

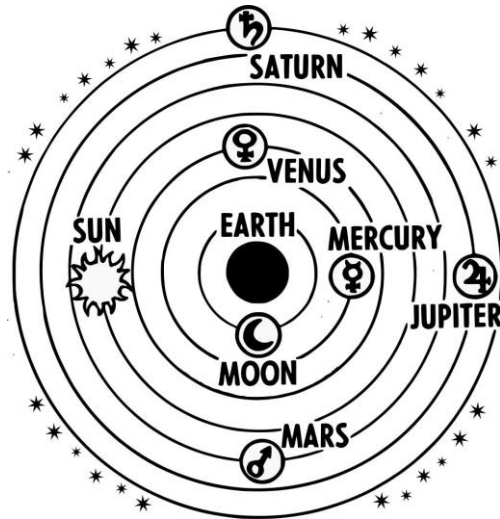


Planets and Beliefs - Teacher's Notes

Human Ideas Change over Time

Our understanding of the Solar System changed as new instruments for observing and measuring became available. Our modern ideas on many things are different from those of our ancestors who believed that the Earth was the center of the Universe and planets were gods.

They probably worked this out by personal naked-eye observation. If you lie on your back at night, you will see that the stars appear to circle around the north or south poles but the planets do not follow them. They follow their own wandering paths. These observations led to the belief in a geocentric (Earth at the center) Universe, with heavenly bodies travelling in concentric spheres round Earth. Neolithic man and early Egyptians believed the Sun God crossed the heavens in a barge every day. The Romans thought the Sun god was pulled across the sky on a horse drawn chariot and Aboriginal people believed that the stars were children of the Sun and Moon thrown up into the sky for safety.











Astronomers gave the planets names and symbols. Most people could not read but could interpret symbols. We can only guess how they viewed our world. The legendary Bronze Age poet Homer describes the sea as "wine dark". Some people say that this is because our eyesight has changed in the intervening years. Others say that wine has changed or we are misinterpreting an ancient language. Science does not accept opinions that aren't backed up by observations that are measurable and repeatable.



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Very Early Astronomers' Symbols for the Planets

Using the diagram of the medieval astronomer's Solar System, choose which planet or object is represented by each symbol and explain why.

Symbol	Planet	Possible explanation for symbol
	Earth (Not considered a planet at this time but the center of the Solar System)	Dot is center of everything? Earth is at the centre of the heavenly spheres?
	The Moon	It looks like a crescent moon?
	Mercury	The god Mercury the messenger of the Gods with wings on his hat?
	Venus	Goddess of love. A high status Bronze Age woman's mirror?
	Sun or Sol	Rays of heat and light?
	Mars	God of war. A shield and spear?
	Jupiter	An eagle was the sign for Jupiter? (Can't see it myself!)
	Saturn	The sickle (grain stem cutter) of Chronos, the god of time?





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Common Misconceptions

We are studying Earth and Space Science. Science demands data to support conclusions. Beliefs do not. Both science and belief can change as more information or better technology provides better data. Recent studies have found that 25% of people in the USA and 32% in the European Union believe the Sun travels round the Earth. You may wish to ask for a "eyes shut, hands up" poll of your class on which they think moves round which.

Number of students in our class **30**

	The Sun moves round the Earth	The Earth moves round the Sun	Don't know
Number of students	10	18	2
Fraction of students	$\frac{10}{30}$	$\frac{18}{30}$	$\frac{2}{30}$
Percentage of students	33%	60%	17%

