Encyclopedic Entry

globe

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A globe is a three-dimensional scale model of the Earth or other round body. Because it is spherical, or ball-shaped, it can represent surface features, directions, and distances more accurately than a flat map. On the other hand, a globe may be less practical for travelers, since globes are much bulkier than flat maps and often carry less detailed information.

The oldest known globe was made more than 2,100 years ago by Crates of Mallus, a Greek philosopher and geographer who lived in what is today Turkey. The oldest globe that survives to this day was made by the German geographer Martin Behaim in 1492—just before Christopher Columbus sailed to the New World. This globe is more accurate than Crates', but still leaves out North America, South America, Australia, and Antarctica.

The Earth is not the only planet that has been mapped onto a globe. In the past few decades, spacecraft have made detailed maps of the surfaces of other planets and moons. Globes for some of them, such as the planet Mars and our own Moon, are available for purchase.

Even the night sky around the Earth, known as the celestial sphere, has been mapped onto a globe. Celestial globes represent stars and planets visible above certain parts of the Earth. Many constellations, such as the Big Dipper, are outlined into familiar shapes on celestial globes. Looking for patterns on celestial globes makes finding individual stars easier to spot.

Like most early terrestrial globes, most early celestial globes were made of metal. Metal globes are usually cast in two halves, or hemispheres. These halves are then welded together with hot metal, creating a seam, or raised line, in the middle of the sphere. It is nearly impossible to create seamless globes—globes that are made of a single piece of metal. Nevertheless, astronomers and metalsmiths in what is today India and Pakistan created such celestial globes in the 1500s.

An ancient type of globe is the armillary sphere. An armillary sphere has a mini-globe of Earth surrounded by rings representing movement of visible stars and planets. The rings are adjustable, so they reflect the stars and planets visible at different times of the year in different places on the globe. Before the invention of the telescope, armillary spheres were the most important tools astronomers had. In fact, celestial globes and armillary spheres have likely been used at least as long as terrestrial globes, if not longer.

VOCABULARY

Term	Part of Speech	Definition
adjustable	*adjective*	able to change according to different situations.
armillary	*noun*	ancient tool, made of interlocking rings surrounding a globe, to determine the

armillary sphere	*noun*	ancient tool, made of interlocking rings surrounding a globe, to determine the position of stars and planets in the visible sky.
astronomer	*noun*	person who studies space and the universe beyond Earth's atmosphere.
Big Dipper	*noun*	constellation of seven stars resembling a ladle, prominent in the Northern Hemisphere.
cast	*noun*	impression formed when a liquid substance is poured into a form or mold, and then hardens into that shape.
celestial globe	*noun*	spherical model of the stars and planets visible in the night sky around the Earth.
celestial sphere	*noun*	imaginary sphere with Earth as its center, including all the stars and planets visible in the night sky.
Christopher Columbus	*noun*	(1446-1506) Italian navigator.
constellation	*noun*	group of stars that form a recognizable shape.
Crates of Mallus	*noun*	(?-145 BCE) Greek philosopher.
decade	*noun*	10 years.
Earth	*noun*	our planet, the third from the Sun. The Earth is the only place in the known universe that supports life.
erdapfel	*noun*	German world for potato.
Erdapfel	*noun*	oldest globe in the world, made in 1492 by Martin Behaim.
geographer	*noun*	person who studies places and the relationships between people and their environments.
globe	*noun*	scale model of the Earth, or sometimes used to mean the Earth itself.
hemisphere	*noun*	half of a sphere, or ball-shaped object.
Mars	*noun*	fourth planet from the sun, between Earth and Jupiter.
Martin Behaim	*noun*	(1459-1507) German geographer.
metal	*noun*	category of elements that are usually solid and shiny at room temperature.
metalsmith	*noun*	person who makes tools or sculpture from metal.
New World	*noun*	the Western Hemisphere, made up of the Americas and their islands.
philosopher	*noun*	person who studies knowledge and the way people use it.
practical	*adjective*	useful or easy to use.
seam	*noun*	line formed by two pieces of joined material.
spacecraft	*noun*	vehicle designed for travel outside Earth's atmosphere.
sphere	*noun*	round object.
spherical	*adjective*	rounded and three-dimensional.
telescope	*noun*	scientific instrument that uses mirrors to view distant objects.
terrestrial globe	*noun*	spherical model of the Earth.

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three-dimensional	*adjective*	having the appearance of width, height, and depth.
undisclosed	*adjective*	secret or unrevealed.
weld	*verb*	to join two or more pieces of metal by applying heat to melt the parts of metal to be joined.

For Further Exploration

Interactives

- National Geographic Channel: Great Migrations—3D Animal Migration Globe