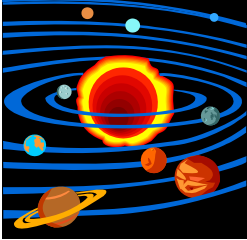


The Solar System

A Collaborative Science Activity for Key Stage 2



Teacher's Notes

This material links reading and oral skills. The text is divided into three parts so that pupils have the task of collecting information from each other as well as from the text.

Before the activity, revise/teach related vocabulary using visual images on Interactive White Board, posters or books.

Procedure

1. Divide pupils into three groups (groups can be given names of planets). These can be arranged so that particular individuals can gain support from other members of the group. With large classes these groups can be subdivided.
2. Give each pupil a copy of the question form.
Give each pupil in group 1 a copy of sheet A.
Give each pupil in group 2 a copy of sheet B.
Give each pupil in group 3 a copy of sheet C.
3. Each individual fills in as many of the answers as they can from their information sheet, with the support of other members of the same group. (The passage could be put on tape for the group to listen to, if necessary).

4. Members of each group then split into twos and threes and interchange with other groups, so that each new group includes members with sheet A, B and C. In trying to find out the additional information to fill in their sheets, the pupils can ask questions, using the question prompts on the sheet.

Vocabulary:

-  asteroid
-  axis
-  earth
-  gravity
-  moon
-  orbit
-  planet
-  solar system
-  space
-  sphere
-  star
-  sun
-  temperature

Follow up activities:

1. **Vocabulary matching activity:** Reinforce new vocabulary by matching definitions to key words. This could be done as a game in groups of 3 or 4: Cut up the definitions. One pupil reads the definition and the other 2 or 3 compete to be the first to give the word - can be timed for extra challenge. Groups stick meaning on sheet. Encourage pupils to write word in home language if possible (can be done at home with parents).
2. **Homework activity:** Pupils complete cloze exercise to consolidate understanding of content and practise new vocabulary.
3. **Extension:** Look on Nasa Kids website for more games and information.



The Solar System

The sun is a star that is nearest the earth. It provides the earth with energy in the form of light and heat.

The sun travels through space with a whole family of planets, called the Solar System.

In the sun's family there are 9 important planets of different sizes. The largest planet is called Jupiter. The smallest planet is Mercury.

The planets orbit (travel around) the sun. Most planets have moons which travel around them. The earth's moon takes 28 days to orbit the earth. The moon is held in place by the earth's gravity. The earth travels around the sun because of its gravitational pull.

A



The Solar System

The sun is a star that is nearest the earth. It provides the earth with energy in the form of light and heat.

The sun travels through space with a whole family of planets, called the Solar System.

A planet spins around on its axis as it orbits (travels around) the sun, which makes day and night. It is daytime for the side of the earth that faces the sun, and night time for the side facing away from the sun.

It takes 24 hours for the earth to turn one complete spin on its axis. Therefore a day and night is 24 hours.

Every planet takes a year to orbit the sun. An earth year is $365 \frac{1}{4}$ days. Mercury's year is only 88 days, but Pluto, takes 248 earth years to go round the sun!

B



The Solar System

The sun is a star that is nearest the earth. It provides the earth with energy in the form of light and heat.

The sun travels through space with a whole family of planets, called the Solar System. These planets are spheres or spherical in shape.

Normally, planets which are near the sun are hotter than planets far away.

Mercury is the nearest planet to the sun, and it can have a temperature of 350°c - much hotter than an oven. Pluto is so far away that it is icy all the time.

Venus is not the nearest planet but it is the hottest, because it has thick clouds. These clouds let the sun's heat in, but do not let it out. The temperature on Venus can be 600°c .

The Solar System also has thousands of smaller planets, some as small as rocks. These are called asteroids.

C



The Solar System - What do you know?

Read the clues and write the answers.

Your group has only some of them.

1. What does the sun provide (give us)?
2. What's the name of the sun and its planets?
3. Why do planets have day and night?
4. How long does it take earth to orbit the sun?
5. What's the nearest planet to the sun?
6. What's the largest planet?
7. What's the number of important planets
in the Solar System?
8. What's the length of a day and night on Earth?
10. What's the smallest planet?
11. What's the temperature on Venus?
12. Why is Venus the hottest planet?
13. What's the length of a year on Mercury?
14. What's the name for small, less
important planets?
15. What orbits around most planets?
16. How long does it take for our moon to orbit earth?
17. What holds the moon in it's orbit around the earth?.....
18. What shape are the sun, earth and other planets?.....

Vocabulary Activity: Work in groups. Read/listen to the definitions for these words. Match the right definition to the word. Can you add a word in your home language?








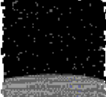

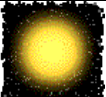
Image	Word	Definition/Meaning	Word in home language
	axis		
	earth		
	gravity		
	moon		
	orbit		
	planet		
	solar system		
	space		
	sphere		
	star		

Vocabulary Activity: Cut out these definitions (word meanings). Work with a partner or group to match the definition with the right word, and stick them in the right box. How quickly can you do it?



Definition/Meaning
The planet we live on.
Large object that moves around the sun or other star.
Path that is taken by a smaller planet as it travels around a larger planet.
An object shaped like a ball.
The whole of the universe, outside the earth.
An imaginary line through the middle of an object that it seems to spin around.
Small planet that orbits the earth.
Hot ball of gas, such as the sun.
Force that makes 2 objects move towards each other.
A star with planets that travel around it.

Vocabulary activity: Master copy.

Image	Word	Definition/Meaning	Word in home language
	axis	An imaginary line through the middle of an object that it seems to spin around.	
	earth	The planet we live on.	
	gravity	Force that makes 2 objects move towards each other.	
	moon	Small planet that orbits the earth.	
	orbit	Path that is taken by a smaller planet as it travels around a larger planet.	
	planet	Large object that moves around the sun or other star.	
	solar system	A star with planets that travel around it.	
	space	The whole of the universe, outside the earth.	
	sphere	An object shaped like a ball.	
	star	Hot ball of gas, such as the sun.	

The Solar System



Use the words in the box below to complete these sentences:

The sun is a _____ that is near the _____.

The sun has _____ important planets that travel with it through _____. This is called a _____.

The biggest planet is called _____ and the hottest planet is called _____. It has a _____ of 600°C.

The earth spins around on its _____ as it travels around the _____ which makes day and night. An earth day and night lasts for _____ hours. It takes each planet 1 year to travel around the sun. An earth year is _____ days.

Most planets have moons which _____ around them. The earth's moon takes _____ days to orbit earth. Planets are held in place around the sun by the force of _____.

earth	mercury	space	9	orbit	sun
24	temperature	Jupiter	28	star	
solar system	gravity	axis	365 $\frac{1}{4}$		