

# NCERT Solutions for 6th Class Geography: Chapter 1- The Earth in the Solar System

Class 6: Geography Chapter 1 solutions. Complete Class 6 Geography Chapter 1 Notes.

### NCERT Solutions for 6th Class Geography: Chapter 1-The Earth in the Solar System

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#### Question A.1:

## **EIndCareer**

The solar system is a part of the \_\_\_\_\_ galaxy.

- a. Big Bang
- b. Nebula
- c. Saptarishi
- d. Milky Way

#### ANSWER:

The correct answer is option (d).

**Explanation:** The Milky Way is a huge whirlpool-shaped galaxy. The solar system, including the Sun and its planets, is a part of this galaxy.

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Question A.2:

Which one of the following does not belong to the family of the solar system?'

- a. Planet
- b. Galaxy
- c. Asteroid
- d. Satellite

#### ANSWER:

The correct answer is option (b).



**Explanation:** Our solar system is a part of the Milky Way galaxy, which consists of planets, asteroids and satellites. So, it is incorrect to say that any galaxy is a part of the solar system.

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Question A.3:

The average distance of the sun from the earth is about

- a. 15 crore km.
- b. 1.5 crore km.
- c. 150 crore km.
- d. 1,500 crore km.

#### ANSWER:

The correct answer is option (a).

**Explanation:** The Earth is the third planet of the solar system. It is at an optimum distance from the Sun; that is, it is neither too far nor too close to the Sun. Hence, weather conditions on the Earth support life on it.

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Question A.4:

Which one of the following planets is not an inner planet?

#### a. Mercury

#### b. Saturn



#### c. Mars

d. Venus

#### ANSWER:

The correct answer is option (b).

**Explanation:** The first four planets, that is, Mercury, Venus, Earth and Mars, are close to the Sun. They are made up of rocks and are known as inner planets. Jupiter, Saturn, Uranus and Neptune are made up of gases; they are part of the group of outer planets.

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Question A.5:

Which planet is known as the earth's twin?

a. Mars

b. Neptune

c. Venus

d. Jupiter

#### ANSWER:

The correct answer is option (c).

**Explanation:** Venus has almost the same size as that of Earth. That is why it is known as Earth's twin.

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#### **Question A.6:**

Which planet has the largest number of known satellites?

- a. Earth
- b. Saturn
- c. Uranus
- d. Jupiter

ANSWER:

The correct answer is option (d).

**Explanation:** Almost all planets have satellites, but the numbers of those satellites vary from planet to planet. Jupiter has the largest number of satellites. It has 39 known moons.

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Question A.7:

Which one of the following is known as minor planet?

- a. Meteor
- b. Asteroid
- c. Comet
- d. Satellite

#### ANSWER:

The correct answer is option (b).



**Explanation:** Asteroids are small solid objects revolving around the Sun in orbits. That is why they are known as planetoids or minor planets.

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Question A.8:

The Halley's comet can be seen after every

- a. 16 years
- b. 56 years
- c. 76 years
- d. 26 years

#### ANSWER:

The correct answer is option (c).

**Explanation:** Comets are huge masses of snow and rocks that revolve around the Sun in orbits. They have a huge glowing tail. Halley's Comet was last seen in 1986. It appears regularly after a period of 76 years.

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Question B:

1. The temperature at the surface of the sun is about \_\_\_\_\_.

2. The light from the sun reaches the earth's surface in about \_\_\_\_\_.

3. The asteroid belt lies between the orbits of \_\_\_\_\_\_ and \_\_\_\_\_.



#### 4. The constellation which has a group of seven stars is called \_\_\_\_\_

#### ANSWER:

1. The temperature at the surface of the Sun is about 6,000 °C.

**Explanation:** The temperature of the surface of the Sun is very high. It is approximately 6,000-degree centigrade. The temperature at the centre of the Sun is around 1,50,00,000-degree Celsius.

2. The light from the Sun reaches the Earth's surface in about 8 minutes and 20 seconds.

**Explanation:** The Sun is approximately 15 crore kilometres from the Earth. Light travels at a speed of 3,00,000 kilometres per second. So, it takes around 8 minutes and 20 seconds to reach the surface of the Earth.

3. The asteroid belt lies between the orbits of Mars and Jupiter.

**Explanation:** Asteroids are small solid objects revolving around the Sun in orbits. They are also known as planetoids or minor planets. Millions of asteroids have been found between the orbits of Mars and Jupiter.

4. The constellation which has a group of seven stars is called Saptarshi.

**Explanation:** A constellation is a group of stars in a particular pattern. The constellation that is visible through our naked eyes is Saptarshi, which is a group of seven stars.





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Question C:

Which planet in the solar system is associated with each of the following?

- 1. Messenger of the Roman gods
- 2. Roman god of war
- 3. Greek god of the sky
- 4. Roman god of the sea

#### ANSWER:

1. Messenger of the Roman gods: Mercury

**Explanation:** Mercury is closest to the Sun. There is a huge difference in its temperature during day and night.

2. The Roman god of war: Mars

**Explanation:** Mars is also known as the Red Planet. Since the colour red signifies violence and Mars appears to be red in colour, it has been named after the Roman god of war.

3. The Greek god of the sky: Uranus



**Explanation:** This planet has rings around the Equator similar to that of Saturn. This planet is known to have 21 moons.

4. The Roman god of the sea: Neptune

**Explanation:** The planet Neptune is similar to Uranus in its physical properties. That is the reason they are termed twin giants.

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Question D:

1. Light year is the unit used to measure distances between heavenly bodies.

2. The earth revolves around the sun from east to west.

3. In the period between the New Moon and Full Moon, the moon wanes.

4. Comets are also known as shooting stars.

#### ANSWER:

1. The given statement is true.

**Explanation:** The ordinary units of measurement are not used for measuring distance in the universe. Light-year is a unit used to measure distance that is equal to the distance covered by light travelling at a speed of 3,00,000 kilometres per second in one year.

2. The given statement is false.



**Explanation:** The Earth rotates on its own axis while revolving around the Sun. The direction of the rotation of the Earth is from west to east. This is the reason we see sunrise from the east.

3. The given statement is false.

**Explanation:** When the Moon moves from new moon to full moon, the visible portion of the Moon increases.

4. The given statement is true.

**Explanation:** Comets are huge masses of snow and rocks that orbit the Sun. They have huge glowing tails; hence, they are also known as shooting stars.

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Question E:

Column B		
Proxima Centauri	a.	Helps to find the north direction
Pole Star	b	Arizona
Jupitar	c.	Nearest star to the earth
Meteor Crater	d	Rule of the Roman gods
	Proxima Centauri Pole Star Jupitar	Proxima a. Centauri Pole Star b Jupitar c.



#### ANSWER:

Column A	Column B
1. Proxima Centauri	c. Nearest star to the Earth
2. Pole Star	a. Helps to find the north direction
3. Jupiter	d. Rule of the Roman gods
4. Meteor Crater	b. Arizona

#### **Explanation:**

1. Proxima Centauri is the nearest star to the Earth after the Sun. It is about 4.24 light-years away from the Earth.

2. Pole Star represents the north direction. It has been used since ancient times to find the north direction.

3. Jupiter is the biggest planet of our solar system. The term 'Jupiter' implies the rulers of the Roman gods. It might have been named so because it has around 39 moons. It is almost equal to a mini solar system.

4. A meteor is a small piece of rock revolving around the Sun in its orbit. When it enters the Earth's atmosphere, it lights up, starts burning and forms a crater when it hits the surface. One such crater was found in Arizona, USA.

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Question F:

1. Universe

2. Milky Way

#### 3. Light year



- 4. Nebula
- 5. Inner planets
- 6. Gas giants
- 7. Blue planet
- 8. Asteroids
- 9. Meteors
- 10. Comets
- 11. Constellations
- 12. Saptarishi

#### ANSWER:

1. The term 'universe' implies to almost everything that exists in the outer space. It is still a mystery as to how it was formed, but the most prevalent theory is that the universe emerged after the Big Bang. It consists of a large number of galaxies, which further comprise planets, meteors, comets, satellites, etc.

2. The universe consists of a large number of galaxies. Our solar system is found in the Milky Way galaxy. It is also known as Akash Ganga, as it appears to be white in colour. It is believed that our galaxy is home to almost 10,000 stars.

3. Ordinary units of measurement are not used for measuring distance in the universe. Light-year is used as a measure of distance that is equal to the distance covered by light travelling at a speed of 3,00,000 kilometres per second in one year.

4. A cloud of gas and dust particles of which a star is made is known as a nebula. Nebulas are very large bodies that possess their own light. They appear to be dot-like figures in the night sky, as they are very far from the Earth's surface.



5. The first four planets of the solar system, i.e. Mercury, Venus, Earth and Mars, are known as inner planets. They are made up of hard rock materials. Hence, they are also termed terrestrial planets.

6. Mars, Jupiter, Uranus and Neptune are known as outer planets or gas giants. They are called so because they are made up of gases. They have been categorised so because they share common properties.

7. The Earth is known as the Blue Planet or the Water Planet. It is called so because when the astronauts first saw the Earth from space, it appeared blue in colour because of the presence of water on it.

8. Asteroids are small solid objects that orbit the Sun. They are also known as planetoids or minor planets. There are millions of asteroids found between the orbits of Mars and Jupiter.

9. A meteor is a small piece of rock revolving around the Sun in its orbit. When it enters the Earth's atmosphere, it lights up and start burning. Hence, it is also called a shooting star. It forms a crater when it hits the surface. One such crater was found in Arizona, USA.

10. Comets are huge masses of snow and rocks that orbit the Sun. They have huge glowing tails. Halley's Comet was last seen in 1986; it appears after a period of every 76 years. There are around 200 crore comets in our solar system.

11. A constellation is a group of stars in a particular pattern. In ancient civilisations, people saw these constellations as figures of objects, animals, beasts, etc. These <a href="https://www.indcareer.com/schools/ncert-solutions-for-6th-class-geography-chapter-1-the-earth-i">https://www.indcareer.com/schools/ncert-solutions-for-6th-class-geography-chapter-1-the-earth-i</a> <a href="https://www.indcareer.com/schools/ncert-solutions-for-6th-class-geography-chapter-1-the-earth-i">https://www.indcareer.com/schools/ncert-solutions-for-6th-class-geography-chapter-1-the-earth-i</a> <a href="https://www.indcareer.com/schools/ncert-solutions-for-6th-class-geography-chapter-1-the-earth-i">https://www.indcareer.com/schools/ncert-solutions-for-6th-class-geography-chapter-1-the-earth-i</a> <a href="https://www.indcareer.com/schools/ncert-solutions-for-6th-class-geography-chapter-1-the-earth-i">https://www.indcareer.com/schools/ncert-solutions-for-6th-class-geography-chapter-1-the-earth-i</a> <a href="https://www.indcareer.com/schools/ncert-solutions-for-6th-class-geography-chapter-1-the-earth-i">https://www.indcareer.com/schools/ncert-solutions-for-6th-class-geography-chapter-1-the-earth-i</a>



constellations had a considerable influence on the lives of the people. The positions of the constellations were used to direct the activities of the people like harvesting, planting and slaughtering.

12. The constellation that is most visible to our naked eyes is Saptarshi. It is a group of seven stars. It was used in ancient times to find directions. The Pole Star, which represents the north direction, can be easily located with the help of Saptarshi. Hence, in earlier times, it was easy to locate directions without the help of a compass.

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Question G.1:

Name the largest planet of the solar system.

#### ANSWER:

Jupiter is the largest planet in our solar system. The planet has been named after the ruler of the Roman gods. It has around 39 moons. The planet along with its moons in a way constitutes a mini solar system.

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Question G.2:

Name the smallest planet in the solar system.

#### ANSWER:

Mercury is the smallest planet in our solar system. It has a diameter of 4,880 kilometres. It is also the closest planet to the Sun. Because of this proximity, it is visible only during twilight.

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Question G.3:

#### What is the path taken by the planets to go round the sun called?





#### ANSWER:

The path taken by the planets to move around the Sun is called an orbit. It is a gravitationally curved elliptical path.

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Question G.4:

Name the planet which has a reddish appearance.

#### ANSWER:

Mars has a reddish appearance. That is why it is also known as the Red Planet. It is almost half the size of Earth.

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Question G.5:

#### Name the astronauts who first landed on the moon.

#### ANSWER:

The two astronauts who first landed on the Moon were Neil Armstrong and Buzz Aldrin. These American astronauts landed on the Moon on 21 July 1969.

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Question H.1:

Name the planets according to their increasing size.

#### ANSWER:

- 1. Mercury 4,880 km
- 2. Mars 6,794 km
- 3. Venus 12,104 km
- 4. Earth 12,756 km
- 5. Neptune 49,532 km
- 6. Uranus 51,118 km
- 7. Saturn 1,20,536 km





8. Jupiter - 1,42,984 km

#### Page No 15:

Question H.2:

Name the planets according to their distance from the sun.

#### ANSWER:

Following are the planets according to their increasing distance from the Sun:

- 1. Mercury
- 2. Venus
- 3. Earth
- 4. Mars
- 5. Jupiter
- 6. Saturn
- 7. Uranus
- 8. Neptune

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Question H.3:

Why do the planets not twinkle like stars at night?

#### ANSWER:

A star appears like a point even when we see it from a telescope, while a planet looks like a disc. A stars has its own light, so when it enters the Earth's atmosphere, it gets reflected by different obstructions. As a result, it twinkles. But since the planets are near, the light reflected by them comes to us directly. Hence, they do not twinkle.

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Question H.4:

Why is the earth called the blue planet?

#### ANSWER:



The Earth is also known as the Blue Planet or the Watery Planet. When the astronauts first saw the Earth from the outer space, it appeared blue in colour owing to the presence of water bodies. These water bodies cover almost 71 percent of the Earth's surface.

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Question I.1:

#### What is the significance of the sun in the solar system?

#### ANSWER:

Our solar system is one big family comprising the Sun, eight planets and other heavenly bodies like satellites, meteors, comets and asteroids. The significance of the Sun can be understood with the following points:

1. The Sun is the major source of heat and light in our solar system. Heat and light support all forms of life on the Earth.

2. The gravitational pull of the Sun is responsible for keeping the planets in their orbits.

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Question I.2:

How is the earth a unique planet is the solar system.

#### ANSWER:

The Earth is a unique planet because of the following reasons:

1. It is at optimum distance from the Sun; that is it is neither too far nor too close to the Sun. Hence, it supports several forms of life.

2. Extreme temperatures are maintained as a result of the rotation of the Earth.



3. The atmosphere of the Earth protects its surface from harmful ultraviolet rays of the Sun.

4. Oxygen is the essential component of the atmosphere on the Earth, as it helps in supporting life on this planet.

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Question I.3:

Write at least one characteristic of each planet in the solar system.

#### ANSWER:

The characteristics of the planets in our solar system are as follows:

1. Mercury: This planet has no atmosphere; hence, it witnesses extreme temperatures during day and night.

2. Venus: It has a very dense atmosphere and has no satellite.

3. Earth: It is the only planet in our solar system that supports life.

- 4. Mars: It has a reddish appearance; hence, it is also known as the Red Planet.
- 5. Jupiter: It is the largest planet in our solar system with 39 moons.
- 6. Saturn: It is a beautiful planet and has a large number of icy rings around the equator.
- 7. Uranus: It has rings around it and 21 moons.

8. Neptune: It is the farthest planet in our solar system and has physical features similar to those of Uranus.

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Question I.4:

Describe the phases of the moon.

#### ANSWER:



The Moon is the only satellite of the Earth. It does not have light of its own, but it reflects the sunlight. The shape of the Moon changes every night. The various phases of the Moon can be understood as under:

1. The visible portion of the Moon increases when it moves from the phase of new moon to the phase of full moon. This is known as wax.

2. The visible portion of the Moon decreases when it moves from the phase of full moon to the phase of new moon. It is known as wane.

Waxing and waning constitute a phase of the moon.

The half portion of the Moon always appears dark. Since the view from the Earth keeps on changing, we see the bright part of it.

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#### Question I.5:

Why do the sun and the moon appear to be of the same size from the earth?

#### ANSWER:

The Sun is 109 times larger than the Earth and its distance is around 15 crore kilometres from the Earth. It is a very large heavenly body compared to the Moon. The diameter of the Moon is 3,480 kilometres. It is 3,84,400 kilometres away from the Earth and therefore is much closer to the Earth than the Sun. The Sun and the Moon appear to be of the same size from the Earth because although the Sun is larger than the Moon, it is farther from the Earth.

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Question I.6:

Why do we always see the same face of the moon?

#### ANSWER:

The half side of the Moon appears dark, as we always see the bright part of the Moon. The reason is that both the Earth and the Moon rotate on their own axes. They have the same rotational period; therefore, we get to see only half side of the Moon.



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Question I.7:

Why can the moon not support any form of life?

#### ANSWER:

The Moon does not support any form of life because it does not have an atmosphere of its own. Life-providing gases, including oxygen, are absent on the Moon. Also, there is absence of moisture and water on the Moon to support life.





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