

Canon Science Papercraft Mini-book

Natural Science Series
Simple Globes & Earth and Moon

The Earth is the only planet in the solar system known to support life. The land and the sea are teeming with all sorts of life. About 71% of the Earth's surface is covered with water; truly the Earth could be called "the water planet."

This fact becomes obvious when looking at a globe. In contrast, the Moon is a bleak world with neither water nor air.

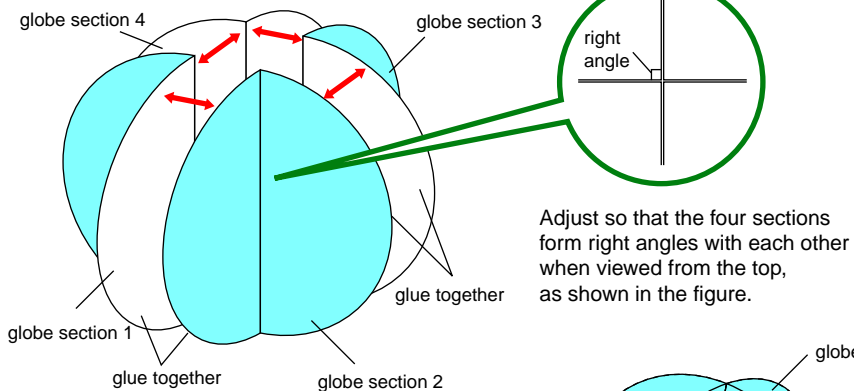


*Cut out the card above and save it. You can collect the cards from each of the Papercraft projects to make your own mini-book!

★Directions

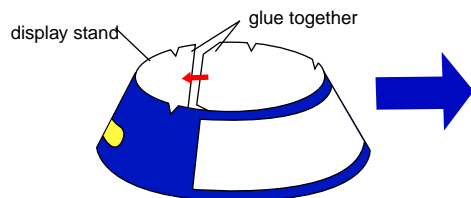
Print out Sections 1 through 3. Cut out all the parts, and fold along the valley fold lines.

1. Glue together globe sections 1 through 4 as shown.

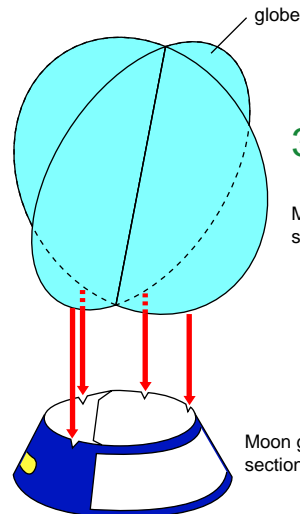


Adjust so that the four sections form right angles with each other when viewed from the top, as shown in the figure.

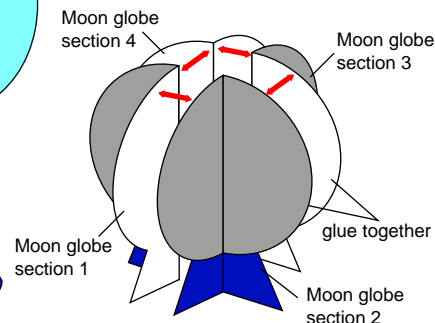
2. Build the display stand and place the globe on the stand.



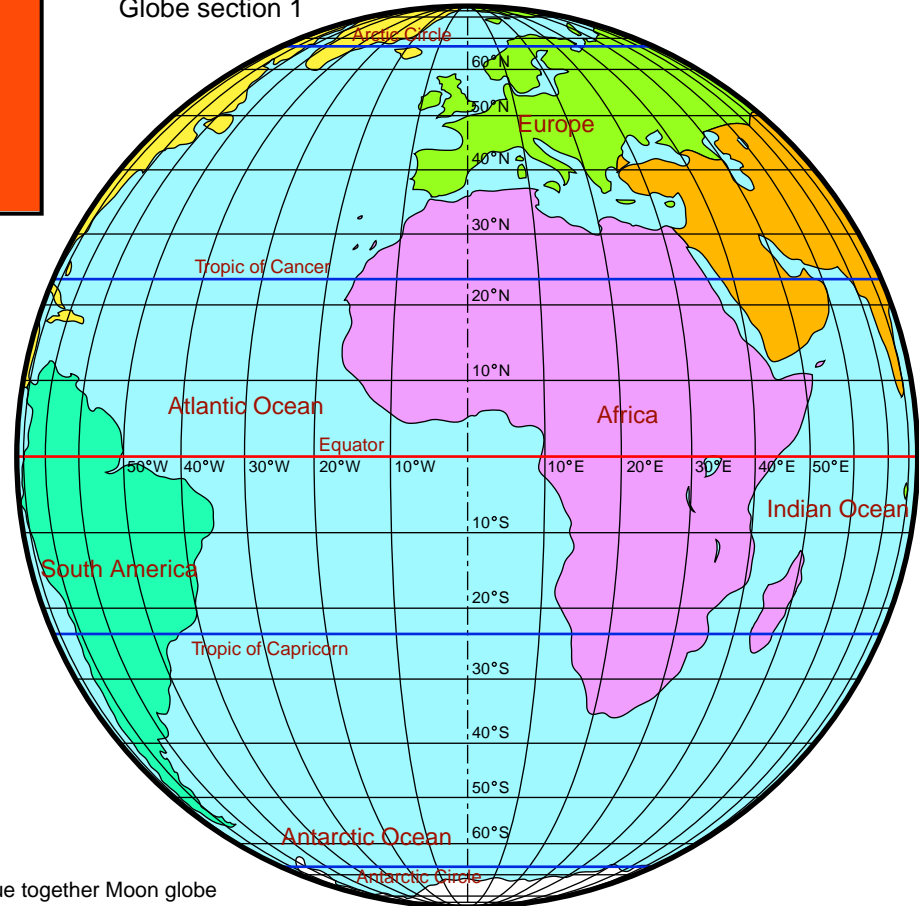
The Earth rotates about an axis which is tilted 23.44° with respect to the sun. When you place the globe on the display stand with the edges of the four sections fitting into the grooves in the stand, as shown in the figure, your globe will be tilted at the same angle as the earth. (Note that the angle may not be exactly correct due to distortions introduced in the construction process.)



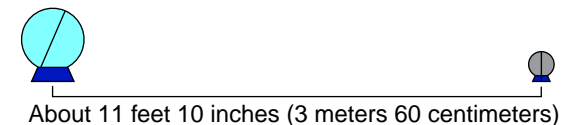
3. Glue together Moon globe sections 1 through 4 as shown.



Globe section 1

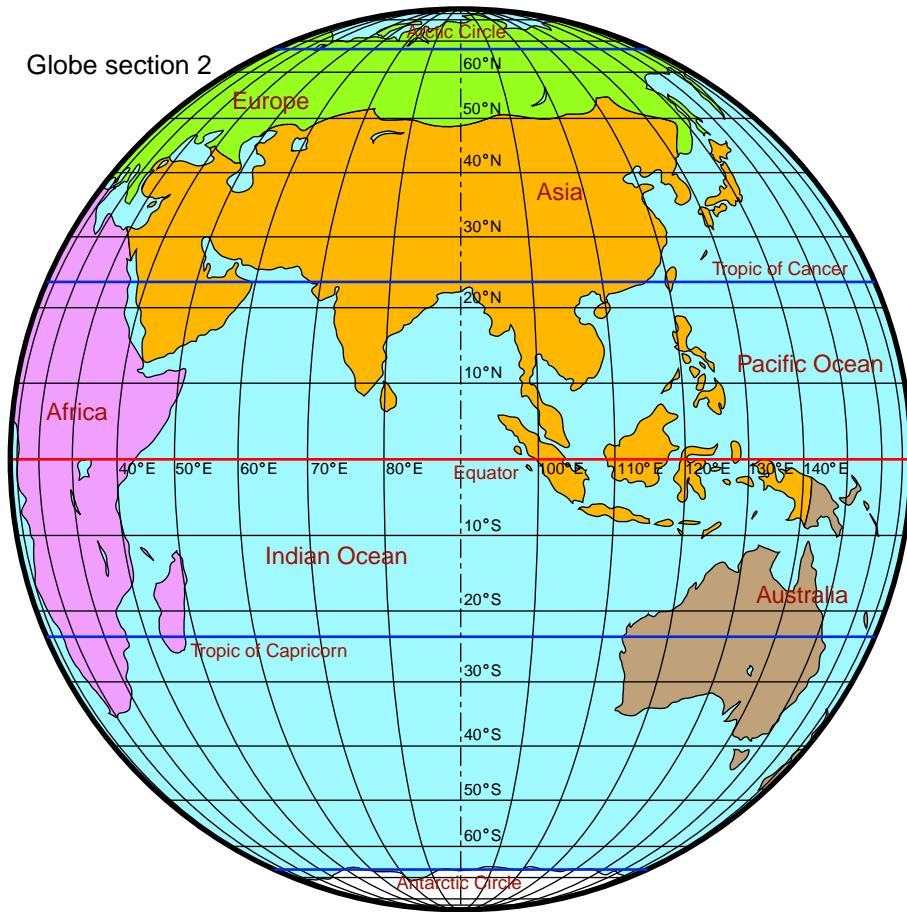


The average distance from the center of the Earth to the center of the Moon is 238,860 miles (384,400 kilometers). If you separate your Earth and Moon globes as shown in the figure below, you can see this distance to scale.

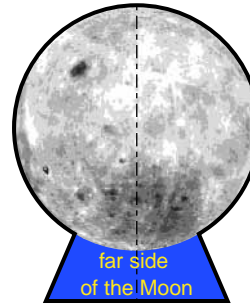


— cut line
- - - valley fold line

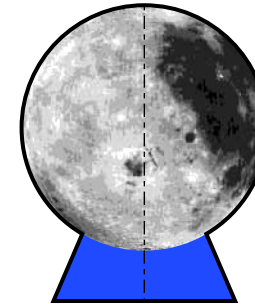
Globe section 2



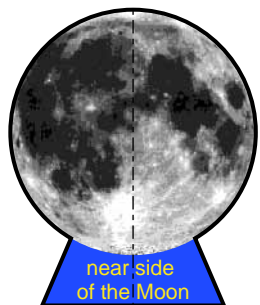
Moon globe section 3



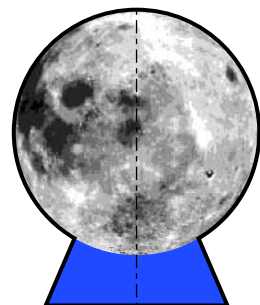
Moon globe section 4



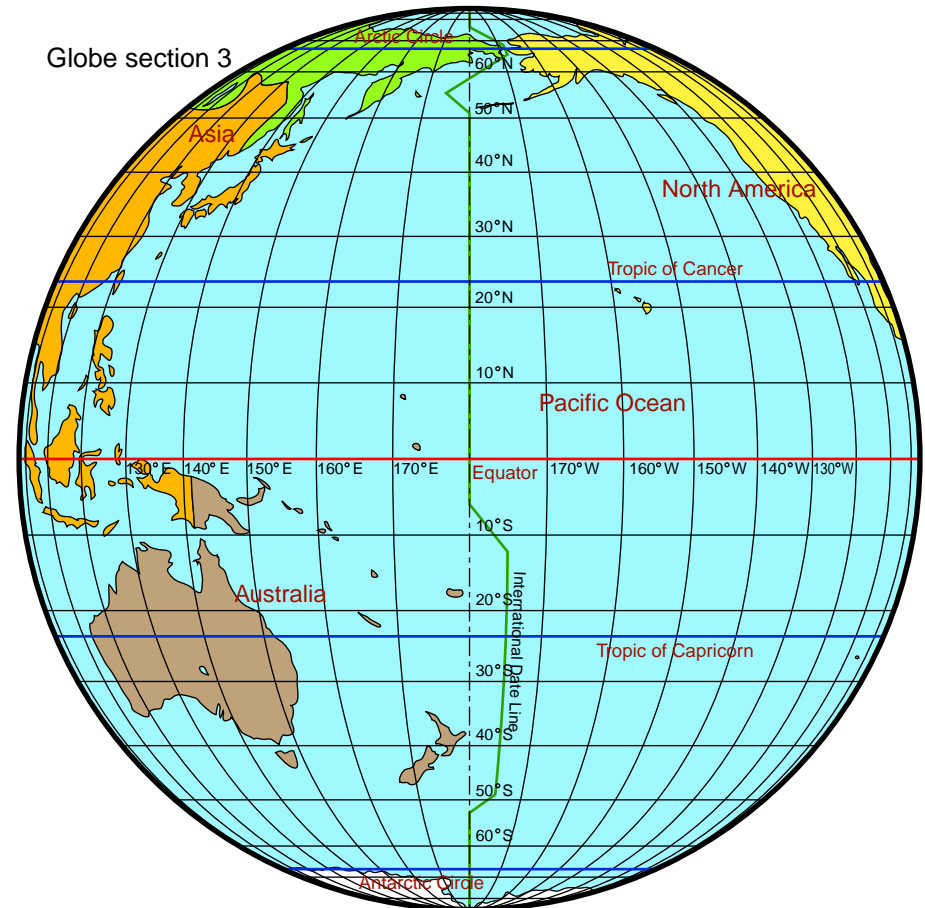
Moon globe section 1



Moon globe section 2

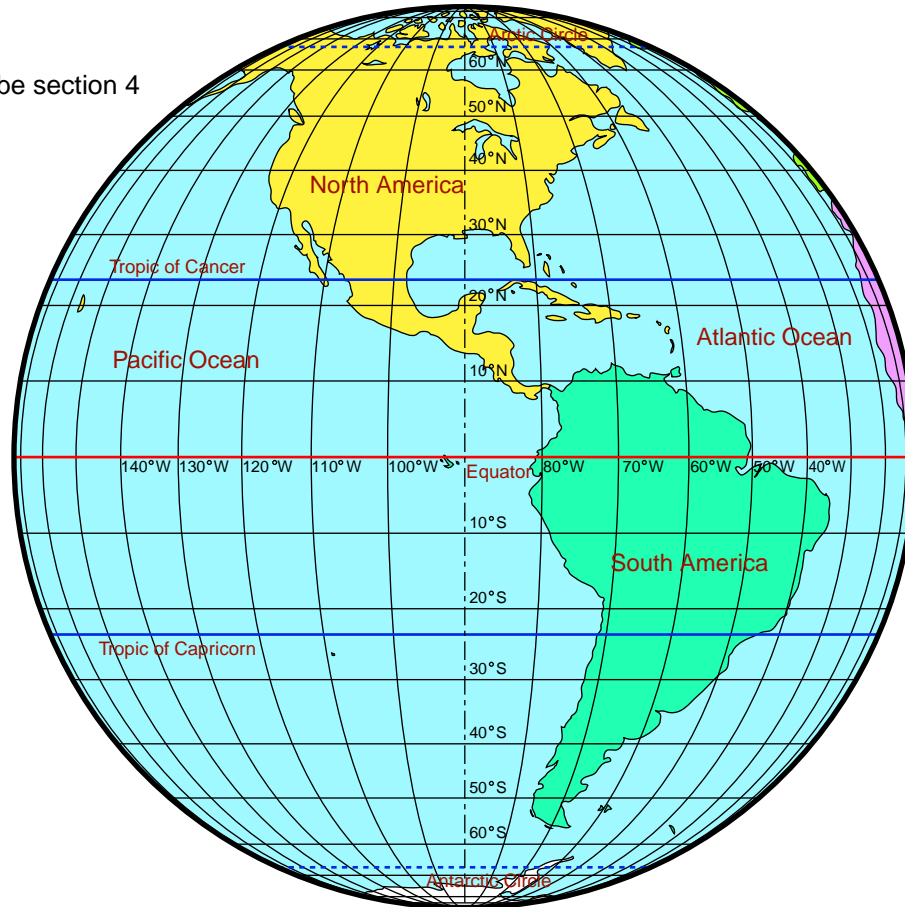


Globe section 3



Globe section 4

— cut line
 - - - valley fold line



direction of rotation

Canon Science Papercraft
 Natural Science Simple Globe

display stand

glue here

— Equator	The line corresponding to 0° latitude; this line divides the Earth into northern and southern hemispheres
— Latitude and longitude lines	Coordinate lines which indicate position on the Earth; latitude lines run east and west, while longitude lines run north and south
— Tropic of Cancer	The line in the northern hemisphere where the sun's rays are perpendicular to the Earth's surface on the summer solstice
— Tropic of Capricorn	The line in the southern hemisphere where the sun's rays are perpendicular to the Earth's surface on the winter solstice
- - - Arctic and Antarctic Circles	The Arctic lies to the north of the Arctic Circle, at 66° 33' north latitude; the Antarctic lies to the south of the Antarctic Circle, at 66° 33' south latitude
— International Date Line	A line where it has been agreed that the date changes