



The eight planets

Journey to other celestial objects

time

80 minutes.

learning outcomes

To:

- know which planets have moons
- know which planets have rings
- know the colours of the different planets
- know what a moon is
- know what a ring of a planet is
- learn to work together

end product

- each group has made a page about one planet. Together these pages form an encyclopaedia about the different planets.

materials needed

- books and magazines about planets
- A3 paper
- magazines for craft project
- glue
- colouring pencils
- something to bind the encyclopaedia pages together

Tip. You may like to use the scale models from Lesson 41 in this lesson.

Preparation

For the activity **Collecting information** you will need several books and magazines about planets from the library. Place these ready at the front of the class.



The eight planets 15 min.

Draw the Sun on the far left of the board. To the right of the Sun draw a row of eight circles one after the other. These circles represent the eight planets. Ask if the children remember which planets make up our solar system. What is the name of the planet that is closest to the Sun? Go through all the planets and write the names under the circles on the board. Starting from the Sun they are:

Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, and Neptune.

Explain to the children that not all the planets are the same. Some of the planets have rings. And some planets have one or more moons.

Discuss with the children whether the Earth is one of the planets that has rings. Conclude that this is not the case. Does the Earth have a moon? Is there just one moon, or more? Come to the conclusion that the Earth has one moon.

Ask the children what colour the Earth would appear if you were to look at it from a distance. The Earth has many different colours, including blue, green, red, and yellow. Decide that from a distance, the Earth looks blue because of all the water on the surface of the planet. Write the answers next to the circle 'Earth' on the board by drawing a moon and writing a '1' next to it. In the circle write the words blue, green, yellow and red to show that these are the colours of the planet.



The children investigate the similarities and differences between the eight planets.



Collecting information 50 min.

Organise the children into groups of four. Assign each group to a particular planet. Select planets that the children don't know much about. Explain to the children that the whole class is going to make an encyclopaedia about the planets. Each group will make one page about the planet that has been assigned to them. When all the pages are finished, they will be bound together to produce a useful overview of the planets. To research information about the planets, the children can use the books you have assembled in the front of the classroom. They can also use the Internet. Their page should provide information for people who don't know anything about the planet. Special attention should be paid to headings and paragraphs.

The children can illustrate the text using photographs and pictures which they can copy from the reference books or print from a website.

As well as an illustrated text, the children also make a creative 2D model of their planet. They could make this by tearing out pieces of paper that are the same colour as their planet. They can then paste these pieces of paper into a circle on a sheet of paper. Any rings can be added in the same way. The children can also use a creative way to show how many moons their planet has.



Encourage the children to gather as much information as they can about their planet. Before they start, each group should discuss what they want to make and how they are going to do it. The page must contain at least the following information: (Write these questions on the board).

- What colour is the planet?
- How many moons does the planet have?
- Does the planet have any rings?

The children can also write down how long a day lasts on the planet, what the average temperature is, whether the planet is larger or smaller than the Earth, etc.

The table below shows which planets have rings and how many moons the planets have.

planet	rings?	number of moons	colour
Mercury	no	0	Dark grey
Venus	no	0	White (clouds), yellow/orange
Earth	no	1	Blue, green, yellow, and red
Mars	no	2	Reddish brown, ochre
Jupiter	yes	67	Brown, red, and white
Saturn	yes	62	Yellow, greener towards the poles
Uranus	yes	27	Cyan (turquoise)
Neptune	yes	13	Blue/green



The differences and similarities 10 min.

Encourage each group to give a short presentation about the contents of their page. They should also show their craft planet as part of the presentation. Ask one of the children in the group to come and draw any rings around the right planet on the board. If the planet has one or more moons, the child should draw a moon and write the number of moons next to it (see the example on the worksheet). The child should also write on the board the colour of the planet. During the presentations the other children complete Task 1 on the worksheet. After the presentations, the children answer the questions under step 4 on the worksheet.



What are rings and moons? 5 min.

In this lesson the children discovered whether the various planets have moons or rings. But do the children know when a celestial object is a moon? And what are the planets' rings made from? Ask whether any of the children know the answers? Explain that a moon is a celestial object that orbits a planet. The rings around the planets are made from dust and small pieces of rock.



The eight planets

1 The differences and similarities



What do you need?

- colouring pencils

What do you need to do?

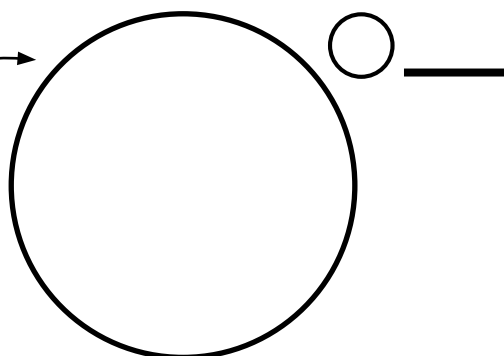
1 Colour the circles in the correct colour for each planet.

2 Add rings to the correct planets.

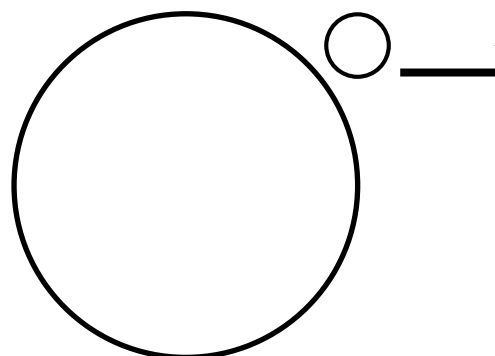
3 Write how many moons each planet has.

The Earth has been completed for you.

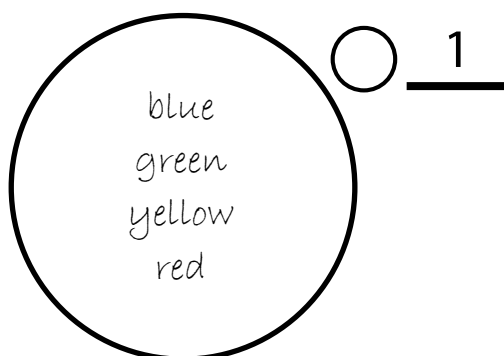
COLOUR
the planets
in the
correct
colours



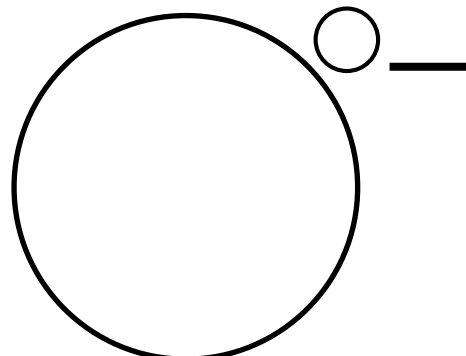
Mercury



Venus



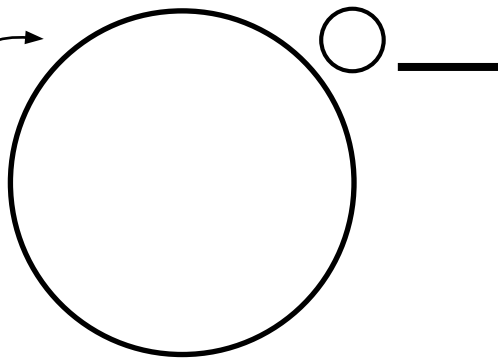
Earth



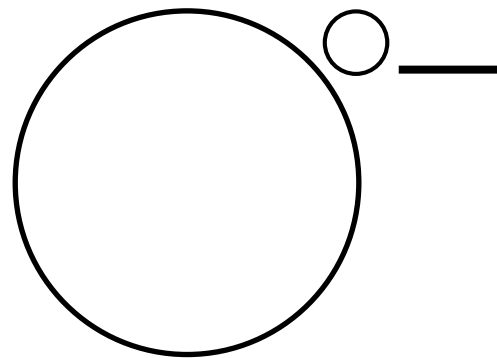
Mars.

write
HERE
how many
moons
the planet
has

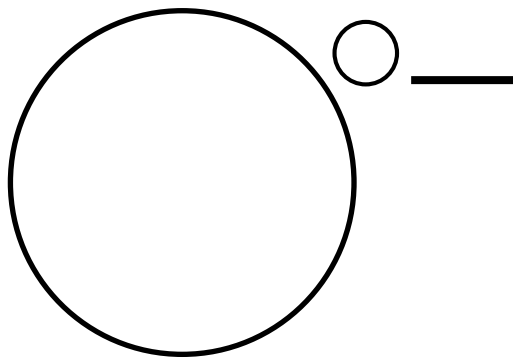
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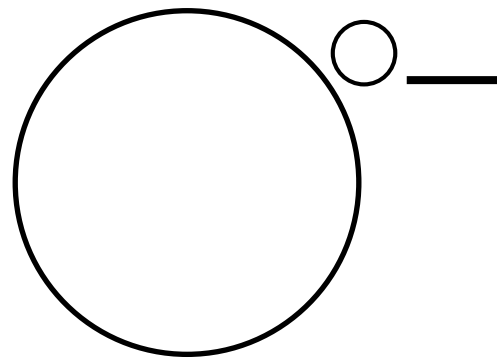
Jupiter



Saturn



Uranus



Neptune

write
HERE
how many
moons
the planet
has

a Which planet has the most moons?

b Which planet has the fewest moons?

c The planets with rings are:

d The planets without rings are: