

Name _____

Planet Shape - Student Worksheet

How planets and other objects in the Solar System get their shape

Both stars and planets appear round or more correctly spheroidal. They spin or rotate in the same direction as the original dust cloud from which they formed. Why can't we say that the Earth is round?

Moons, asteroids and some dwarf planets can be very unevenly shaped. Massive bodies are so "heavy" that gravity pulls all material close to the center of the spinning mass. ANU (Australian National University) astronomers have calculated that the borderline between taking a spherical shape and an irregular shape is a diameter of 600 km. If the body is solid rock (such as asteroids inhabiting the Asteroid Belt between Mars and Jupiter) gravity will eventually pull it into a spherical shape.

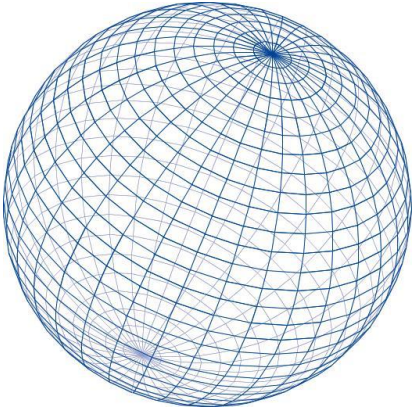
Because the rock keeps spinning however, over time it takes on a slightly flattened shape known as an oblate spheroid.

Our Earth is a slightly flattened sphere. The distance from Earth's center to the Equator is 6,378km whereas the distance from its poles to the Equator is 6,357km. 21km makes all the difference.

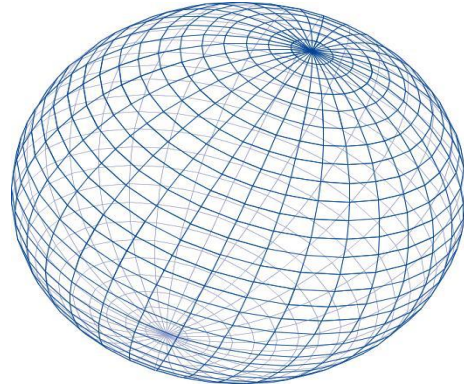


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Sphere



Oblate spheroid

What shape are these heavenly bodies?

Materials

- Access to the Internet of astronomy books

Method

Collect data on these objects in our solar system, then decide what shape they are liable to be.

Name	Made of	Location	Diameter (km)	Shape
Ida				
Mercury				

Name _____

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Name	Made of	Location	Diameter (km)	Shape
Ceres				
Halley's comet				
Uranus				