

## Chapter 1: The Earth and our solar system

### Q. 1. Fill in the blanks by choosing an appropriate word given in the brackets:

(gravity, satellite, dwarf planet, revolution, light)

- (1) Stars have their own light
- (2) Movement of the earth around the sun is called its revolution.
- (3) The moon is called the Satellite of the earth.
- (4) Pluto is a dwarf planet
- (5) Due to the force of earth's gravity all things on the earth remain on it.

### Q. 2. Underline correct word in the following statements:

- (1) On a clear night sky. we can see many stars / lamps
- (2) Planets have / do not have their own light.
- (3) Heavenly bodies generally have a square / round shape.
- (4) Between the planets. Mars and Jupiter, there are numerous dwarf planets / asteroids.
- (5) The moon / sun is the closest to the earth as compared to other heavenly bodies.
- (6) Scientists who travel in the spacecraft are called pilots / astronauts.
- (7) Very powerful rockets / crackers are used to send a spacecraft into space.
- (8) All the bodies in the solar system get light from the sun / moon.

### Q. 3. Who am I?

- (1) You can see me from the earth but the lighted part of me that you see changes every day.  
Moon
- (2) I have my own light. It is only from me that the planets get light and heat. Sun
- (3) I turn around myself, around a planet and also around a star. Moon
- (4) I turn around myself and revolve around the sun. Planet
- (5) No other planet has a living world like mine. Earth
- (6) I am the nearest star to the earth. Sun

### Q. 4. Distinguish between Stars and Planets:

Stars	Planets
1. Heavenly bodies that twinkle are called stars	1. Heavenly bodies that do not twinkle are called Planets.
2. All the stars have their own light	2. They get light from the stars
3. Example: Sun	3. Example: Earth, Mars

**Q. 5. What is the meaning of the following terms?**

- (1) Planets: The heavenly bodies that do not twinkle and called Planets
- (2) Solar system: The sun which is a star and the Planets that revolve around it are together called the solar system.
- (3) Stars: The heavenly body that twinkle are called stars
- (4) Asteroids: Between the Planets Mars & Jupiter there is a band of numerous heavenly bodies, they are called asteroids..
- (5) Dwarf planets: there are some some smaller heavenly bodies that revolve around the sun they called dwarf Planet

**Q. 6. Answer the following questions in one sentence each:**

**(1) Which planet is between earth and mercury?**

**Ans.** Venus Planet is between earth and mercury

**(2) Why can't we see stars during the daytime?**

**Ans.** Sun, which is a star, is closer to us than any of the other stars. Hence it appears big and brilliant. In it's bright light during the day, we cannot see other stars

**(3) What is space?**

**Ans.** The emptiness between and beyond the stars and planets is called space or outer space.

**(4) How do the heavenly bodies exert a force of attraction on each other?**

**Ans.** Heavenly bodies exert a force of attraction no each other due to the force of gravity

**(5) What is an orbit?**

**Ans.** Every planet in the solar system revolves around the sun along a specific path, this is known as that Planet's orbit.

**Q. 7. Answer the following questions:**

**(1) Which points are to be considered while observing the sky?**

**Ans.** While observing the sky the following points are to be considered.

- 1. The brightness of the heavenly bodies.
- 2. Whether the heavenly bodies are twinkling
- 3. The color and size of the heavenly bodies
- 4. The change in the position of these heavenly bodies

**(2) Write down the names of all the planets in correct order as they are present in our solar system**

**Ans.** Mercury, Venus Earth, Mars, Jupiter, Saturn, Uranus and Neptune are the planets present in the solar system

**(3) For what purpose are rockets used in space travel?**

**Ans.** Rockets are used to launch spacecraft into space they transport astronauts and cargo in the International Space Station(ISS), and beyond. Additionally rockets place satellites into orbit for communication, weather monitoring and scientific research

**Q. 8. Give scientific reasons:**

**(1) The moon is the satellite of the earth.**

**Ans.** Our earth is a planet. Satellites revolve around the planet. As moon revolves around the earth and both, the earth and the moon receives the light from the star, the moon is the satellite of the earth

**(2) The sun appears prominent and bright.**

**Ans.** The sun is a star having its own light. As compared to other star in space the sun is closer to the earth. Therefore, the sun appears permanent and bright

**(3) All the things on the earth remain with the earth only.**

**Ans.** Earth exerts gravitational force due to the force of gravity, even if something is thrown in the upward direction, it comes back towards the ground, therefore all the things on the earth remain with the earth only.

**• Use your brain power! (Textbook page 5)**

**(1) What will happen to our solar system if the sun was to suddenly disappear?**

**Ans.** If the Sun suddenly disappeared, everything would quickly become very dark and very cold because we would lose all daylight and warmth. The planets, including Earth, would no longer stay in their orbits and would drift off into space since the Sun's gravity keeps them in place. Plants would start to die without sunlight, leading to a collapse of the food chain and a lack of food for animals and people.

**(2) Suppose you want to give your address to a friend you have on the planet Mars. How will you write your address if you want him to understand exactly where you live?**

**Ans.**

Lavanya Shinde, Gokhale Road,  
Dadar (west), Mumbai - 400020  
State of Maharashtra, Country India, Continent of Asia  
Earth (3rd Planet), Solar system, Milky way

**• What's the solution? (Textbook page 5)**

**(3) One of the asteroids has fallen out of its place in the asteroid belt and is hurtling towards the sun. Our earth is in its way and there is all likelihood of a collision. What can be done to prevent this collision?**

**Ans.** To stop an asteroid from hitting Earth, we can:

1. Send a spaceship to bump it away.
2. Use a big spacecraft to pull it off course.
3. Use an explosion in space to change its path.
4. Use gravity from another asteroid to alter its course.
5. Break it into smaller pieces with a controlled explosion.
6. Shine lasers to push it gently.