

We Are Learning To

describe the relative positions of the Earth, Sun and planets in the Solar System. We are also learning to apply our understanding of the movements in the Solar System to explain phenomena such as eclipses and why the Moon appears to change shape.

What I am Looking For is for you to be able to:

- describe the position and movements of the Moon, planets (including Earth) and Sun, relative to each other, and explain how these cause the length of a day, a year and the seasons (all);
- use ideas about the movement of the Sun, Earth and Moon to explain why the Moon's shape appears to change and eclipses occur (most); and
- use models to demonstrate the phases of the Moon and eclipses of the Sun and Moon (some).

Lesson plan

Starter

Give pupils, working in pairs, the card sort game to match key words and statements. This will enable you to check their understanding of the work covered in the previous lesson and of new work on eclipses.

Main

Give pupils the different orbit times of each of the planets (see the sheet 'Orbits'). Ask them to put the planets in order of distance from the Sun. Orbit time can be linked to the length of a 'year' on the planet. The images of the Solar System can be used to show the position of the planets.

Ask pupils to use a simple model to demonstrate their understanding of day and night, a year and the seasons. Then introduce the phases of the Moon - a globe and a ball painted half black and half white make a simple demonstration. Demonstrate eclipses at this point. Encourage pupils to use the models themselves. Use the (animations) of the phases of the Moon to back up the modelling.

Ask the pupils to work through the worksheet on the 1999 solar eclipse, 'A day to remember'. Follow this by asking pupils to pick (from a hat) a card with a fact about solar eclipses and read it to the group. The group could talk about the consequences of that statement or they could describe what aspects of eclipses relate to the observations.

Plenary

Several activities exist which can consolidate the learning and assess pupils' understanding:

- for a whole class activity there is a 'Loop game';
- for less able pupils, the list of words and meanings on the 'Space glossary' which could also be used as a loop game; and
- more able pupils might start to construct a concept map of the key features of the Solar System or add links to an existing framework.