

EARTH, SUN AND MOON

Teacher Information - Earth, Sun and Moon

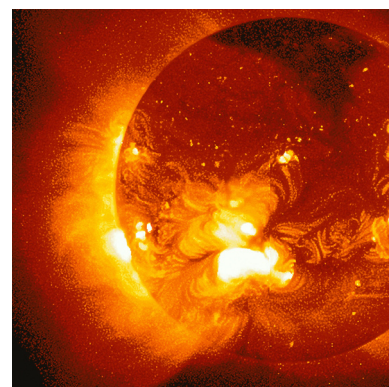
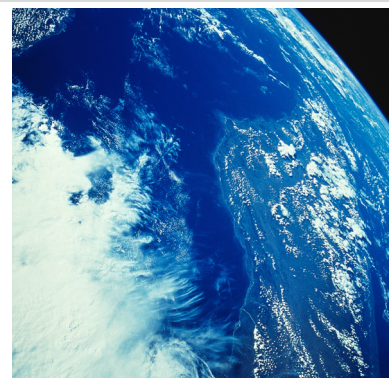
Included in this pack is a lesson plan to be used either at the beginning of at the end of a topic. This will help you as a teacher to understand any misconceptions children may have about the earth, Moon and Sun.

Also included in this pack is information about possible misconceptions children may have, worksheets for children to complete and an extension activity.

Possible misconception models.

Depending on the age and experience of your class, they may come up with the following ideas of how the Earth, Sun and Moon are related:

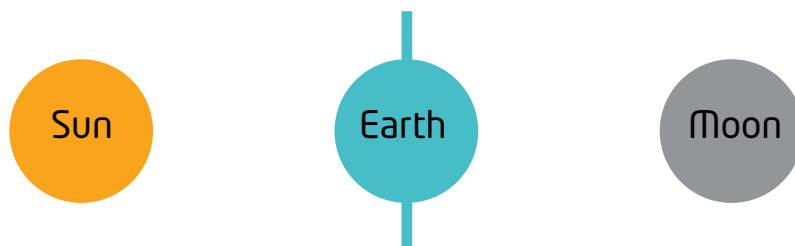
1. Earth-centred "magic" model (The Earth remains still and Sun and Moon move in and out alternatively)



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2. Spinning Earth model (The Moon and Sun stay still and the Earth turns to face one or the other)



3. Earth-centred model (with orbiting Sun and Moon)



4. Sun-centred model (with orbiting Earth and Moon)



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Lesson Plan

Class/Group			
Subject	Science	Date	
Main topic of lesson	Earth, Moon and Sun.		
Relationship to National Space centre Programme/ Activity			
Reference (NC/NLS/NNS/CGFS)	Objectives		
QCA unit 5E	To understand the size and position of the Earth, Moon		
NC Sc4 4a	To understand the relation ship between the Earth, Moon and Sun		
Resources needed	Cylinders, flat circles, spheres of various sizes.		
Key vocabulary to be used/taught	Orbit, spinning, Earth, Moon, Sun,		
Risk assessment			

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Detailed activity planning			
Timing	Learning activities	Assessment opportunities	Additional notes
0 - 10	Introduce the topic of Earth, Moon and Sun to the class. Brainstorm ideas of what they already know about the Earth, Moon and Sun.	By questioning the children you should be able to assess what they already understand and what might need clarifying.	
10 - 20	Show children the pictures of the Earth, Moon and Sun that are attached. Ask them to discuss them in small groups and decide on the shape of them. Come together as a class and discuss children's ideas. Show the class the selection of shapes cylinders, flat circles and spheres. Tell the children they will need to use these to show the relationship between the Earth, Moon and Sun.	By observing the groups this should show and misconceptions and children's reasoning behind ideas. Observing the children and questioning them on why they have placed or chosen objects. This can be used for assessment purposes later.	Differentiation: some children may not be able to put their ideas down on paper, but should be able to use the objects and describe what they think is happening. Extra support might be needed for some groups to have a scribe.
30 - 40	Using paper ask the children to draw what they have done and how they have arranged the shapes and why. Extension Using the attached worksheet children to answer questions about the Earth, Sun and Moon. Plenary Discuss children's ideas and how the sizes of the Earth Moon and Sun relate. Then show the children some pictures of the Earth from space and the Sun and Moon. Make sure the children understand that the Planets and stars are spherical.		



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Extension: Earth, Sun and Moon.

Below are some sentences, you need to decide if they are right, wrong or not sure.

If you think it is right, colour in the planet next to it **green**.

If you think it is wrong, colour in the planet next to it **red**.

If you are not sure, colour in the planet next to it **yellow**.

Question 1.

- | | |
|--|-----------------------|
| 1. The Earth is spherical. | <input type="radio"/> |
| 2. The Moon gives off (emits) light. | <input type="radio"/> |
| 3. The Sun orbits (circles) the Earth | <input type="radio"/> |
| 4. The Sun is very hot in fact 6,000°C on the surface. | <input type="radio"/> |
| 5. The Earth orbits (circles) the Moon. | <input type="radio"/> |
| 6. The Moon has many craters on it. | <input type="radio"/> |
| 7. The Sun is a star. | <input type="radio"/> |
| 8. The Sun gives us light and heat. | <input type="radio"/> |



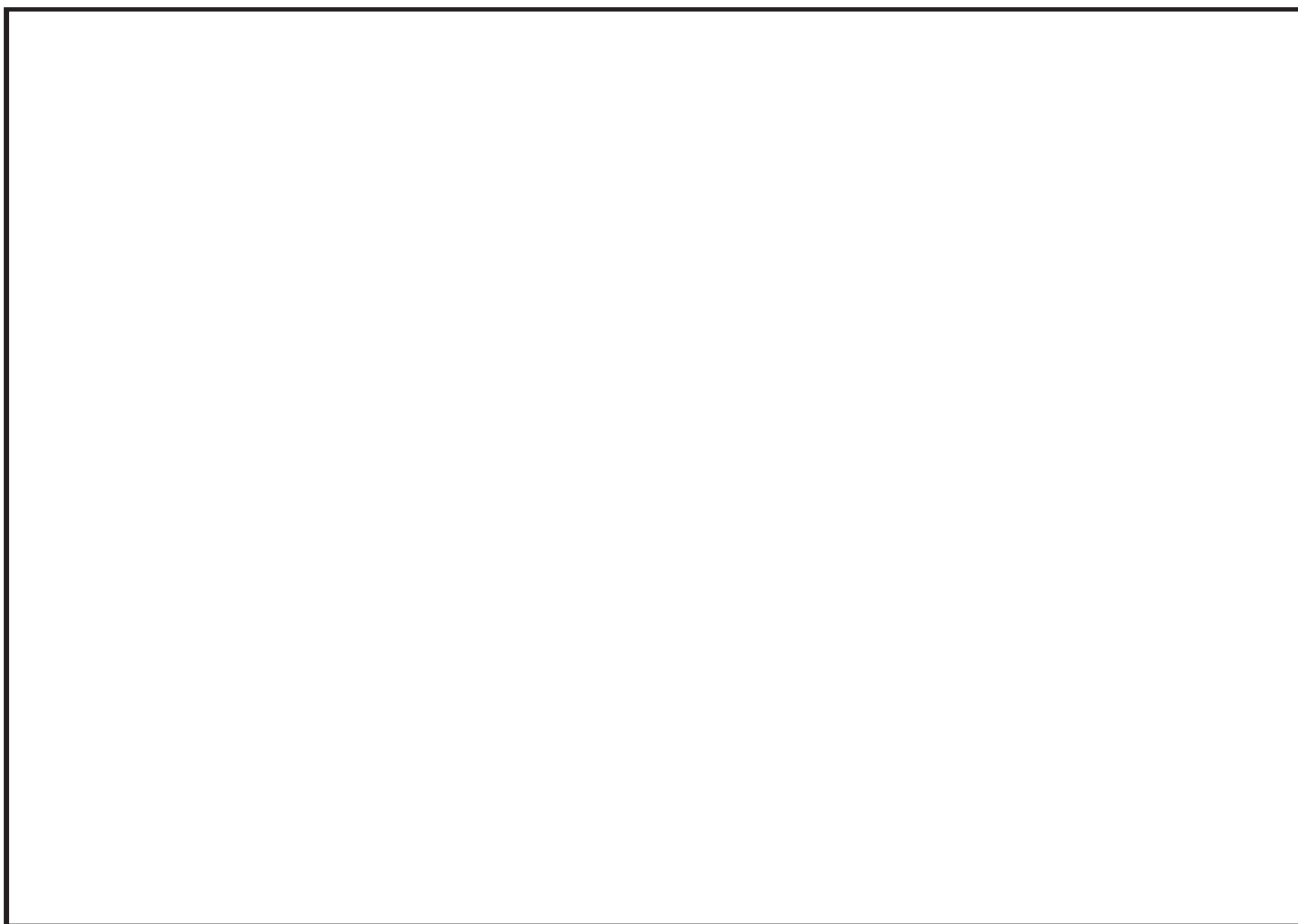
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Extension: Earth, Sun and Moon.

Question 2.

In the box below draw a diagram of the Earth, Sun and Moon.

Label the picture with any important information.



Use these words to help you with your diagram.

Earth Moon Sun Travel Spin Orbit Circles Sphere