

The Solar System

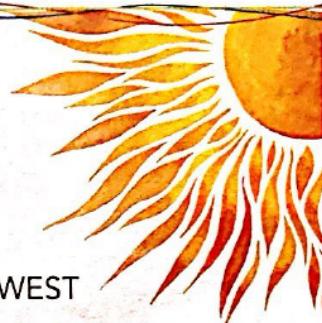
Key concepts

- The Sun and the solar system
- The planets
- The satellites
- The stars

Get set, Go!

Fill in the missing letters to complete the series.

1. M _ O _ O N : NIGHT :: SUN : DAY
2. SUNRISE : EAST :: S _ U _ N _ S _ E _ T : WEST
3. SUN : ONE :: STARS : _ M A _ N _ Y
4. SUN : STAR :: JUPITER : P _ L _ a _ N _ e _ +
5. PLANETS : S _ u _ V _ :: MOON : EARTH



What do you see when you look at the sky? During the day you see the Sun. At night you see the Moon and the stars.

All the objects which we see in the sky are called **heavenly bodies**. The Sun, the Moon, the stars and the planets are heavenly bodies.

These heavenly bodies are found in a limitless area called space.

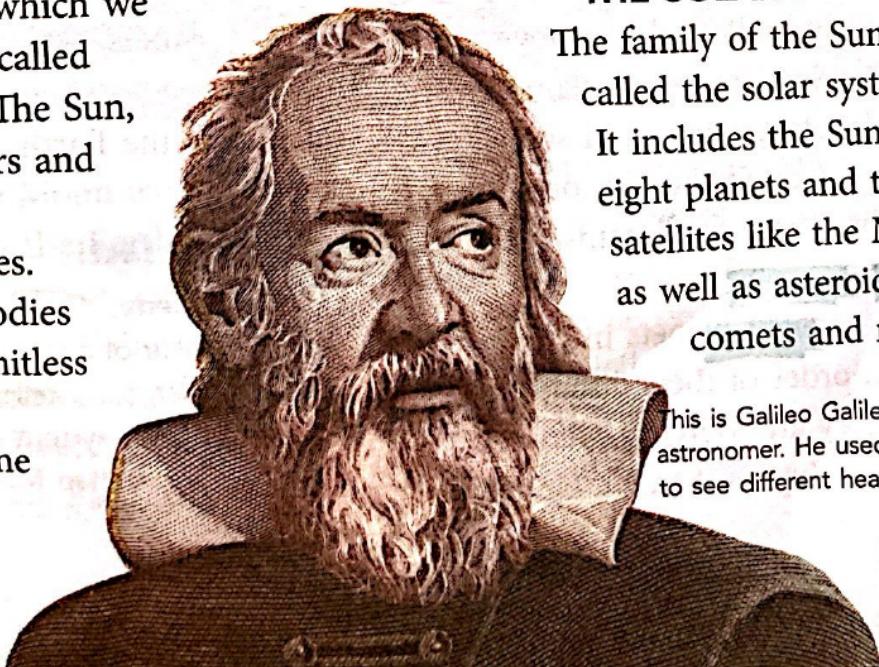
The study of the heavenly bodies

and space is called **astronomy**. The people who study astronomy are called **astronomers**.

THE SOLAR SYSTEM

The family of the Sun is called the **solar system**. It includes the Sun, the eight planets and their satellites like the Moon, as well as asteroids, comets and meteors.

This is Galileo Galilei. He was an astronomer. He used a telescope to see different heavenly bodies.



We see countless stars in the night sky. The band of light that you see in this picture, is formed of billions of stars. It is called the Milky Way. You will read about the Milky Way on page 144.

The Sun

The Sun is at the centre of the solar system and is its largest member. It is a huge ball of very hot gases. It, thus, gives us heat and light. It is the nearest star to the Earth.

Planets

The heavenly bodies which move around the Sun are called planets. All the planets are round in shape. They move around the Sun on their fixed paths. These fixed paths are called orbits.

There are eight planets in our solar system. In order of their distance from the Sun, they are Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus

and Neptune. Mercury is the planet closest to the Sun while Neptune is the farthest. We live on planet Earth. Read about the planets on pages 148–149.

Satellites

The heavenly bodies which move around the planets are called satellites. All the planets, except Mercury and Venus, have satellites. The Moon is the satellite of the Earth.

It's a fact!

Ganymede, a satellite of Jupiter, is the largest satellite in our solar system. It is bigger than Mercury!



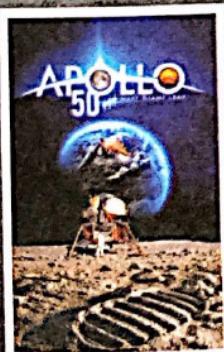
CELEBRATING 50 YEARS OF THE FIRST MOON LANDING (1969 – 2019)

On 16 July 1969, three American astronauts – Neil Armstrong, Edwin 'Buzz' Aldrin and Michael Collins – took off aboard the space shuttle Apollo 11 from the Kennedy Space Center in Florida, USA. Their destination: a heavenly body 3,84,400 km away – THE MOON.

Five days later, on 21 July 1969, Neil Armstrong became the first human to set foot on the Moon. A few minutes later, Edwin 'Buzz' Aldrin followed. They stayed there for two-and-a-half hours. They explored the Moon's surface, collected rock samples and took photographs. They left behind the American flag and a plaque which read, "Here men from the planet Earth first set foot upon the moon. July 1969 AD. We came in peace for all mankind." On 24 July 1969, the three astronauts returned safely to Earth.

DID YOU KNOW

Between July 1969 and December 1972, twelve people set foot on the Moon, including Neil Armstrong and Edwin 'Buzz' Aldrin.

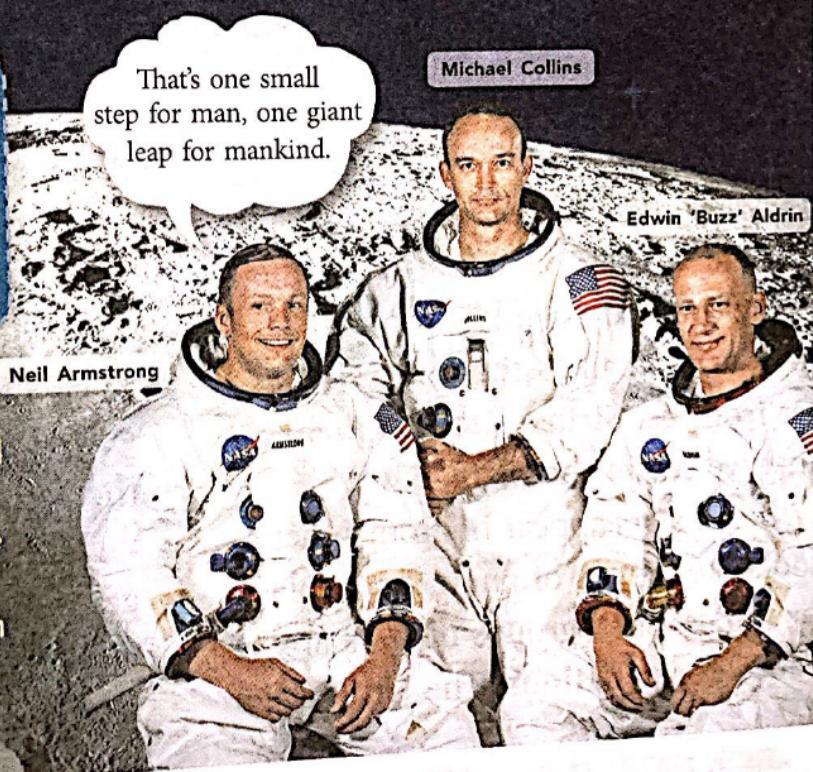


► NASA released this poster to commemorate 50 years of the first Moon landing.

That's one small step for man, one giant leap for mankind.

Michael Collins

Edwin 'Buzz' Aldrin



The Moon The Moon is the closest heavenly body to the Earth. From the Earth, both the Sun and the Moon appear to be of the same size. However, the Moon is much smaller than the Sun. It looks big because it is much closer to the Earth than the Sun.

The Moon has no light of its own. It shines as it reflects the light of the Sun. There is no air or water on the Moon. So, no one can live there. In 1969, Neil Armstrong and Edwin 'Buzz' Aldrin became the first people to land on the Moon.

C. Answer these questions.

1. What is a solar system?
2. Write the names of the planets in the order of their distance from the Sun.
3. The Great Red Spot is found on which planet? What is it?
4. What are stars made up of?
5. What is a galaxy?

D. Think and answer.

Why cannot we see the Moon and the stars during the day?

E. Picture study

Look at the picture. Answer the questions.



1. Write the name of this heavenly body.
2. No one can live on this heavenly body. Why?

Do and learn

F. FIELD TRIP A planetarium is a place where pictures of the night sky are shown. From these pictures we learn about the heavenly bodies. Visit a planetarium in your town or city. After the visit, discuss in class the different heavenly bodies and the constellations that you saw there.

G. PROJECT Observe the shape of the Moon for a few days. Draw the different shapes in your notebook. Write whether the visible shape of the Moon was increasing or decreasing.

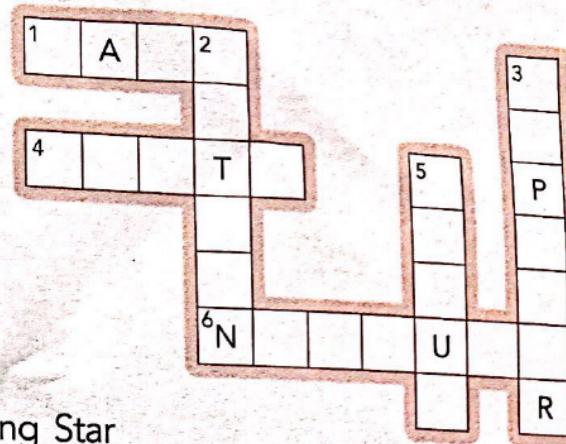
H. WORD PUZZLE Read the clues about the planets. Write the missing letters to complete this word puzzle.

ACROSS

- 1 The red planet
- 4 The blue planet
- 6 The windiest planet

- 2 The planet with seven rings
- 3 The largest planet
- 5 The planet which is also called the Morning Star

**D
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I. @WEBLINK To watch Edwin 'Buzz' Aldrin narrate an interesting episode about his journey to the Moon, visit rsgr.in/icsess3-7.

Integration

Art education

J. Use your imagination to make a constellation.

You will need: a sheet of black chart paper, a sheet of white paper, yellow and white crayons, scissors, glue

STEP 1: On the sheet of white paper draw and colour as many stars as you like.

STEP 2: Take an adult's help to cut out the coloured stars.

STEP 3: Use your imagination to arrange the stars on the sheet of black chart paper.

STEP 4: Paste the stars.

STEP 5: Use a white crayon to connect each star with a line.

STEP 6: Give a name to your constellation based on its shape.

Have fun!

Meet the Members of the Solar Family

2. Venus

It is the hottest planet. It is visible before sunrise as the Morning Star and after sunset as the Evening Star. A day on Venus is equal to 243 days on the Earth.

1. Mercury

It is the smallest planet in the solar system. It takes 88 days to move around the Sun once.

4. Mars

It is called the red planet. This is because it has red soil. It has two satellites.

3. Earth

It is called the blue planet. This is because about three-fourths of the Earth's surface is covered with water. It is the only planet that supports life.

Remember the order of the planets from the Sun in this way.

My Very Educated Mother Just Served Us Nuts

Mercury Venus Earth Mars Jupiter Saturn Uranus Neptune

7. Uranus

It is the coldest planet. It has 27 satellites. The satellites are named after the characters from William Shakespeare and Alexander Pope's work.



8. Neptune

It is the windiest planet. It takes 165 years to move around the Sun once. It has 14 satellites.

5. Jupiter

It is the largest planet. It is famous for its Great Red Spot. The Great Red Spot is a huge storm that has been blowing for more than 300 years! It has 79 satellites.

6. Saturn

It is the second-largest planet. It has seven bright rings, made of ice. Scientists have found that the rings were formed around the same time when the dinosaurs lived on Earth! It has 82 satellites.

