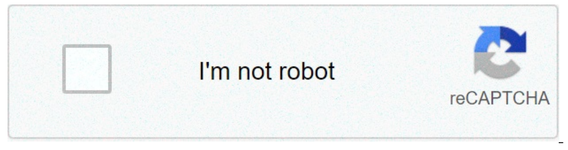

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Detailed map of ancient egypt

Although most historians and geographers find it difficult to agree on many aspects of the Nile, including its length and source, virtually everyone acknowledges that Ancient Egypt could never have existed without the great body of water. Egypt, known to many as the home of the Great Pyramids, the Great Sphinx and other marvels of the ancient world, isn't ideally located for advanced civilization. Other than the Nile, Egypt is surrounded by tons of sand, which isn't exactly conducive to agriculture and other cornerstones of civilization. Fortunately for the Egyptians, they knew just how to finesse the Nile and its capabilities to turn what would appear to be a barren wasteland into a thriving empire.A consistent freak act of nature allowed the Egyptians to harness the capabilities of the Nile River. While the majority of Egypt was and still is covered with the aforementioned sand, the river basin next to the Nile boasts wildlife and fertile soils. This is all due to the predictable rise and fall of the Nile's water levels each year, known as inundation (rise) and relinquishment (fall). During the inundation period, which takes place sometime around July, water would rise and fill canals made by Egyptian laborers. Sometime around the end of October, the river would begin to recede, leaving rich silt deposits.The water that had been collected in the canals and basins during the inundation period was enough to supply nourishment for the crops for the next year. Crops were harvested in June before the return of the floods. The cycle somewhat reliably repeated every year, although it sometimes produced more water than needed, which had negative effects on the crops.In the early 1900s, several dams were built in southern Egypt in an effort to control the sometimes overzealous flooding. While the dams were able to control the floods to a manageable level, they also decreased the amount of sediment deposits, drastically reducing the fertility of the area. Fortunately for Egyptian farmers, fertilizers are commonplace and they use them to offset the change in land fertility. The system allowed Egyptian farmers to grow a variety of crops, including staples such as wheat and barley. In addition to irrigating the crops and fertilizing the soil, the Nile's inundation period also supplied much-needed drinking water.The rise and fall of the Nile's life-giving waters inspired the ancient Egyptians to view it as a cycle of death and rebirth. The Egyptians experienced so much success cultivating the Nile that the area became densely populated. Because of this, Egyptian society evolved rapidly developing its own systems of record keeping, accounting and writing (hieroglyphics).The Nile was not just an agricultural boon for Egypt -- it also was the country's most important roadway, serving as the main thoroughfare to encourage travel and communication capabilities. This function helped to connect outlying portions of Egypt to the capital, enabling trade and communication.Although the ancient Egyptian society eventually collapsed, the Nile continued to flow. Eventually, Great Britain took control of the Nile basin late in the 19th century, although it later relinquished control in Africa in the 1950s and 1960s. Jeff J Mitchell/Getty Images News/Getty Images The geography of the area influenced where the Ancient Egyptians built most of their civilization. The geography also affected the materials the civilization used to build things, and it kept the civilization relatively safe from invasion. The harsh climate pushed the early Egyptian tribes toward the Nile River Valley, where the long, strong river kept the surrounding areas lush and green through regular flooding. This allowed the civilization to thrive even in the hot, dry desert. Egyptian culture and daily life revolved around the river because it brought the different seasons. The Nile also has a high place in Egyptian mythology and belief. In addition, the flow of the river determined how their trade routes were set up. The stones available in the land determined what kind of buildings the people were able to build, and the abundance of stones to mine led to the many monuments left behind thousands of years later. Without the solid stone available, such things as the pyramids would not have been possible. Egypt is historically known for the enslavement of Hebrews which aided in the expansion in the empire by providing free manual labor. The climate was harsh and the Nile broken up by dangerous rapids, keeping many invading forces out. This allowed the civilization to thrive for thousands of years with minimal examples of being taken over. Chad Ehlers/Photographer's Choice/Getty Images The three seasons observed in ancient Egypt were Akhet, Peret and Shemu. The seasons were associated with the three phases of farming as well as the rise and fall of the Nile River. The first season of ancient Egypt, Akhet, marked the period between June and September when the banks of the Nile River flooded, with flood waters bringing fertile mud and silt to the region. It was followed by Peret, lasting from October to February, during which crops were planted and grown. The last season of the ancient Egyptian calendar was Shemu, which marked the harvest period that took place between March and May. The way in which we divide the day into hours and minutes, as well as the structure and length of the yearly calendar, owes much to pioneering developments in ancient Egypt. Since Egyptian life and agriculture depended upon the annual flooding of the Nile, it was important to determine when such floods would begin. The early Egyptians noted that the beginning of akhet (inundation) occurred at the heliacal rising of a star they called Serpet (Sirius). It has been calculated that this sidereal year was only 12 minutes longer than the mean tropical year which influenced the flooding, and this produced a difference of only 25 days over the whole of Ancient Egypt's recorded history. Ancient Egypt was run according to three different calendars. The first was a lunar calendar based on 12 lunar months, each of which began on the first day in which the old moon crescent was no longer visible in the East at dawn. (This is most unusual since other civilizations of that era are known to have started months with the first setting of the new crescent!) A thirteenth month was intercalated to maintain a link to the heliacal rising of Serpet. This calendar was used for religious festivals. The second calendar, used for administrative purposes, was based on the observation that there was usually 365 days between the heliacal rising of Serpet. This civil calendar was split into twelve months of 30 days with an additional five epagomenal days attached at the end of the year. These additional five days were considered to be unlucky. Although there is no firm archaeological evidence, a detailed back calculation suggests that the Egyptian civil calendar dates back to circa 2900 BCE. This 365-day calendar is also known as a wandering calendar, from the Latin name annus vagus since it slowly gets out of synchronization with the solar year. (Other wandering calendars include the Islamic year.) A third calendar, which dates back at least to the 4th century BCE was used to match the lunar cycle to the civil year. It was based on a period of 25 civil years which was approximately equal 309 lunar months. An attempt to reform the calendar to include a leap year was made at the beginning of the Ptolemaic dynasty (Decree of Canopus, 239 BCE), but the priesthood was too conservative to allow such a change. This pre-dates the Julian reform of 46 BCE which Julius Caesar introduced on the advice of the Alexandrian astronomer Sosigenese. Reform did, however, come after the defeat of Cleopatra and Anthony by the Roman General (and soon to be Emperor) Augustus in 31 BCE. In the following year, the Roman senate decreed that the Egyptian calendar should include a leap year, although the actual change to the calendar didn't occur until 23 BCE. The months of the Egyptian civil calendar were further divided into three sections called "decades", each of 10 days. The Egyptians noted that the heliacal rising of certain stars, such as Sirius and Orion, matched the first day of the 36 successive decades and called these stars decans. During any one night, a sequence of 12 decans would be seen to rise and was used to count the hours. (This division of the night sky, later adjusted to account for the epagomenal days, had close parallels to the Babylonian zodiac. The signs of the zodiac each accounting for three of the decans. This astrological device was exported to India and then to Medieval Europe via Islam.) Early man divided the day into temporal hours whose length depended upon the time of year. A summer hour, with the longer period of daylight, would be longer than that of a winter day. It was the Egyptians who first divided the day (and night) into 24 temporal hours. The Egyptians measured time during the day using shadow clocks, precursors to the more recognizable sun dials seen today. Records suggest that early shadow clocks were based on the shadow from a bar crossing four marks, representing hourly periods starting two hours into the day. At midday, when the sun was at its highest, the shadow clock would be reversed and hours counted down to dusk. An improved version using a rod (or gnomon) and which indicates the time according to the length and position of the shadow has survived from the second millennia BCE. Problems with observing the sun and stars may have been the reason the Egyptians invented the water clock, or "clepsydra" (meaning water thief in Greek). The earliest remaining example survives from the Temple of Karnak is dated to the 15th century BCE. Water drips through a small hole in one container to a lower one. Marks on either container can be used to give a record of hours passed. Some Egyptian clepsydras have several sets of marks to be used at different times of the year, to maintain consistency with the seasonal temporal hours. The design of the clepsydra was later adapted and improved by the Greeks. As a result of the campaigns of Alexander the Great, a great wealth of knowledge of astronomy was exported from Babylon into India, Persia, the Mediterranean, and Egypt. The great city of Alexandria with its impressive Library, both founded by the Greek-Macedonian family of Ptolemy, served as an academic center. Temporal hours were of little use to astronomers, and around 127 CE Hipparchus of Nicea, working in the great city of Alexandria, proposed dividing the day into 24 equinoctial hours. These equinoctial hours, so called because they are based on the equal length of day and night at the equinox, split the day into equal periods. (Despite his conceptual advance, ordinary people continued to use temporal hours for well over a thousand years: the conversion to equinoctial hours in Europe was made when mechanical, weight driven clocks were developed in the 14th century.) The division of time was further refined by another Alexandrian based philosopher, Claudius Ptolemeus, who divided the equinoctial hour into 60 minutes, inspired by the scale of measurement used in ancient Babylon. Claudius Ptolemaeus also compiled a great catalog of over one thousand stars, in 48 constellations and recorded his concept that the universe revolved around the Earth. Following the collapse of the Roman Empire, it was translated into Arabic (in 827 CE) and later into Latin (in the 12th century CE). These star tables provided the astronomical data used by Gregory XIII for his reform of the Julian calendar in 1582. Richards, EG. Mapping Time: The Calendar and its History. Oxford University Press, 1998. General History of Africa II: Ancient Civilizations of Africa. James Curry Ltd., University of California Press, and the United Nations Educational, Scientific and Cultural Organization (UNESCO), 1990. Color (Ancient Egyptian name "iwen") was considered an integral part of an item's or person's nature in Ancient Egypt, and the term could interchangeably mean color, appearance, character, being or nature. Items with similar color were believed to have similar properties. Colors were often paired. Silver and gold were considered complementary colors (i.e. they formed a duality of opposites just like the sun and moon). Red complemented white (think of the double crown Ancient Egypt), and green and black represented different aspects of the process of regeneration. Where a procession of figures is depicted, the skin tones alternate between light and dark ochre. Purity of color was important to Ancient Egyptians and the artist would usually complete everything in one color before moving on to the next. Paintings would be finished off with fine brushwork to outline the work and add limited interior detail. The degree to which Ancient Egyptian artists and craftsmen mixed colors varies according to dynasty. But even at its most creative, color mixing was not widely spread. Unlike today's pigments which give consistent results, several of those available to Ancient Egyptian artists could react chemically with each other; for example, lead white when mixed with orpiment (yellow) actually produces black. Black (Ancient Egyptian name "kem") was the color of the life-giving silt left by the Nile inundation, which gave rise to the Ancient Egyptian name for the country: "kemet" – the black land. Black symbolized fertility, new life and resurrection as seen through the yearly agricultural cycle. It was also the color of Osiris ('the black one'), the resurrected god of the dead, and was considered the color of the underworld where the sun was said to regenerate every night. Black was often used on statues and coffins to invoke the process of regeneration ascribed to the god Osiris. Black was also used as a standard color for hair and to represent the skin color of people from the south – Nubians and Kushites. White (Ancient Egyptian name "hedj") was the color of purity, sacredness, cleanliness and simplicity. Tools, sacred objects and even priest's sandals were white for this reason. Sacred animals were also depicted as white. Clothing, which was often just undyed linen, was usually depicted as white. Silver (also known by the name "hedj," but written with the determinative for precious metal) represented the color of the sun at dawn, and the moon, and stars. Silver was a rarer metal than gold in Ancient Egypt and held a greater value. Blue (Ancient Egyptian name "irtyu") was the color of the heavens, the dominion of the gods, as well as the color of water, the yearly inundation and the primeval flood. Although Ancient Egyptians favored semi-precious stones such as azurite (Ancient Egyptian name "tefer'" and lapis lazuli (Ancient Egyptian name "khesbedj," imported at great cost across the Sinai Desert) for jewelry and inlay, technology was advanced enough to produce the world's first synthetic pigment, known since medieval times as Egyptian blue. Depending on the degree to which the pigment Egyptian blue was ground, the color could vary from a rich, dark blue (coarse) to a pale, ethereal blue (very fine). Blue was used for the hair of gods (specifically lapis lazuli, or the darkest of Egyptian blues) and for the face of the god Amun – a practice which was extended to those Pharaohs associated with him. Green (Ancient Egyptian name "wahdj'"was the color of fresh growth, vegetation, new life and resurrection (the latter along with the color black). The hieroglyph for green is a papyrus stem and frond. Green was the color of the "Eye of Horus," or "Wedjat," which had healing and protective powers, and so the color also represented well-being. To do "green things" was to do behave in a positive, life-affirming manner. When written with the determinative for minerals (three grains of sand) "wahdj" becomes the word for malachite, a color which represented joy. As with blue, the Ancient Egyptians could also manufacture a green pigment – verdigris (Ancient Egyptian name "hes-byah" – which actually means copper or bronze dross (rust). Unfortunately, verdigris reacts with sulphides, such as the yellow pigment orpiment, and turns black. (Medieval artists would use a special glaze over the top of verdigris to protect it.) Turquoise (Ancient Egyptian name "mefkhat"), a particularly valued green-blue stone from the Sinai, also represented joy, as well as the color of the sun's rays at dawn. Through the deity Hathor, the Lady of Turquoise, who controlled the destiny of new-born babies, it can be considered a color of promise and foretelling. Yellow (Ancient Egyptian name "khenet") was the color of women's skin, as well as the skin of people who lived near the Mediterranean - Libyans, Bedouin, Syrians and Hittites. Yellow was also the color of the sun and, along with gold, could represent perfection. As with blue and green, the Ancient Egyptians produced a synthetic yellow – lead antimonite – its Ancient Egyptian name, however, is unknown. When looking at Ancient Egyptian art today it can be difficult to distinguish between lead antimonite, (which is a pale yellow), lead white (which is very slightly yellow but can darken over time) and orpiment (a relatively strong yellow which fades in direct sunlight). This has lead some art historians to believe white and yellow were interchangeable. Realgar, which we consider to be an orange color today, would have been classed as yellow. (The term orange didn't come into use until the fruit arrived in Europe from China in medieval times – even Cennini writing in the 15th century describes it as a yellow!) Gold (Ancient Egyptian name "newb") represented the flesh of the gods and was used for anything which was considered eternal or indestructible. (Gold was used on a sarcophagus, for example, because the pharaoh had become a god.) Whilst gold leaf could be used on sculpture, yellow or reddish-yellows were used in paintings for the skin of gods. (Note that some gods were also painted with blue, green or black skin.) Red (Ancient Egyptian name "deshr") was primarily the color of chaos and disorder – the color of the desert (Ancient Egyptian name "deshret," the red land) which was considered the opposite of the fertile black land ("kemet"). One of the principal red pigments, red ochre, was obtained from the desert. (The hieroglyph for red is the hermit ibis, a bird which, unlike the other ibis of Egypt, lives in dry areas and eats insects and small creatures.) Red was also the color of destructive fire and fury and was used to represent something dangerous. Through its relation to the desert, red became the color of the god Seth, the traditional god of chaos, and was associated with death – the desert was a place where people were exiled or sent to work in mines. The desert was also regarded as the entrance to the underworld where the sun disappeared each night. As chaos, red was considered the opposite to the color white. In terms of death, it was the opposite of green and black. While red was the most potent of all colors in Ancient Egypt, it was also a color of life and protection – derived from the color of blood and the life-supporting power of fire. It was therefore commonly used for protective amulets. Colors which need no replacement: Ivory and Lamp Black Indigo Red and Yellow Ochres Turquoise Suggested replacements: Chalk White – Titanium White Lead White – Flake White, but you can tint some Titanium White slightly with yellow. Egyptian Blue light tone – Cobalt Turquoise Egyptian Blue dark – Ultramarine Azurite – Ultramarine Lapis Lazuli – Ultramarine Malachite – Permanent Green or Phthalo Green Verdigris – Emerald Green Chrysocolla – Light Cobalt Green Orpiment – Cadmium Yellow Lead Antimonite – Naples Yellow Realgar – Bright-Red or Orange-Red Gold – use a metallic gold paint, preferably with a reddish hue (or underpaint with red) Red Lead – Vermilion Hue Madder Lake – Alizarin Crimson Kermes Lake – Permanent Crimson