Although the [beliefs](https://en.wikipedia.org/wiki/Belief) described above were held in common among Mesopotamians, there were also regional variations. The Sumerian word for universe is **an-Ki**, which refers to the god [An](https://en.wikipedia.org/wiki/Anu) and the goddess [Ki](https://en.wikipedia.org/wiki/Ki_%28goddess%29). Their son was Enlil, the air god. They believed that Enlil was the most powerful god. He was the chief god of the [pantheon](https://en.wikipedia.org/wiki/Pantheon_%28religion%29). The Sumerians also posed philosophical questions, such as: Who are we?, Where are we?, How did we get here?. They attributed answers to these questions to explanations provided by their gods.

**Philosophy**

[Giorgio Buccellati](https://en.wikipedia.org/wiki/Giorgio_Buccellati) believes that the origins of [philosophy](https://en.wikipedia.org/wiki/Philosophy) can be traced back to early Mesopotamian [wisdom](https://en.wikipedia.org/wiki/Wisdom), which embodied certain philosophies of life, particularly ethics, in the forms of [dialectic](https://en.wikipedia.org/wiki/Dialectic), [dialogues](https://en.wikipedia.org/wiki/Dialogue), [epic poetry](https://en.wikipedia.org/wiki/Epic_poetry), [folklore](https://en.wikipedia.org/wiki/Folklore), [hymns](https://en.wikipedia.org/wiki/Hymn), [lyrics](https://en.wikipedia.org/wiki/Lyrics), [prose](https://en.wikipedia.org/wiki/Prose) works, and [proverbs](https://en.wikipedia.org/wiki/Proverb). Babylonian [reason](https://en.wikipedia.org/wiki/Reason) and [rationality](https://en.wikipedia.org/wiki/Rationality) developed beyond [empirical](https://en.wikipedia.org/wiki/Empiricism) observation.

The earliest form of [logic](https://en.wikipedia.org/wiki/Logic) was developed by the Babylonians, notably in the rigorous [nonergodic](https://en.wikipedia.org/wiki/Ergodicity) nature of their [social systems](https://en.wikipedia.org/wiki/Social_structure). Babylonian thought was [axiomatic](https://en.wikipedia.org/wiki/Axiom) and is comparable to the "ordinary logic" described by [John Maynard Keynes](https://en.wikipedia.org/wiki/John_Maynard_Keynes). Babylonian thought was also based on an [open-systems](https://en.wikipedia.org/wiki/Open_system_%28systems_theory%29) [ontology](https://en.wikipedia.org/wiki/Ontology) which is compatible with [ergodic](https://en.wikipedia.org/wiki/Ergodic) axioms. Logic was employed to some extent in [Babylonian astronomy](https://en.wikipedia.org/wiki/Babylonian_astronomy) and medicine.

Babylonian thought had a considerable influence on early [Ancient Greek](https://en.wikipedia.org/wiki/Ancient_Greek_philosophy) and [Hellenistic philosophy](https://en.wikipedia.org/wiki/Hellenistic_philosophy). In particular, the Babylonian text [*Dialogue of Pessimism*](https://en.wikipedia.org/wiki/Dialogue_of_Pessimism) contains similarities to the [agonistic](https://en.wikipedia.org/wiki/Agonist) thought of the [sophists](https://en.wikipedia.org/wiki/Sophism), the [Heraclitean](https://en.wikipedia.org/wiki/Heraclitus) doctrine of contrasts, and the [dialectic](https://en.wikipedia.org/wiki/Dialectic) and dialogs of [Plato](https://en.wikipedia.org/wiki/Plato), as well as a precursor to the maieutic method of [Socrates](https://en.wikipedia.org/wiki/Socrates). The [Ionian](https://en.wikipedia.org/wiki/Ionians) philosopher [Thales](https://en.wikipedia.org/wiki/Thales) was influenced by Babylonian cosmological ideas.

Culture

[Alabaster](https://en.wikipedia.org/wiki/Alabaster) with shell eyes, [Sumerian](https://en.wikipedia.org/wiki/Sumer) male worshiper, 2750-2600 BC

**Festivals**

Ancient Mesopotamians had ceremonies each month. The theme of the rituals and festivals for each month was determined by at least six important factors:

1. The [Lunar phase](https://en.wikipedia.org/wiki/Lunar_phase) (a waxing moon meant abundance and growth, while a waning moon was associated with decline, conservation, and festivals of the Underworld)
2. The phase of the annual agricultural cycle
3. [Equinoxes](https://en.wikipedia.org/wiki/Equinoxes) and [solstices](https://en.wikipedia.org/wiki/Solstices)
4. The local mythos and its divine Patrons
5. The success of the reigning Monarch
6. The [Akitu](https://en.wikipedia.org/wiki/Akitu), or [New Year](https://en.wikipedia.org/wiki/New_Year) Festival (First full moon after spring equinox)
7. Commemoration of specific historical events (founding, military victories, temple holidays, etc.)

**Music**

*Main article:*[*Music of Mesopotamia*](https://en.wikipedia.org/wiki/Music_of_Mesopotamia)

Some songs were written for the gods but many were written to describe important events. Although music and songs amused [kings](https://en.wikipedia.org/wiki/Monarch), they were also enjoyed by ordinary people who liked to sing and dance in their homes or in the [marketplaces](https://en.wikipedia.org/wiki/Marketplace). Songs were sung to children who passed them on to their children. Thus songs were passed on through many [generations](https://en.wikipedia.org/wiki/Generation) as an oral tradition until writing was more universal. These songs provided a means of passing on through the [centuries](https://en.wikipedia.org/wiki/Century) highly important information about historical events.

The [Oud](https://en.wikipedia.org/wiki/Oud) (Arabic:العود) is a small, stringed musical instrument used by the Mesopotamians. The oldest pictorial record of the Oud dates back to the [Uruk](https://en.wikipedia.org/wiki/Uruk) period in Southern Mesopotamia over 5000 years ago. It is on a [cylinder seal](https://en.wikipedia.org/wiki/Cylinder_seal) currently housed at the British Museum and acquired by Dr. Dominique Collon. The [image](https://en.wikipedia.org/wiki/Image) depicts a female crouching with her instruments upon a boat, playing [right-handed](https://en.wikipedia.org/wiki/Right-handed). This instrument appears hundreds of times throughout Mesopotamian history and again in ancient [Egypt](https://en.wikipedia.org/wiki/Egypt) from the 18th [dynasty](https://en.wikipedia.org/wiki/Dynasty) onwards in long- and short-neck varieties. The oud is regarded as a [precursor](https://en.wiktionary.org/wiki/Precursor) to the [European](https://en.wikipedia.org/wiki/Europe) [lute](https://en.wikipedia.org/wiki/Lute). Its name is derived from the Arabic word العود al-‘ūd 'the wood', which is probably the name of the tree from which the oud was made. (The Arabic name, with the definite article, is the source of the word 'lute'.)

**Games**

[Hunting](https://en.wikipedia.org/wiki/Hunting) was popular among Assyrian kings. [Boxing](https://en.wikipedia.org/wiki/Boxing) and [wrestling](https://en.wikipedia.org/wiki/Wrestling) feature frequently in art, and some form of [polo](https://en.wikipedia.org/wiki/Polo) was probably popular, with men sitting on the shoulders of other men rather than on horses. They also played *majore*, a game similar to the sport [rugby](https://en.wikipedia.org/wiki/Rugby_football), but played with a ball made of wood. They also played a board game similar to [senet](https://en.wikipedia.org/wiki/Senet) and [backgammon](https://en.wikipedia.org/wiki/Backgammon), now known as the "[Royal Game of Ur](https://en.wikipedia.org/wiki/Royal_Game_of_Ur)."

**Family life**

*The Babylonian marriage market* by the 19th-century painter [Edwin Long](https://en.wikipedia.org/wiki/Edwin_Long)

Mesopotamia, as shown by successive law codes, those of [Urukagina](https://en.wikipedia.org/wiki/Urukagina), [Lipit Ishtar](https://en.wikipedia.org/wiki/Lipit_Ishtar) and [Hammurabi](https://en.wikipedia.org/wiki/Hammurabi), across its history became more and more a [patriarchal society](https://en.wikipedia.org/wiki/Patriarchal_society), one in which the men were far more powerful than the women. For example, during the earliest Sumerian period, the *"en"*, or high priest of male gods was originally a woman, that of female goddesses, a man. Thorkild Jacobsen, as well as many others, has suggested that early Mesopotamian society was ruled by a "council of elders" in which men and women were equally represented, but that over time, as the status of women fell, that of men increased. As for schooling, only royal offspring and sons of the rich and professionals, such as scribes, physicians, temple administrators, went to school. Most boys were taught their father's trade or were apprenticed out to learn a trade. Girls had to stay home with their mothers to learn [housekeeping](https://en.wikipedia.org/wiki/Housekeeping) and [cooking](https://en.wikipedia.org/wiki/Cooking), and to look after the younger children. Some children would help with crushing grain or cleaning birds. Unusual for that time in history, women in Mesopotamia had [rights](https://en.wikipedia.org/wiki/Rights). They could own [property](https://en.wikipedia.org/wiki/Property) and, if they had good reason, get a [divorce](https://en.wikipedia.org/wiki/Divorce).

**Burials**

Hundreds of [graves](https://en.wikipedia.org/wiki/Grave_%28burial%29) have been excavated in parts of Mesopotamia, revealing information about Mesopotamian [burial](https://en.wikipedia.org/wiki/Burial) habits. In the city of [Ur](https://en.wikipedia.org/wiki/Ur), most people were buried in family graves under their houses, along with some possessions. A few have been found wrapped in mats and [carpets](https://en.wikipedia.org/wiki/Carpets). Deceased children were put in big "jars" which were placed in the family [chapel](https://en.wikipedia.org/wiki/Chapel). Other remains have been found buried in common city graveyards. 17 graves have been found with very precious objects in them. It is assumed that these were royal graves. Rich of various periods, have been discovered to have sought burial in Bahrein, identified with Sumerian Dilmun.

Economy and agriculture

Mining areas of the ancient [West Asia](https://en.wikipedia.org/wiki/West_Asia). Boxes colors: [arsenic](https://en.wikipedia.org/wiki/Arsenic) is in brown, copper in red, [tin](https://en.wikipedia.org/wiki/Tin) in grey, iron in reddish brown, gold in yellow, silver in white and [lead](https://en.wikipedia.org/wiki/Lead) in black. Yellow area stands for [arsenic bronze](https://en.wikipedia.org/wiki/Arsenic_bronze), while grey area stands for tin [bronze](https://en.wikipedia.org/wiki/Bronze).

Irrigated agriculture spread southwards from the Zagros foothills with the Samara and Hadji Muhammed culture, from about 5,000 BC. Sumerian temples functioned as banks and developed the first large-scale [system of loans and credit](https://en.wikipedia.org/wiki/Economy), but the Babylonians developed the earliest system of commercial [banking](https://en.wikipedia.org/wiki/Banking). It was comparable in some ways to modern [post-Keynesian economics](https://en.wikipedia.org/wiki/Post-Keynesian_economics), but with a more "anything goes" approach.

In the early period down to [Ur III](https://en.wikipedia.org/wiki/Ur_III) temples owned up to one third of the available land, declining over time as royal and other private holdings increased in frequency. The word Ensi was used to describe the official who organized the work of all facets of temple agriculture. [Villeins](https://en.wikipedia.org/wiki/Villein) are known to have worked most frequently within agriculture, especially in the grounds of temples or palaces.

The geography of southern Mesopotamia is such that agriculture is possible only with irrigation and good drainage, a fact which has had a profound effect on the evolution of early Mesopotamian civilization. The need for irrigation led the Sumerians, and later the Akkadians, to build their cities along the Tigris and Euphrates and the branches of these rivers. Major cities, such as Ur and Uruk, took root on tributaries of the Euphrates, while others, notably Lagash, were built on branches of the Tigris. The rivers provided the further benefits of fish (used both for food and fertilizer), reeds, and clay (for building materials). With irrigation, the [food supply](https://en.wikipedia.org/wiki/Food_supply) in Mesopotamia was comparable to the Canadian prairies.

The Tigris and Euphrates River valleys form the northeastern portion of the [Fertile Crescent](https://en.wikipedia.org/wiki/Fertile_Crescent), which also included the Jordan River valley and that of the Nile. Although land nearer to the rivers was fertile and good for [crops](https://en.wikipedia.org/wiki/Crops), portions of land farther from the water were dry and largely uninhabitable. This is why the development of irrigation was very important for [settlers](https://en.wikipedia.org/wiki/Settler) of Mesopotamia. Other Mesopotamian [innovations](https://en.wikipedia.org/wiki/Innovation) include the control of water by [dams](https://en.wikipedia.org/wiki/Dam) and the use of aqueducts. Early settlers of fertile land in Mesopotamia used wooden [plows](https://en.wikipedia.org/wiki/Plow) to soften the [soil](https://en.wikipedia.org/wiki/Soil) before planting crops such as [barley](https://en.wikipedia.org/wiki/Barley), [onions](https://en.wikipedia.org/wiki/Onion), [grapes](https://en.wikipedia.org/wiki/Grape), [turnips](https://en.wikipedia.org/wiki/Turnip), and [apples](https://en.wikipedia.org/wiki/Apple). Mesopotamian settlers were some of the first people to make [beer](https://en.wikipedia.org/wiki/Beer) and [wine](https://en.wikipedia.org/wiki/Wine). As a result of the skill involved in farming in the Mesopotamian, farmers did not depend on [slaves](https://en.wikipedia.org/wiki/Slaves) to complete farm work for them, but there were some exceptions.

There were too many risks involved to make slavery practical (i.e. the escape/mutiny of the slave). Although the rivers sustained life, they also destroyed it by frequent floods that ravaged entire cities. The unpredictable Mesopotamian weather was often hard on farmers; crops were often ruined so backup sources of food such as cows and lambs were also kept. Over time the southernmost parts of Sumerian Mesopotamia suffered from increased salinity of the soils, leading to a slow urban decline and a centering of power in Akkad, further north.

Government

The geography of Mesopotamia had a profound impact on the political development of the region. Among the rivers and streams, the Sumerian people built the first cities along with irrigation canals which were separated by vast stretches of open desert or swamp where nomadic tribes roamed. Communication among the isolated cities was difficult and, at times, dangerous. Thus, each Sumerian city became a [city-state](https://en.wikipedia.org/wiki/City-state), independent of the others and protective of its independence. At times one city would try to conquer and unify the region, but such efforts were resisted and failed for centuries. As a result, the political history of Sumer is one of almost constant warfare. Eventually Sumer was unified by [Eannatum](https://en.wikipedia.org/wiki/Eannatum), but the unification was tenuous and failed to last as the Akkadians conquered Sumeria in 2331 BC only a generation later. The Akkadian Empire was the first successful empire to last beyond a generation and see the peaceful succession of kings. The empire was relatively short-lived, as the Babylonians conquered them within only a few generations.

**Kings**

*Further information:*[*Sumerian King List*](https://en.wikipedia.org/wiki/Sumerian_King_List)*,*[*List of kings of Babylon*](https://en.wikipedia.org/wiki/List_of_kings_of_Babylon)*, and*[*List of Assyrian kings*](https://en.wikipedia.org/wiki/List_of_Assyrian_kings)

The Mesopotamians believed their kings and queens were descended from the City of [Gods](https://en.wikipedia.org/wiki/God), but, unlike the [ancient Egyptians](https://en.wikipedia.org/wiki/Ancient_Egyptians), they never believed their kings were real gods. Most kings named themselves “king of the universe” or “great king”. Another common name was “[shepherd](https://en.wikipedia.org/wiki/Shepherd)”, as kings had to look after their people.

**Power**

When Assyria grew into an empire, it was divided into smaller parts, called [provinces](https://en.wikipedia.org/wiki/Provinces). Each of these were named after their main cities, like Nineveh, [Samaria](https://en.wikipedia.org/wiki/Samaria), [Damascus](https://en.wikipedia.org/wiki/Damascus), and [Arpad](https://en.wikipedia.org/wiki/Arpad_%28Syria%29). They all had their own governor who had to make sure everyone paid their taxes. Governors also had to call up soldiers to war and supply workers when a temple was built. He was also responsible for enforcing the laws. In this way, it was easier to keep control of a large empire. Although Babylon was quite a small [state](https://en.wikipedia.org/wiki/Sovereign_state) in the Sumerian, it grew tremendously throughout the time of [Hammurabi](https://en.wikipedia.org/wiki/Hammurabi)'s rule. He was known as “the law maker”, and soon [Babylon](https://en.wikipedia.org/wiki/Babylon) became one of the main cities in Mesopotamia. It was later called Babylonia, which meant "the gateway of the gods." It also became one of history's greatest centers of learning.

**Warfare**

Fragment of the [Stele of the Vultures](https://en.wikipedia.org/wiki/Stele_of_the_Vultures) showing marching warriors, Early Dynastic III period, 2600–2350 BC

One of two figures of the *Thicket found* in the Royal Cemetery in [Ur](https://en.wikipedia.org/wiki/Ur), 2600-2400 BC

With the end of the [Uruk](https://en.wikipedia.org/wiki/Uruk) phase, walled cities grew and many isolated [Ubaid](https://en.wikipedia.org/wiki/Ubaid_period) villages were abandoned indicating a rise in communal violence. An early king [Lugalbanda](https://en.wikipedia.org/wiki/Lugalbanda) was supposed to have built the white walls around the city. As [city-states](https://en.wikipedia.org/wiki/City-states) began to grow, their spheres of influence overlapped, creating arguments between other city-states, especially over land and canals. These arguments were recorded in tablets several hundreds of years before any major war—the first recording of a war occurred around 3200 BC but was not common until about 2500 BC. An [Early Dynastic II](https://en.wikipedia.org/wiki/Early_Dynastic_II) king (Ensi) of Uruk in Sumer, Gilgamesh (c. 2600 BC), was commended for military exploits against [Humbaba](https://en.wikipedia.org/wiki/Humbaba) guardian of the Cedar Mountain, and was later celebrated in many later poems and songs in which he was claimed to be two-thirds god and only one-third human. The later [Stele of the Vultures](https://en.wikipedia.org/wiki/Stele_of_the_Vultures) at the end of the [Early Dynastic III](https://en.wikipedia.org/wiki/Early_Dynastic_III) period (2600–2350 BC), commemorating the victory of [Eannatum](https://en.wikipedia.org/wiki/Eannatum) of Lagash over the neighboring rival city of [Umma](https://en.wikipedia.org/wiki/Umma) is the oldest monument in the world that celebrates a massacre.

From this point forwards, warfare was incorporated into the Mesopotamian political system. At times a neutral city may act as an arbitrator for the two rival cities. This helped to form unions between cities, leading to regional states. When empires were created, they went to war more with foreign countries. King Sargon, for example, conquered all the cities of Sumer, some cities in Mari, and then went to war with northern Syria. Many Assyrian and Babylonian palace walls were decorated with the pictures of the successful fights and the enemy either desperately escaping or hiding amongst reeds.

**Laws**

*See also:*[*Mesopotamian marriage law*](https://en.wikipedia.org/wiki/Mesopotamian_marriage_law)

City-states of Mesopotamia created the first law codes, drawn from legal precedence and decisions made by kings. The codes of [Urukagina](https://en.wikipedia.org/wiki/Urukagina) and [Lipit Ishtar](https://en.wikipedia.org/wiki/Lipit_Ishtar) have been found. The most renowned of these was that of [Hammurabi](https://en.wikipedia.org/wiki/Hammurabi), as mentioned above, who was posthumously famous for his set of laws, the [Code of Hammurabi](https://en.wikipedia.org/wiki/Code_of_Hammurabi) (created c. 1780 BC), which is one of the earliest sets of laws found and one of the best preserved examples of this type of document from ancient Mesopotamia. He codified over 200 laws for Mesopotamia. Examination of the laws show a progressive weakening of the rights of women, and increasing severity in the treatment of slaves

Art

*Main article:*[*Art of Mesopotamia*](https://en.wikipedia.org/wiki/Art_of_Mesopotamia)

The art of Mesopotamia rivalled [that of Ancient Egypt](https://en.wikipedia.org/wiki/Art_of_Ancient_Egypt) as the most grand, sophisticated and elaborate in western [Eurasia](https://en.wikipedia.org/wiki/Eurasia) from the 4th millennium BC until the [Persian](https://en.wikipedia.org/wiki/Persia) Achaemenid Empire conquered the region in the 6th century BC. The main emphasis was on various, fortunately very durable, forms of sculpture in stone and clay; little painting has survived, but what has suggests that painting was mainly used for geometrical and plant-based decorative schemes, though most sculpture was also painted.

The [Protonitrate period](https://en.wikipedia.org/wiki/Protoliterate_period), dominated by [Uruk](https://en.wikipedia.org/wiki/Uruk), saw the production of sophisticated works like the [Warka Vase](https://en.wikipedia.org/wiki/Warka_Vase) and [cylinder seals](https://en.wikipedia.org/wiki/Cylinder_seal). The [Guennol Lioness](https://en.wikipedia.org/wiki/Guennol_Lioness) is an outstanding small [limestone](https://en.wikipedia.org/wiki/Limestone) figure from [Elam](https://en.wikipedia.org/wiki/Elam) of about 3000–2800 BC, part man and part lion. A little later there are a number of figures of large-eyed priests and worshippers, mostly in alabaster and up to a foot high, who attended temple [cult images](https://en.wikipedia.org/wiki/Cult_image) of the deity, but very few of these have survived. Sculptures from the [Sumerian](https://en.wikipedia.org/wiki/Sumer) and Akkadian period generally had large, staring eyes, and long beards on the men. Many masterpieces have also been found at the Royal Cemetery at [Ur](https://en.wikipedia.org/wiki/Ur) (c. 2650 BC), including the two figures of a [*Ram in a Thicket*](https://en.wikipedia.org/wiki/Ram_in_a_Thicket), the [*Copper Bull*](https://en.wikipedia.org/wiki/Copper_Bull) and a bull's head on one of the [Lyres of Ur](https://en.wikipedia.org/wiki/Lyres_of_Ur).

From the many subsequent periods before the ascendency of the Neo-Assyrian Empire Mesopotamian art survives in a number of forms: cylinder seals, relatively small figures in the round, and reliefs of various sizes, including cheap plaques of molded pottery for the home, some religious and some apparently not. The Reliefs an unusual elaborate and relatively large (20 x 15 inches) [terracotta](https://en.wikipedia.org/wiki/Terracotta) plaque of a naked winged goddess with the feet of a bird of prey, and attendant owls and lions. It comes from the 18th or 19th centuries BC, and may also be molded.Stone [stelae](https://en.wikipedia.org/wiki/Stela), [votive offerings](https://en.wikipedia.org/wiki/Votive_offering), or ones probably commemorating victories and showing feasts, are also found from temples, which unlike more official ones lack inscriptions that would explain them; the fragmentary [Stele of the Vultures](https://en.wikipedia.org/wiki/Stele_of_the_Vultures) is an early example of the inscribed type, and the Assyrian [Black Obelisk of Shalmaneser III](https://en.wikipedia.org/wiki/Black_Obelisk_of_Shalmaneser_III) a large and solid late one.

The conquest of the whole of Mesopotamia and much surrounding territory by the Assyrians created a larger and wealthier state than the region had known before, and very grandiose art in palaces and public places, no doubt partly intended to match the splendor of the art of the neighboring Egyptian empire. The Assyrians developed a style of extremely large schemes of very finely detailed narrative low reliefs in stone for palaces, with scenes of war or hunting; the [British Museum](https://en.wikipedia.org/wiki/British_Museum) has an outstanding collection. They produced very little sculpture in the round, except for colossal guardian figures, often the human-headed [lamassu](https://en.wikipedia.org/wiki/Lamassu), which are sculpted in high relief on two sides of a rectangular block, with the heads effectively in the round (and also five legs, so that both views seem complete). Even before dominating the region they had continued the cylinder seal tradition with designs which are often exceptionally energetic and refined.

Architecture

A suggested reconstruction of the appearance of a Sumerian [ziggurat](https://en.wikipedia.org/wiki/Ziggurat)

*Main article:*[*Architecture of Mesopotamia*](https://en.wikipedia.org/wiki/Architecture_of_Mesopotamia)

The study of ancient Mesopotamian architecture is based on available [archaeological](https://en.wikipedia.org/wiki/Archaeological) evidence, pictorial representation of buildings, and texts on building practices. Scholarly literature usually concentrates on temples, palaces, city walls and gates, and other monumental buildings, but occasionally one finds works on residential architecture as well. Archaeological surface surveys also allowed for the study of urban form in early Mesopotamian cities.

Brick is the dominant material, as the material was freely available locally, whereas building stone had to be brought a considerable distance to most cities. The [ziggurat](https://en.wikipedia.org/wiki/Ziggurat) is the most distinctive form, and cities often had large gateways, of which the [Ishtar Gate](https://en.wikipedia.org/wiki/Ishtar_Gate) from Neo-Babylonian Babylon, decorated with beasts in polychrome brick, is the most famous, now largely in the [Pergamon Museum](https://en.wikipedia.org/wiki/Pergamon_Museum) in [Berlin](https://en.wikipedia.org/wiki/Berlin).

The most notable architectural remains from early Mesopotamia are the temple complexes at [Uruk](https://en.wikipedia.org/wiki/Uruk) from the 4th millennium BC, temples and palaces from the Dynastic period sites in the [Diyala River](https://en.wikipedia.org/wiki/Diyala_River) valley such as Khafajah and Tell Asmar, the [Third Dynasty of Ur](https://en.wikipedia.org/wiki/Third_Dynasty_of_Ur) remains at [Nippur](https://en.wikipedia.org/wiki/Nippur) (Sanctuary of [Enlil](https://en.wikipedia.org/wiki/Enlil)) and [Ur](https://en.wikipedia.org/wiki/Ur) (Sanctuary of [Nanna](https://en.wikipedia.org/wiki/Sin_%28mythology%29)), Middle Bronze remains at Syrian-Turkish sites of [Ebla](https://en.wikipedia.org/wiki/Ebla), [Mari](https://en.wikipedia.org/wiki/Mari%2C_Syria), [Alalakh](https://en.wikipedia.org/wiki/Alalakh), [Aleppo](https://en.wikipedia.org/wiki/Aleppo) and [Kultepe](https://en.wikipedia.org/wiki/Kultepe), Late Bronze Age palaces at [Bogazkoy](https://en.wikipedia.org/wiki/Bogazkoy) (Hattusha), [Ugarit](https://en.wikipedia.org/wiki/Ugarit),  [Ashur](https://en.wikipedia.org/wiki/Ashur) and  [Nuzi](https://en.wikipedia.org/wiki/Nuzi), Iron Age palaces and temples at [Assyrian](https://en.wikipedia.org/wiki/Assyria) ([Kalhu](https://en.wikipedia.org/wiki/Kalhu) / Nimrud, [Khorsabad](https://en.wikipedia.org/wiki/Khorsabad), [Nineveh](https://en.wikipedia.org/wiki/Nineveh)), [Babylonian](https://en.wikipedia.org/wiki/Babylonia) ([Babylon](https://en.wikipedia.org/wiki/Babylon)), [Urartian](https://en.wikipedia.org/wiki/Urartian) ([Tushpa](https://en.wikipedia.org/wiki/Tushpa)/Van, Kalesi, Cavustepe, Ayanis, [Armavir](https://en.wikipedia.org/wiki/Armavir%2C_Armenia), [Erebuni](https://en.wikipedia.org/wiki/Yerevan), [Bastam](https://en.wikipedia.org/wiki/Bastam)) and [Neo-Hittite](https://en.wikipedia.org/wiki/Neo-Hittite) sites ([Karkamis](https://en.wikipedia.org/wiki/Carchemish%22%20%5Co%20%22Carchemish), [Tell Halaf](https://en.wikipedia.org/wiki/Tell_Halaf), [Karatepe](https://en.wikipedia.org/wiki/Karatepe)). Houses are mostly known from Old Babylonian remains at Nippur and Ur. Among the textual sources on building construction and associated rituals are Gudea's cylinders from the late 3rd millennium are notable, as well as the Assyrian and Babylonian royal inscriptions from the [Iron Age](https://en.wikipedia.org/wiki/Iron_Age).

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