

EARTH, SUN AND MOON

Teacher Information - Earth, Sun and Moon

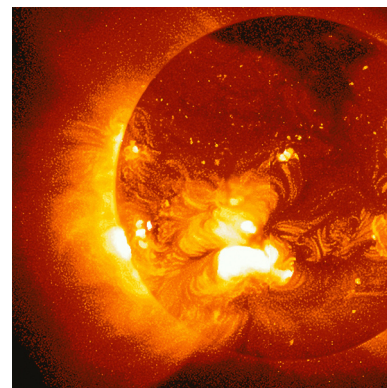
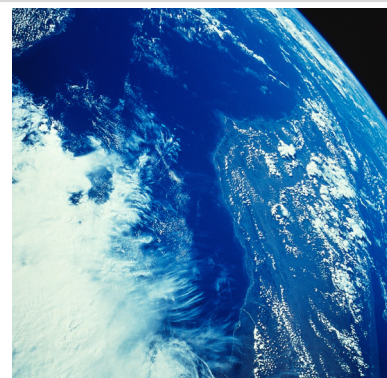
Included in this pack is a lesson plan to be used either at the beginning of or at the end of a topic. This will help you as a teacher to understand any misconceptions children may have about the earth, Moon and Sun.

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:

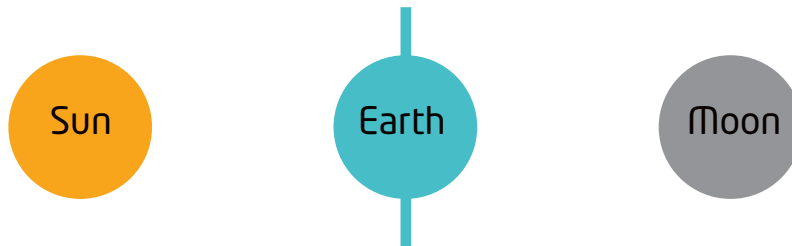
1. Earth-centred "magic" model (The Earth remains still and Sun and Moon move in and out alternatively)



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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 | <p>Introduce the topic of Earth, Moon and Sun to the class. Brainstorm ideas of what they already know about the Earth, Moon and Sun.</p> <p>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.</p> | <p>By questioning the children you should be able to assess what they already understand and what might need clarifying.</p> <p>By observing the groups this should show and misconceptions and children's reasoning behind ideas.</p> | |
| 10 - 20 | <p>Come together as a class and discuss children's ideas.</p> <p>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.</p> | <p>Observing the children and questioning them on why they have placed or chosen objects.</p> <p>This can be used for assessment purposes later.</p> | <p>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.</p> <p>Extra support might be needed for some groups to have a scribe.</p> |
| 30 - 40 | <p>Using paper ask the children to draw what they have done and how they have arranged the shapes and why.</p> <p>Extension</p> <p>Using the attached worksheet children to answer questions about the Earth, Sun and Moon.</p> <p>Plenary</p> <p>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.</p> | | |



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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.
2. The Moon gives off (emits) light.
3. The Sun orbits (circles) the Earth
4. The Sun is very hot in fact 6,000°C on the surface.
5. The Earth orbits (circles) the Moon.
6. The Moon has many craters on it.
7. The Sun is a star.
8. The Sun gives us light and heat.

Key Stage 2
Links with National Curriculum - Sc4 4a
Links with QCA - Unit 5E

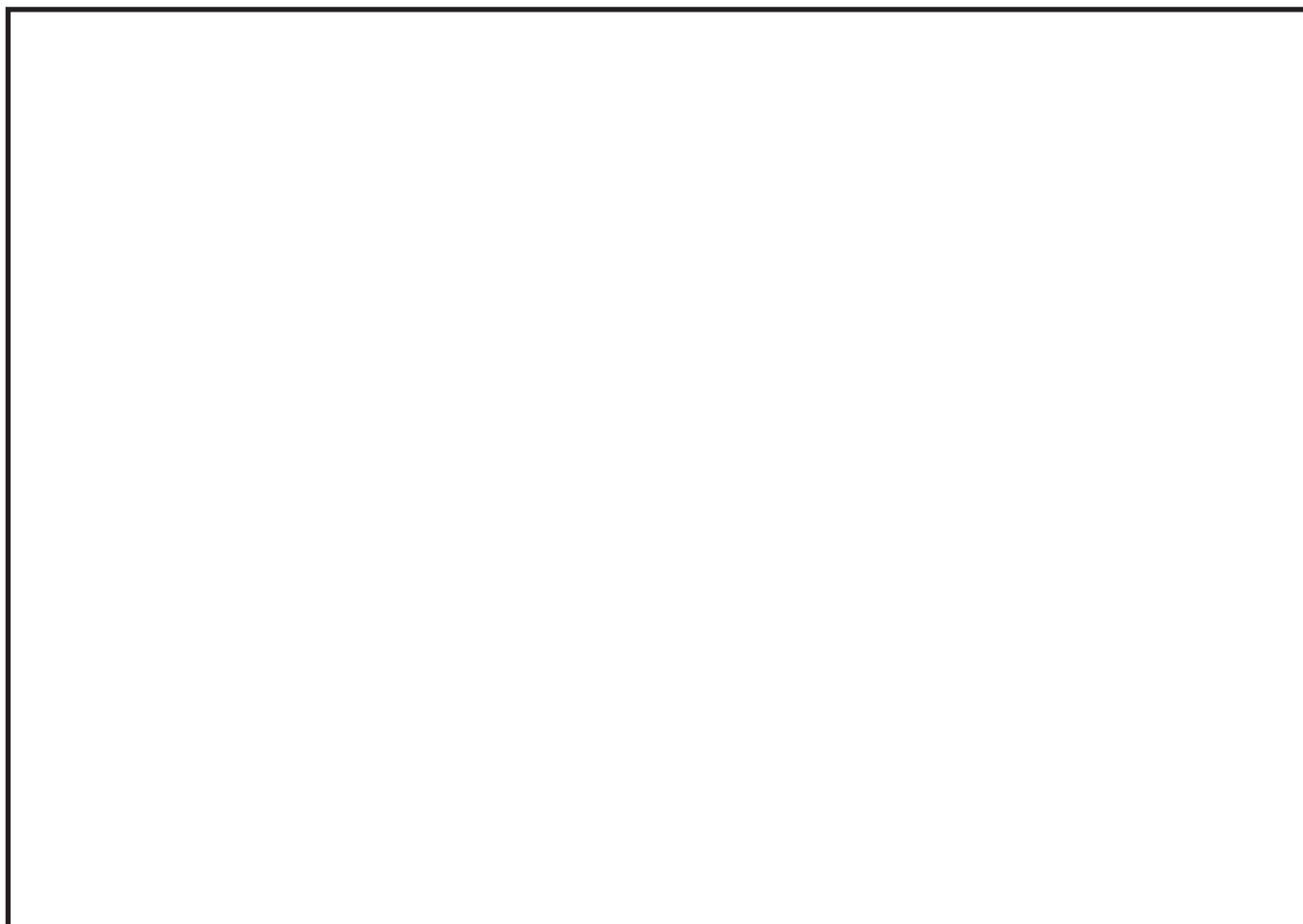


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Extension: Earth, Sun and Moon.

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