


Lesson	2 of 6	Key Unit Question:	What is the solar system?	Key Lesson Question:	How do we know the Earth is a sphere?
Learning Objective		NC Links		Resources	
I can describe the Sun, Earth and Moon as approximately spherical bodies.		• Describe the Sun, Earth and Moon as approximately spherical bodies		• Presentation • Differentiated activity sheet (easy/medium) • Challenge activity sheet • Next step • Spherical fruit (in varying sizes)	
Teaching Input					
<ul style="list-style-type: none"><li>• Introduce the learning objective on PPT slide 1/PDF title page.</li><li>• Recap on the previous lesson; can you remember the names of the planets in order depending on their distance from the Sun? Use any mnemonics invented in the previous lesson or teach the common mnemonic - My Very Easy Method Just Speeds Up Naming Planets - remembering that Pluto is a dwarf planet! (PPT 2-3/PDF 1-2)</li><li>• To recap on the size and order of the planets; ask the children to use spherical shaped fruit (of varying sizes) to represent each planet. Talk about their choices of fruit relative to the size of the planet. Discuss what the word spherical means (relate to the word sphere) Is this a 2-D shape or 3-D shape? (PPT slide 4/PDF p3)</li><li>• Watch the BBC Bitesize clip that explains who first discovered that the Earth was spherical. How do we know the Earth is spherical? - 2nd level Science - BBC Bitesize (PPT slide 5/PDF p4). Ask the children to pay particular attention to the clues that made Aristotle start to think that the world was a sphere.</li><li>• PPT slide 6/PDF p5 - ask the children to write down the reasons that Aristotle thought that the world was a sphere. Share ideas using PPT slide 7/PDF p6. What other evidence is there to prove the Earth is round? (Pictures from satellites in space etc).</li><li>• Introduce the differentiated activity sheet (PPT slide 8/PDF p7). Read the two points of view as a class then set children off on the task.</li><li>• After the children have completed the independent task, discuss their explanations. Ask the key learning question - how do we know the Earth is a sphere? What shape are the Moon and Sun?</li></ul>					
BACKGROUND SCIENCE FOR TEACHERS					
A common misconception is that the Earth is flat. This idea is related to gravity; if the world were a sphere then why don't we fall off? When children understand that the pull of gravity is towards the centre of the Earth, the meaning of down is relative to the position on Earth. The discovery that the Earth is round is most commonly ascribed to the ancient Greek philosopher, Pythagoras, while the credit for proving it, is usually given to Aristotle. Aristotle demonstrated the Earth was round by drawing on a variety of evidence: the curvature of the horizon, the way constellations appear in the sky and the way a ship disappears over the horizon. Christopher Columbus did not discover that the Earth was round.					
Differentiated Activities					
★ (working below)		★★ (working at)			
Children are given two points of view regarding Earth's shape. They must explain which point of view they agree with, giving reasons for their answer. A word bank is provided at the bottom of the sheet to support children.		Children are given two points of view regarding Earth's shape. They must explain which point of view they agree with, giving reasons for their answer			
Challenge activity		Next Step activity			
Children use information books or the internet to research information about the Greek philosopher, Aristotle, and create a passport for him.		Children are asked to imagine the Earth as a different shape such as a cube or a pyramid. What would it be like to live on Earth? What would be different?			
Assessment questions	Self assessment		Key vocabulary		
What shape is the Earth? How do we know that the Earth is a sphere? If the Earth is a sphere, why don't people fall off?	I understand that the Sun, Earth and Moon are spherical in shape.		sphere/spherical, Aristotle, Greek philosopher, hull, horizon, ellipse, curve		
			 <a href="http://www.grammarsaurus.co.uk">www.grammarsaurus.co.uk</a>		