



**MAGNOLIA  
LESSON PLAN  
EVS-II**

## A – Curriculum to Learning Objectives: Physical Geography of the Earth

Prior Knowledge		<ul style="list-style-type: none"> <li>Names of objects seen in the sky during the day and night, example: stars, Sun, Moon</li> </ul>		
Class	L. No.	Lesson Name	L. Obj. No.	Learning Objectives
3	1	The Solar System	1.a 1.b 1.c 1.d	<ul style="list-style-type: none"> <li>the solar system</li> <li>how the solar system fits into the universe and why the Earth is living planet</li> <li>space exploration</li> <li>solving riddles to identify heavenly bodies</li> </ul>
3	2	The Shape of the Earth	2.a 2.b 2.c 2.d	<ul style="list-style-type: none"> <li>the shape of the Earth and its movements</li> <li>why the Earth is an oblate sphere</li> <li>how we can prove the shape of the Earth</li> <li>other planets in the solar system</li> </ul>
4	2	Continents and Oceans on Earth	2.a 2.b	<ul style="list-style-type: none"> <li>the position of continents and oceans</li> <li>continental drift</li> </ul>
4	3	What Does the Earth Look Like?	3.a 3.c	<ul style="list-style-type: none"> <li>major landforms and water bodies</li> <li>some interesting physical features on Earth</li> </ul>
5	3	The Climatic Zones of the Earth	3.a 3.b 3.d	<ul style="list-style-type: none"> <li>weather, seasons and climate</li> <li>factors that affect the climate, climatic zones</li> <li>climatic zones and countries</li> </ul>

## B – Vision-to-Action Plan: 1 The Solar System

Period and Planned Date	TB Page No. and Key Competency	L. Obj. No.	Learning Outcome(s)	Teaching Strategies	Resources	Practice		Areas to Focus
						CW	HW	
1 DD/MM/YYYY	1-2 (THK, REM)	1.a	<ul style="list-style-type: none"> <li>Understand the concept of a solar system</li> <li>List the planets in our solar system</li> </ul>	<ul style="list-style-type: none"> <li>Peer Learning – Group</li> <li>Guided Learning</li> </ul>	<ul style="list-style-type: none"> <li>Model of the solar system</li> </ul>	WB: Pgs. 1, 2 (Q 1, 5, 6)	Read the sections on 'Stars', 'Natural Satellites' and 'Other Heavenly Bodies' (TB: Pg. 3).	
2 DD/MM/YYYY	3 (REM)	1.a	<ul style="list-style-type: none"> <li>Differentiate between stars, natural satellites and other heavenly bodies</li> </ul>	<ul style="list-style-type: none"> <li>Flipped Classroom</li> </ul>	<ul style="list-style-type: none"> <li>Pictures of different natural satellites, comets and the asteroid belt</li> </ul>	WB: Pgs. 1, 2 (Q 2, 4, 7)	WB: Pg. 2 (Q 8, 9, 10)	
3 DD/MM/YYYY	3-4 (UND)	1.b	<ul style="list-style-type: none"> <li>Understand the concepts of universe and galaxy</li> <li>Examine why Earth is the only planet with life on it</li> </ul>	<ul style="list-style-type: none"> <li>Interactive Discussion</li> <li>Real-life Connect</li> </ul>	–	WB: Pgs. 1, 3 (Q 3, 12)	WB: Pg. 4 (Q 16)  Bring a blank sheet of paper.	
4 DD/MM/YYYY	4-5 (APP)	1.c	<ul style="list-style-type: none"> <li>Explain the reasons and importance of space exploration</li> </ul>	<ul style="list-style-type: none"> <li>Questioning</li> <li>Activity Method</li> </ul>	<ul style="list-style-type: none"> <li>Blank sheet of paper</li> </ul>	WB: Pgs. 2, 3 (Q 11, 14)	Bring foam balls of different colours and sizes, cardboard, glue and paint.	

Period and Planned Date	TB Page No. and Key Competency	L. Obj. No.	Learning Outcome(s)	Teaching Strategies	Resources	Practice		Areas to Focus
						CW	HW	
5 DD/MM/YYYY	5 (H.O.T.S., AF)	1.a 1.b 1.c 1.d	<ul style="list-style-type: none"> <li>• Make your own model of a solar system</li> <li>• Summarise the concepts covered in the lesson</li> </ul>	<ul style="list-style-type: none"> <li>• Activity Method</li> <li>• Summarising</li> </ul>	<ul style="list-style-type: none"> <li>• Foam balls of different colours and sizes, cardboard, glue and paint</li> <li>• <a href="https://bit.ly/2HnuUBo">https://bit.ly/2HnuUBo</a></li> </ul>	WB: Pgs. 3, 5 (Q 13, 17, 18)	WB: Pgs. 4, 6 (Q 15, 19, 20)	

Annual Day:  
1/29

Day:  
1/5

Actual Date:  
\_\_\_\_\_

Page(s):  
1

Important Words

Duration: –

**Lesson 1**

# The Solar System

Let Us Learn About —

- 1 the solar system.
- 2 how the solar system fits into the universe and why the Earth is a living planet.
- 3 space exploration.
- 4 solving riddles to identify heavenly bodies.



## Think

The children and Mrs Irani are watching the night sky on their terrace.

**Mrs Irani:** Look at the bright stars tonight. All these stars are far off in space.

**Rashi:** But what is 'space'?

**Morad:** Space is the place beyond the Earth, where all the stars and planets are.

**Meher:** What is the difference between a star and a planet? Is the Earth a star or a planet?



The night sky

**Q.** What is the Earth?

(A) a star

(B) a satellite

(C) a planet

(D) an asteroid



Transactional Tip(s)

Duration: 10 min



Peer Learning – Group:

- Ask learners to read the 'Think' section in groups.
- Ask each group to discuss and solve the 'Think' question.
- Pass around the model of the solar system in class.
- Ask each group to state which components of the solar system they can recognize or have prior knowledge of.
- Ask each group to make a list of the components.

Class Pulse Check

Duration: 1 min



- 1) What is the Earth? (Think, TB: Pg. 1)

Annual Day:  
1/29

Day:  
1/5

Actual Date:  
\_\_\_\_\_

Page(s):  
2

Important Words

Duration: 1 min

- Today: planetary system, solar system, heavenly bodies, planet



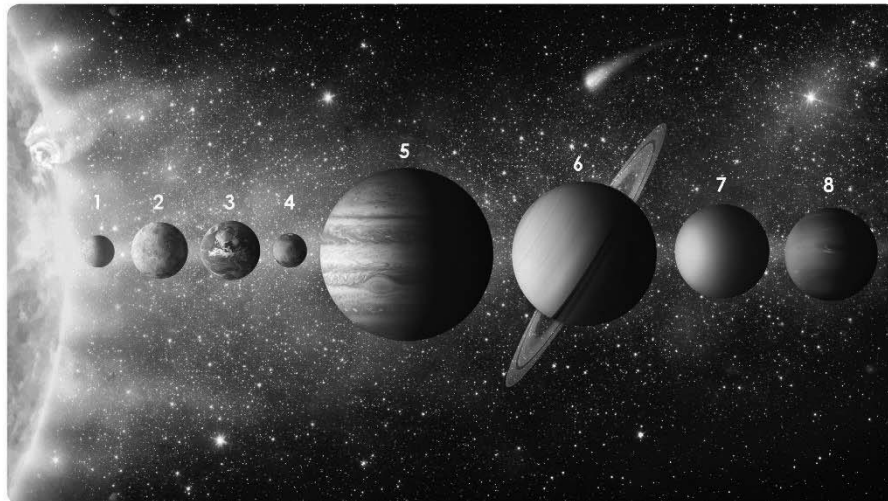
### Remembering

A set of planets and heavenly bodies that constantly move around a star is called a **planetary system**. Our planetary system is called the **solar system**. Our Earth is part of the solar system. It is made up of the Sun, eight planets and their satellites and other **heavenly bodies**.

### PLANETS

A **planet** is a very big ball-shaped object found in space. Look at the picture and find the planets numbered as follows.

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



*Our solar system*

Mercury is the smallest planet in the solar system, and Jupiter is the largest. Venus is the hottest and the brightest planet in the solar system. Mars is called the red planet. Saturn has rings of ice and dust around it. Fast storms blow on Neptune.

Transactional Tip(s)

Duration: 15 min



Guided Learning:

- Define planetary system.
- Using the model of the solar system, help learners identify all the planets of the solar system and their positions in the planetary system.
- Ask learners to read out the different characteristics of the different planets in the solar system.
- Ask learners to solve the allotted WB questions in class.

Class Pulse Check

Duration: 3 min



- 1) What is a planetary system?
- 2) How many planets are there in the solar system? Name them.



Annual Day:  
2/29

Day:  
2/5

Actual Date:  
\_\_\_\_\_

Page(s):  
3

### STARS

The planets in our solar system continuously move around the Sun. The Sun is a **star**. A star is a burning, ball-shaped object in space. It is made up of gas. It has its own light. A star is very hot. We can feel the heat of the Sun on Earth.

### NATURAL SATELLITES

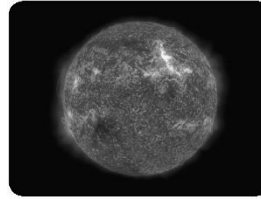
The Moon is the only **natural satellite** of the Earth. A natural satellite is a ball-shaped object, which travels around a planet. Natural satellites do not have their own light. So, why does the Moon shine?

Point a torch at a mirror. You will see light. However, it is not the mirror's own light. The light from the torch is seen in the mirror. Natural satellites are like mirrors. They do not have their own light. They **reflect** the light of the stars.

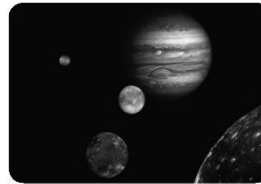
### OTHER HEAVENLY BODIES

Other than planets and stars, many objects are found in space. Some rocks found in the solar system are called **asteroids**. The rocks between Mars and Jupiter make up the **asteroid belt**.

A comet is a bright speeding heavenly body that travels around the Sun. It is made up of ice, gas and dust. It forms a bright tail when it is close to the Sun. A famous comet is the Halley's Comet. It takes about 75 years to travel around the solar system and pass by the Earth. It was last seen in 1986. It will pass close to the Earth again in 2061.



A star



A planet with its natural satellites



Asteroid belt



The Halley's Comet



### Understanding

### OUR UNIVERSE

You are a part of your class; your class is a part of your school, and your school is a part of your city. Similarly, the Sun, the Earth and the other planets make up the solar system.



### Important Words

Duration: 1 min

- Last class: planetary system, solar system, heavenly bodies, planet
- Today: star, natural satellite, reflect, asteroids, asteroid belt

### Transactional Tip(s)

Duration: 26 min



### Flipped Classroom:

- Ask pairs of learners to discuss for 5 minutes the key points of any topic in 'Remembering' on TB: Pg. 3. Choose pairs to list the key points on the blackboard.
- Help learners differentiate between stars, natural satellites, asteroids, asteroid belt and comets.
- Explain to learners that some planets do not have natural satellites while some planets have more than one.
- Show learners pictures of different natural satellites, comets and the asteroid belt.
- Ask learners to solve the allotted WB questions in class.

### Class Pulse Check

Duration: 3 min



- 1) **True/False:** The Sun is a star.
- 2) What is the difference between an asteroid, a comet and a natural satellite?

Annual Day:  
3/29

Day:  
3/5

Actual Date:

Page(s):  
3-4

A **galaxy** is a vast collection of gas, dust and of stars and their planetary systems. There are uncountable galaxies. All these galaxies are a part of the **universe**. The name of our galaxy is the **Milky Way** galaxy.

### OUR LIVING WORLD

The Earth is the only planet which supports life. This is a special characteristic of the Earth. What makes it possible for living things to be on the Earth?

Planets like Mercury and Venus are very close to the Sun and very hot. Venus is the hottest planet of our solar system. Its atmosphere traps the heat of the Sun, making it so hot. As we go farther and farther away from the Sun, the planets become cooler. Neptune is the coldest planet in our solar system.

Since the Earth is the third planet from the Sun, it receives the right amount of light and heat. There is also plenty of water on Earth. Water, air and heat are needed for living things to grow. This is why the Earth is called the 'living planet'.



Position of the Earth in the solar system



### Application

For hundreds of years, people have wanted to **explore** space. Long ago, people could only look at the sky and try to study it. The first person to travel into space was Yuri Gagarin from Russia (formerly known as the USSR) in 1961. Rakesh Sharma was the first Indian to travel into space. The Moon is the only heavenly body that people have travelled to.



Yuri Gagarin



Rakesh Sharma



### Important Words

Duration: 1 min

- Last class: star, natural satellite, reflect, asteroids, asteroid belt
- Today: galaxy, universe, Milky Way

### Transactional Tip(s)

Duration: 26 min



### Interactive Discussion (11 min):

- Ask learners what their understanding of universe and galaxy is.
- Discuss the meanings of 'universe' and 'galaxy'. Discuss how they are different.
- Ask learners to read the section 'Our Universe' (TB: Pgs. 3, 4).

### Real-life Connect (15 min):

- Using the picture on TB: Pg. 4, explain the positions of the Earth and the other planets in the galaxy and the universe.
- Demonstrate with the help of a diagram, how small the Earth is with respect to the Universe. (Hint: compare Earth to a pea and the Universe to a cricket stadium)
- Discuss with learners the reasons why life is possible on Earth and not on the other planets.
- Ask learners to solve the allotted WB questions in class.

### Class Pulse Check

Duration: 3 min



- 1) What makes up the solar system?
- 2) What is our galaxy known as?
- 3) Which planet is called the 'living planet'?



Annual Day:  
4/29

Day:  
4/5

Actual Date:  
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Page(s):  
4-5

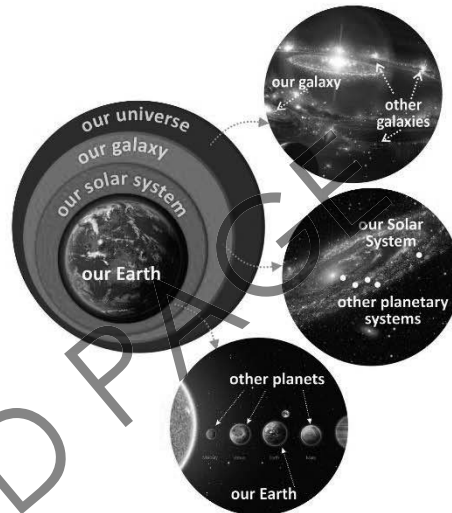
A **galaxy** is a vast collection of gas, dust and of stars and their planetary systems. There are uncountable galaxies. All these galaxies are a part of the **universe**. The name of our galaxy is the **Milky Way** galaxy.

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Position of the Earth in the solar system



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Yuri Gagarin



Rakesh Sharma



### Important Words

Duration: 1 min

- Last class: galaxy, universe, Milky Way
- Today: explore

### Transactional Tip(s)

Duration: 15 min



### Questioning:

- Ask learners to read the 'Application' (TB: Pgs. 4, 5) section in pairs.
- Ask learners to frame questions from the section and discuss the answers.
- They can also ask additional questions:
  - Why do people want to go to space?
  - How can space travel be dangerous?
  - What precautions can be taken during space travel?
- Ask learners to solve the allotted WB questions in class.

### Class Pulse Check

Duration: 1 min



- 1) Which heavenly body have human beings travelled to?

**Annual Day:**  
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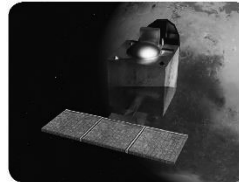
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**Actual Date:**  
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**Page(s):**  
5

Artificial satellites sent into space help us learn about our neighbouring planets and heavenly bodies. Example: Mangalyaan was sent to study Mars in 2013 by India. It takes photographs of Mars and the space around it. Mangalyaan became famous as it was successful on the first try.

Space exploration is **expensive** and dangerous. So, all missions have to be very well-planned.



*Mangalyaan*



### Higher Order Thinking Skills (H.O.T.S.)

Solve these riddles.

1) I am a ball-shaped natural object found in space. I shine with my own light. What am I?

**Ans.** \_\_\_\_\_

2) I am a group of rocks found between Mars and Jupiter. What am I?

**Ans.** \_\_\_\_\_



### Amazing Facts

The Earth has one moon. Did you know that Jupiter has many moons? Scientists say that Jupiter has 79 moons!



### New Words

- |                    |   |   |
|--------------------|---|---|
| 1) heavenly bodies | – | the natural objects found in space  |
| 2) reflect         | – | throw back the same light   |
| 3) universe        | – | the name given to the great collection of all living things, planets, stars, satellites, galaxies and so on |
| 4) explore         | – | find out more about something   |
| 5) expensive       | – | something that costs a lot of money   |

### Important Words

**Duration: 1 min**

- Today: expensive

### Transactional Tip(s)

**Duration: 11 min**



### Activity Method:

- In groups, ask learners to draw either of the following.
  - how the earth would look like from space
  - what kind of satellites they would like to invent for the benefit of people living on Earth.
- Ask each group to present their drawings and briefly explain their thoughts behind the drawings.

### Class Pulse Check

**Duration: 1 min**



- 1) What is Mangalyaan? Why was it built?



Annual Day:  
5/29

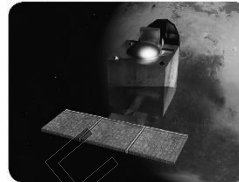
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Page(s):  
5

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Mangalyaan



### Higher Order Thinking Skills (H.O.T.S.)

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Ans. \_\_\_\_\_



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| 4) explore         | – | find out more about something   |
| 5) expensive       | – | something that costs a lot of money   |



### Important Words

Duration: 1 min

- Last class: explore, expensive
- Today: –

### Transactional Tip(s)

Duration: 28 min



### Activity Method (15 min):

- Let learners solve the questions in the 'H.O.T.S.' section.
- Help learners make a model of the solar system using the materials they have brought.
- You can find tips to make a model here:  
<https://bit.ly/2HnuUBo>

### Summarising (13 min):

- Recapitulate the topics covered in the lesson.
- Emphasise on the uniqueness of Earth and why life is found on it.
- Ask learners to read the 'Amazing Facts'.
- Ask learners to solve the allotted WB questions in class.

### Class Pulse Check

Duration: 1 min



- 1) Mention one use of artificial satellites.



## C – Exit Assessment

	Suggested questions to test the learning objective(s)	Learning objective(s)	Number of learners who answered correctly
1	The Earth is the _____ planet in our solar system. (Ans. third)	Period 1 - the solar system	
2	<b>True/False:</b> Natural satellites shine with their own light. (Ans. False)	Period 2 - the solar system	
3	Are all galaxies a part of the universe? (Ans. Yes)	Period 3 - how the solar system fits into the universe and why the Earth is a living planet	
4	<b>Russia/India</b> sent Mangalyaan to space. (Ans. India)	Period 4 - space exploration	
5	I am the coldest planet in our solar system. Who am I? (Ans. Neptune)	Period 5 - solving riddles to identify heavenly bodies	

Post-lesson Reflection		Handhold Learners	Challenge Learners
TB completed Yes <input type="checkbox"/> No <input type="checkbox"/> WB completed Yes <input type="checkbox"/> No <input type="checkbox"/>			
Enthusiastic participation 😊 <input type="checkbox"/> 😊 <input type="checkbox"/> 😐 <input type="checkbox"/>			
Concept clarity in the classroom 😊 <input type="checkbox"/> 😊 <input type="checkbox"/> 😐 <input type="checkbox"/>		Exam Revision Strategy	
Concept clarity through the workbook 😊 <input type="checkbox"/> 😊 <input type="checkbox"/> 😐 <input type="checkbox"/>		Reteach <input type="checkbox"/> Revise <input type="checkbox"/> Practise <input type="checkbox"/>	
		App Report Number _____	Signature _____