

Class 8 Science Chapter 16 Solar System

II. Very short answer type questions

A. Give one example for the following:

1. A galaxy	Ans: Milky Way
2. A solar system body that is not the Sun or a planet	Ans: Asteroid
3. A comet	Ans: Halley's Comet
4. A natural satellite	Ans: Moon
5. An artificial satellite	Ans: INSAT-3C
6. A planet without a natural satellite	Ans: Mercury
7. A star bigger than the Sun	Ans: Betelgeuse
8. A constellation	Ans: Orion
9. A very light planet made up mostly of gases	Ans: Jupiter
10. An asterism	Ans: Big Dipper

III. Short answer type questions

Q.1 What is a constellation?

Ans: A constellation is a group of stars that form a recognizable pattern in the night sky. These patterns often resemble animals, mythological characters, or objects. For example, Orion and Ursa Major.

Q.2 Name a star in the Orion constellation.

Ans: Betelgeuse is a well-known star in the Orion constellation. It appears reddish in color and is one of the brightest stars in the night sky.

Q.3 Name the Earth's natural satellite.

Ans: The Earth's natural satellite is the Moon. It is the only natural satellite of Earth and is responsible for causing tides on our planet.

Q.4 Where is the Asteroid Belt?

Ans: The Asteroid Belt is located between the orbits of Mars and Jupiter. It is a region filled with numerous rocky bodies known as asteroids.

Q.5 Which celestial body has a head and a long tail?

Ans: A comet is a celestial body that has a bright head and a long glowing tail. The tail always points away from the Sun due to solar wind.

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IV. Long answer type questions

Q.1 Describe the objects that one could see in the night sky.

Ans: When we look at the night sky, we can see many different objects. These include: Stars – They look like tiny shining dots but are actually huge balls of hot gases. The Sun is also a star.

The Moon: It is the Earth's natural satellite. It appears in different shapes every night.

Planets: These look like stars but do not twinkle. Some planets we can see are Venus, Mars, and Jupiter.

Constellations: These are groups of stars that form patterns or shapes in the sky, like Orion or Ursa Major.

Comets: These are space objects with a glowing head and a long tail.

Artificial Satellites: Man-made machines like communication or weather satellites can also be seen moving slowly like stars.



Q.2 Draw a rough diagram and give a short description of any one constellation.

Ans: The [Orion constellation](#) is a prominent and easily recognizable pattern of stars that is visible during winter in the Northern Hemisphere. A rough diagram can be drawn by connecting three bright stars in a straight line to represent Orion's Belt, and then adding the other stars to form the shape of a hunter, with Betelgeuse and Rigel as the most prominent stars in its body and leg, respectively

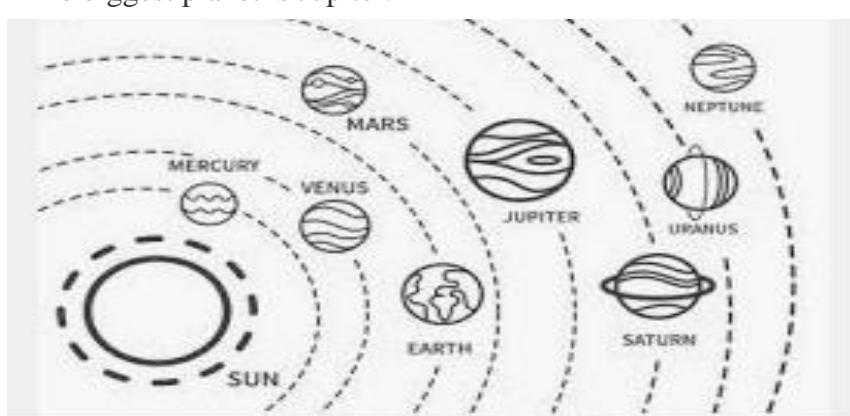


Q.3 Name the planets of the Solar System. List them in the order of their distance from the Sun. Also, name the smallest and biggest planet of our solar system.

Ans: The planets of our Solar System in order from the Sun are: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune.

The smallest planet is Mercury.

The biggest planet is Jupiter.



Q.4 Distinguish between meteoroids, meteors, and meteorites.

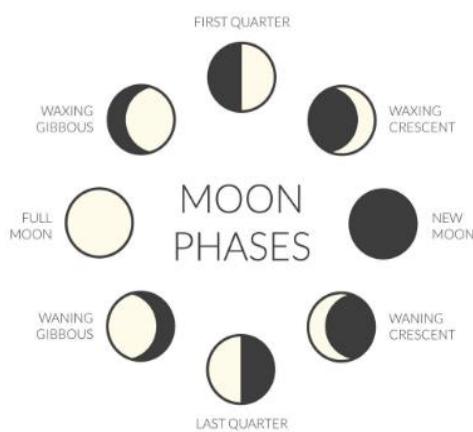
Ans:

Term	Where it is found	What it does	Example/Note
Meteoroid	In space	A small rock or particle that moves through space.	May enter Earth's atmosphere.
Meteor	In Earth's atmosphere	A meteoroid that burns due to friction with air and appears as a streak of light (shooting star).	Does not usually reach the ground.
Meteorite	On Earth's surface	A part of a meteor that survives the fall and lands on Earth.	Can form craters on impact.

Q.5 What are 'Phases of the Moon'? Draw a rough diagram of any two phases and name them.

Ans: The **Phases of the Moon** are the different ways the Moon looks from Earth over about a month. These changes in apparent shape occur because we see varying amounts of the Moon's sunlit surface as the Moon orbits the Earth. The Moon itself doesn't change shape; it's always half-lit by the Sun, but our perspective on that illuminated half changes.

The complete cycle includes eight principal phases, but here's a description and a diagram of two key phases:



The eight main phases, in order, are:

New Moon: (Moon is not visible)

Waxing Crescent

First Quarter: (Half-moon, light increasing)

Waxing Gibbous

Full Moon: (Completely illuminated)

Waning Gibbous

Third Quarter: (Half-moon, light decreasing)

Waning Crescent

Q.6 List five uses of artificial satellites.

Ans: Artificial satellites are machines made by humans that orbit the Earth. They are useful in many ways:

Television and Internet: Satellites help send TV and internet signals around the world.

Weather Forecast: They take pictures of clouds and help predict weather.

GPS and Navigation: They help us find directions and locations on maps.

Space Research: Satellites are used to study planets, stars, and outer space.

Military and Defences: Satellites help in spying and protecting a country.