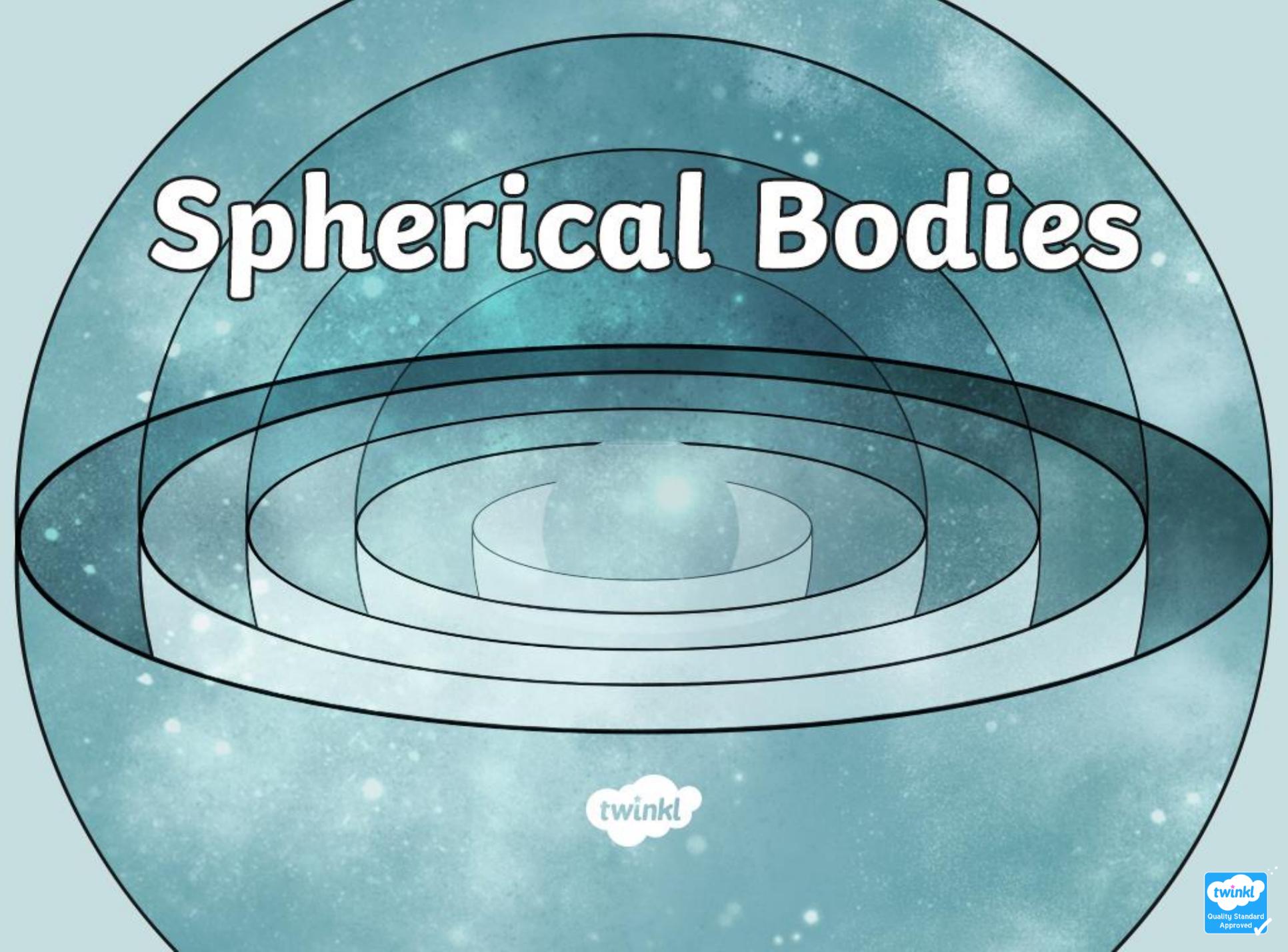


Spherical Bodies

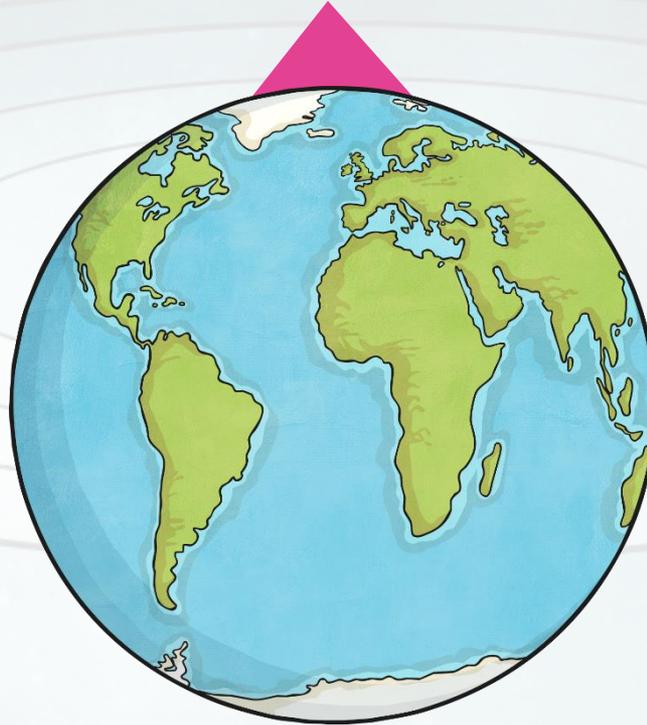
The image features a central 3D illustration of a spherical body. It consists of a small, glowing blue sphere at the center, surrounded by several concentric, semi-transparent layers that resemble a planet's atmosphere or internal structure. The layers are depicted with black outlines and a light blue, ethereal glow. The entire scene is set against a dark blue background filled with numerous small, white, star-like specks, creating a cosmic or space-themed atmosphere.

Ideas and Evidence



What shape is hidden under this globe?

What is your evidence?



Spherical: The Definition

spherical

sfɛrɪk(ə)l

Say: sfericl

Adjective

In the shape of a sphere.

Synonyms: ball-shaped, balloon-like, globe-shaped, bubble-shaped, orbicular.

The Planets: Spherical Bodies

Planets are referred to as 'spherical bodies' because to be classed as a planet, something has to:

- be **roughly spherical**;
- orbit the Sun;
- not orbit another planet;
- be big enough to have cleared away any bits floating near to it.

This tick list fits for planets made out of rock as well as those made from gases.

Stars and moons are also spherical objects.

Flat Earth Versus Spherical Body



What are the arguments for a flat Earth?



What are the arguments for a spherical Earth?



Read through the Shape Of The Earth Evidence Cards.

Sort the evidence into two groups – one that supports the idea that the Earth is flat and the other that supports the idea that the Earth is a sphere.

Identifying Evidence



Which idea has the most evidence to support it?

What do you think based on the evidence?

Scientific Ideas and Evidence



Complete the Scientific Ideas and Evidence Activity

Worksheet



Scientific Ideas and Evidence

Which piece of evidence is the most important in proving the Earth is spherical? Circle just one.

 Sailors made observations about the position of the Sun and stars.	 Planes have flown around the world and never seen the edge.	 Shadows cast by the Earth on the moon.
 Ships have sailed all the way around the world.	 Observations of ships sailing across the horizon.	 Pictures of Earth viewed from space.

Think the strongest evidence that the Earth is spherical is _____
The reason for this is _____

_____ and reason for this is _____

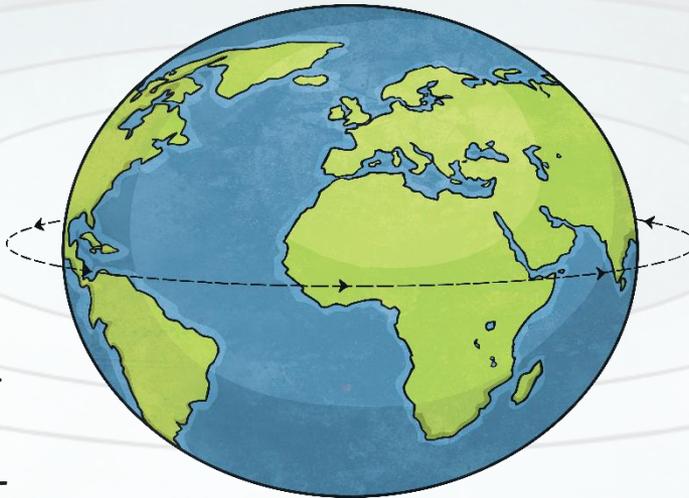
  Science | Year 5 | Earth and Space | Spherical | 30sec | Lesson 1



How Do We Know Planets Are Spherical?

This is a good question, as in the past many people believed that Earth was flat. A few people still believe this today.

You can understand how, in the past, before we knew about gravity, it was difficult to imagine that people in Australia would not fall off the Earth or all the water would run off a ball-shaped planet.



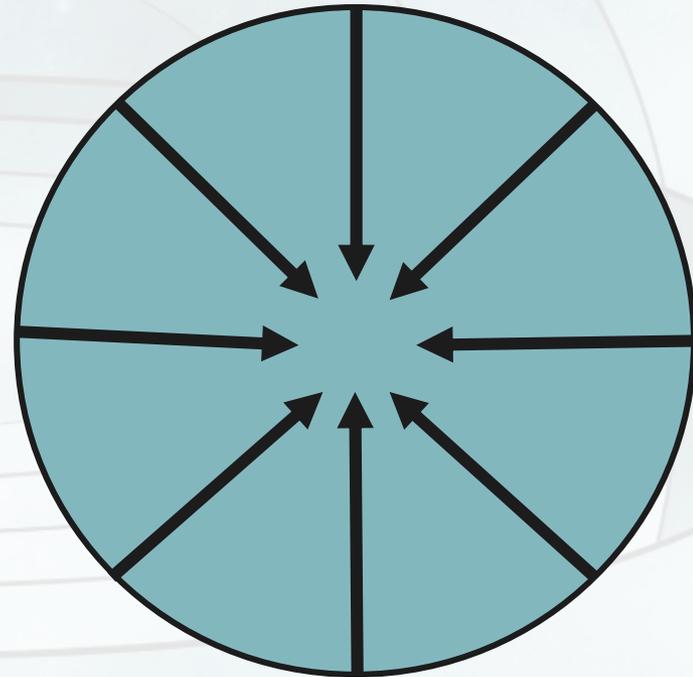
But as research, understanding and technology developed, there was enough evidence to conclude that planets are spherical. Astronauts have seen spheres and we have photos and film to show this too.

Why Are Planets Spherical?

The simple answer is '**gravity**'.

Because gravity pulls everything towards its centre and it pulls everything with the same force, then everything is going to be the same distance from the centre, which in turn makes a sphere!

Asteroids are all different shapes as they are not big enough to have gravity strong enough to pull them into a sphere.

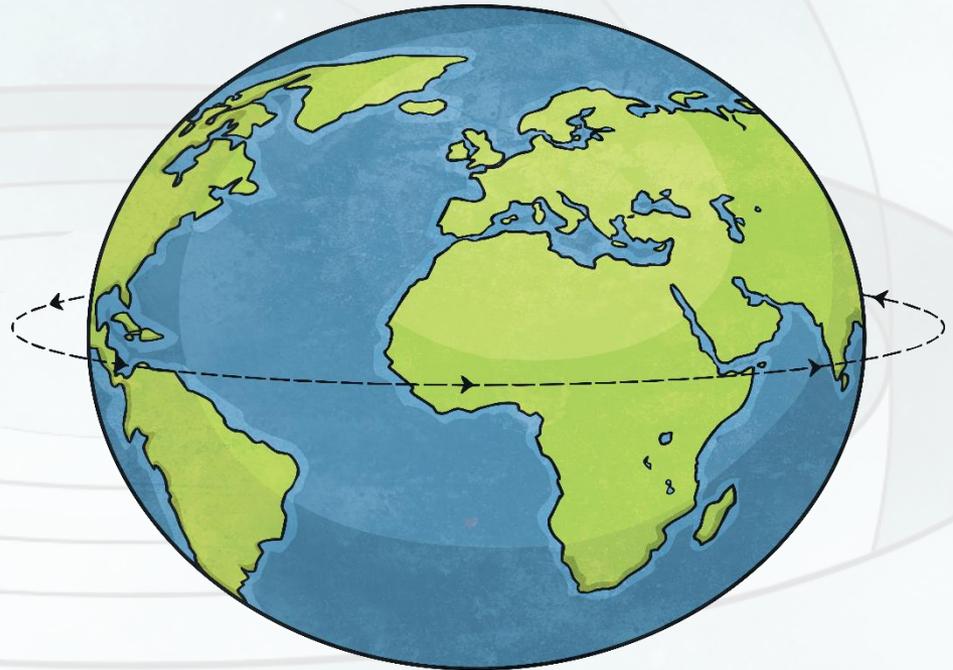


What Do We Mean by 'Roughly Spherical'?

Actually, Earth does bulge around the equator making its technical shape an oblate spheroid.

Earth bulges around the equator because it is spinning and the centrifugal force of the spin makes it bulge out a bit.

The faster the spin, the bigger the bulge!



centrifugal force – A force created during a spin that pulls from the centre of the object.

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