

Master Lesson Plan

For

Motion of the Earth

Board	Standard	Subject	Chapter	Language	Reference Link	Creation date
CBSE	STD VI	Social Science	Motion of the Earth	English	Motion of the Earth	2020-06-19 17:08:48

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Motion of the Earth

1. MS_Objectives_Motion of Earth

Objectives

At the end of the lesson, students will be able to –

- Devise an experiment to demonstrate the occurrence of day and night
- Describe the rotation of the earth
- Discover new information about the motion of the earth
- Conclude that rotation of the earth causes day and night
- Relish amazing facts about an ancient Indian astronomer
- Describe the revolution of the earth
- Visualize the exciting discovery made by Copernicus regarding our Solar System
- Create a construction to draw an ellipse in a simple way
- Relate the four seasons with climatic changes and regional festivals
- Construct a model to understand the earth's tilt
- Explain the concept of a leap year
- Contrast the summer solstice, winter solstice and equinox
- Summarise the various concepts learnt in the chapter by answering some questions from the chapter

Time to teach	Asset Type	Theme	SubTheme
3 Minutes	Main Script	Solar system & the earth	The Solar System, The Solar System

2. SA_Let's create Day and Night

Let's Create Day and Night

Aim:

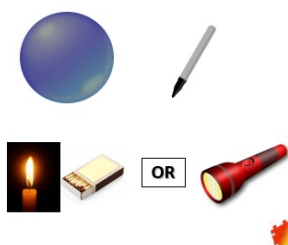
To observe the occurrence of day and night.

Materials required:

A big ball, a candle, match sticks and a marker.

WHAT DO WE NEED?

- ☐ A Big Ball
- ☐ A Marker Pen
- ☐ A Candle, MatchBox
OR Torch light



Procedure:

Step 1: Mark a point as 'x' on the ball with the marker.

Step 2: Light the candle.

Step 3: Close all the windows with curtains on and the door so that there would be some darkness in the classroom.

Step 4: Hold the ball next to the candle in such a way that the point 'x' is come on the darker side.

Step 5: Start rotating the ball slowly with both the hands from left to right.

Step 6: Students can see the sunrise as it nears the candle light.

Step 7: Teacher explains that it denotes daytime.

Step 8: As the ball keeps moving the point 'x' would start moving away from sun.

Step 9: Teacher explains that it denotes night.

Step 10: Let the children do the experiment themselves and clarify their doubts.

Note to the Teacher:

Students should be kept away from the matchsticks. Teacher needs to light the candle and take care that the ball is not taken near the flame. If available, a torch-light or the torch light feature in a mobile phone can be used in place of the candle.

Observation:

With the help of the teacher, students are able to observe how the ball, representing the Earth, passes from light to darkness, similar to day and night.

Conclusion:

Students can understand the occurrence of day and night on the Earth.

URLs

BALL - <https://pixabay.com/vectors/bubble-soap-bubble-ball-round-blue-1841301/>

CANDLE: <https://pixabay.com/photos/light-death-memorial-isolated-wax-1551386/>

MATCHBOX: <https://pixabay.com/photos/open-box-matches-matchboxes-wood-4872636/>

MARKER PEN: <https://pixabay.com/vectors/felt-tip-felt-pen-marker-black-154473/>

TORCH LIGHT: <https://pixabay.com/vectors/light-torch-lamp-electric-159858/>

Time to teach	Asset Type	Theme	SubTheme
5 Minutes	Suggested Activity	Solar system & the earth	Rotation, Rotation

3. MS_Rotation of the Earth

Rotation of the Earth

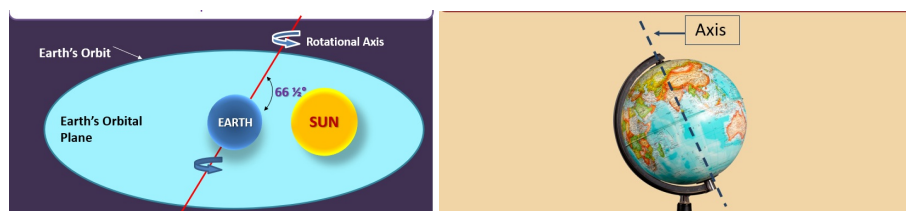
When the Earth turns on its axis, it is called **Rotation**.

The **axis** is a vertical imaginary line running through the centre of the earth.

This axis is tilted at an angle of $66\frac{1}{2}$ degrees with its orbital plane.

The **orbit** is the path taken by planets around the sun.

All planets revolve around the sun in the same plane. This is called the **orbital plane**.



URLs

SSSVV Gallery (keyword- revolving globe)

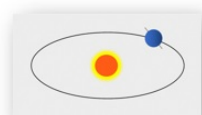
Created using PPT shapes

Time to teach	Asset Type	Theme	SubTheme
3 Minutes	Main Script	Solar system & the earth	Rotation, Rotation

4. IQ_Extraordinary Earth

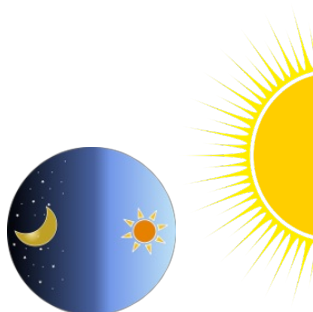
Extraordinary Earth

1. When we, on earth, look up, we see the sun gradually moving across the sky, rising in the East and setting in the West. Which is actually moving in this case?
2. We feel dizzy when we turn round and round a pole, while playing. Our earth is moving around itself and yet we do not feel a thing. How can this be explained?
3. What can you predict about the speed of movement of the earth, if one day was to have -
 - a. 48 hours?
 - b. 10 hours?
4. What do you think would happen to life on earth if the earth stopped moving around itself?



Answers:

1. The earth is moving around itself and the sun is fixed. It only seems as if earth is fixed while sun travels across the sky.
2. We are not able to feel the earth moving since we are also moving on its surface along with it. We are very small compared to the size of the earth, so we do not feel the motion.
- 3.a. The earth has slowed down its movement around itself
- b. The earth is moving faster around itself.
4. If the earth stopped moving around itself, then, one part of the earth will always be facing the sun and the other part will be in darkness forever. Both these situations do not support living beings.



URLs

Rotating earth – SSSVV Gallery (Keyword- Revolving globe)

Revolution – SSSVV gallery (Keyword- revolution)

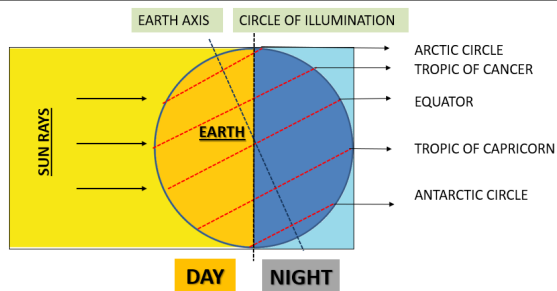
<https://pixabay.com/vectors/nightsky-star-sun-day-night-297261/>

<https://pixabay.com/illustrations/sun-vector-illustration-free-image-1837376>

Time to teach	Asset Type	Theme	SubTheme
4 Minutes	Inquisitive Questions	Solar system & the earth	Rotation, Rotation

5. MS_Day and Night

Day and Night



The earth takes around 24 hours to complete one rotation on its axis. This is called the **earth day**.

As the earth is spherical in shape, the sun's rays fall only on that side which faces the sun. The other side experiences night during this time.

The circle that divides day from night is called the **circle of illumination**. However, this circle of illumination does not coincide with the earth's axis, as it is tilted.

URLs

OC: DAY AND NIGHT:

ANURADHA RAMKUMAR: ramji.anu@gmail.com

Time to teach	Asset Type	Theme	SubTheme
3 Minutes	Main Script	Solar system & the earth	Rotation, Rotation

6. IA_Amazing Aryabhata

Amazing Aryabhata

- Aryabhata, the ancient Indian astronomer and mathematician, was born in the year 476 CE in present day Patna, Bihar



- He was the first mathematician-astronomer of ancient India, whose works became well-known to the outside world.
- His most famous work was Aryabhatiya, in which he presented many new ideas in mathematics and astronomy.
- He was the first scholar to correctly propose that the earth rotates about its axis and the duration is one day.
- He also stated that the moon does not emit light, but shines by reflecting the light from the sun.



URLs

https://commons.wikimedia.org/wiki/File:2064_aryabhata-crp.jpg

<https://www.flickr.com/photos/kevinmgill/14661461658> (Attribution: Kevin Gill)

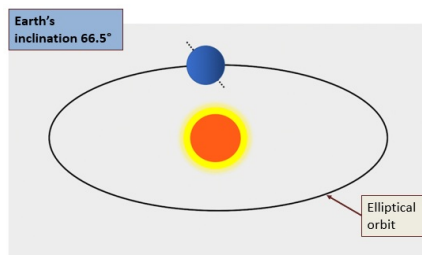
Time to teach	Asset Type	Theme	SubTheme
3 Minutes	Interesting Asides	Solar system & the earth	Rotation, Rotation

7. MS_Revolution of the Earth

Revolution of the Earth

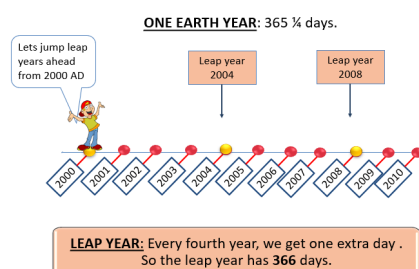
We have seen that the earth turns around about its own axis and this is called rotation of the earth.

When an object moves around another object in a fixed path, it is called revolution.



The movement of the earth around the sun in a fixed path, is called revolution.

It takes $365 \frac{1}{4}$ days for the earth to complete one revolution around the sun. This period is one year on the earth.

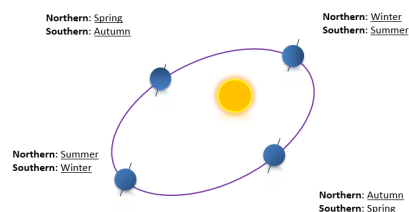


In order to simplify this number, it has been decided that one year shall have 365 days.

Every fourth year, we get one extra day from the four one - quarter days that have been accumulating. This one day gets added to the 365 days, every fourth year and it is called the **leap year**. The leap year therefore has **366** days.

The earth is revolving around the sun in an elliptical orbit as seen in the picture, and not in a circular orbit

The revolution of the earth and its tilt cause changes in seasons.



The earth is inclined by $66\frac{1}{2}^\circ$ on the same side throughout its orbit.

The revolution of the earth and its tilt cause changes in seasons in the Northern hemisphere and Southern hemisphere of the earth.

Usually, during revolution of the earth, when the Southern hemisphere receives direct rays of the sun, it is hot in those regions and the season is summer. At the same time, in the Northern hemisphere, away from the sun, temperatures are low and it is winter season there.

The tilt of the earth is responsible for the changes in seasons in one year. There are, in general, four seasons, namely spring, summer, autumn and winter. The seasons in a region are based on the amount of sunlight received by that region of the earth.

URLs

SSSVV gallery (Keyword- Revolution)

Boy- <https://pixabay.com/vectors/blonde-boy-cartoon-character-comic-1300066/>

Image : made using ppt shapes

Time to teach	Asset Type	Theme	SubTheme
4 Minutes	Main Script	Solar system & the earth	Revolution, Revolution

8. IA_Nicolaus Copernicus

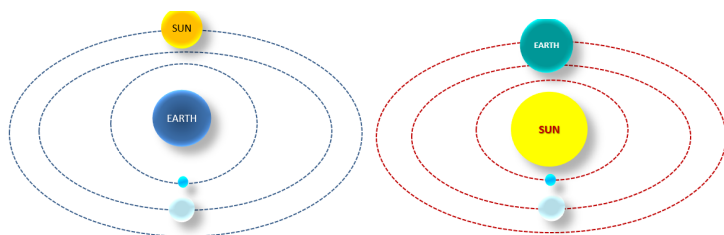
Nicolaus Copernicus

It was **Nicolaus Copernicus**, a scientist and a mathematician from Poland, who first discovered that the earth moves around the sun. Before his discovery, everyone believed that the earth was at the center of the solar system and that the sun and other heavenly bodies revolved around it.



(Pic - Nicolaus Copernicus)

There existed a **geocentric model of the solar system** which was developed thousands of years ago. According to this model the Earth was the center of the solar system. It places the Earth at the center and all the other planets including the Sun and the Moon circling it. Copernicus established that this model was incorrect.



(Pic - The Geocentric model and the Heliocentric model)

The **heliocentric model** was developed later which replaced the geocentric model. This had the Sun as the center of the universe and all the other planets including the Earth revolve around it.

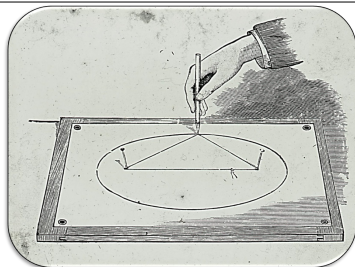
URLs

Created Using PPT Shapes

Time to teach	Asset Type	Theme	SubTheme
2 Minutes	Interesting Asides	Solar system & the earth	Revolution, Revolution

9. SA_Drawing an Ellipse

Drawing an Ellipse

**Aim:**

To demonstrate an easy method to draw an ellipse

Materials Required:

A cardboard sheet larger than A4 size

A sheet of white paper, approximately A4 size

Two board-pins

A small loop of thread, smaller than the width of the white paper

A pencil and an eraser

Glue

Procedure:

1. The teacher pastes the sheet of white paper on the cardboard sheet.
2. The teacher then fixes the two board pins on the white paper, about 6-7 centimetres apart.
3. The loop of thread is placed around the two board pins.
4. A pencil is held on the paper, touching the inner side of the loop.
5. Students watch that when the pencil is pulled along the loop, the figure appearing on the white paper is an ellipse.
6. A few students can try this activity, supervised by the teacher.

Observation:

This is a simple method to draw an ellipse using everyday objects.

Note to the Teacher - Precaution:

Teacher needs to ensure that the students do not handle the sharp board-pins.

Conclusion:

Students have learnt to construct a simple device to draw an ellipse.

URL

<https://www.flickr.com/photos/cabhc/22748070505/>

<https://creativecommons.org/publicdomain/mark/1.0/>

Time to teach	Asset Type	Theme	SubTheme
5 Minutes	Suggested Activity	Solar system & the earth	Revolution, Revolution

10. DD_Four seasons of the year

FOUR SEASONS OF THE YEAR



Spring:

Spring is the first season of the year. It marks the end of winter season.

It is usually associated with blooming of flowering plants.

In India, Vasant Panchami and Holi are the major spring festivals, usually falling during the months of February - March.

**Summer:**

Summer is the warmest season of the year. Summer is from June to August in the northern hemisphere and it is from December to February in the southern hemisphere.

It follows the spring season.

In the South Indian town of Madurai, famed for the Meenakshi Amman temple, a grand Chithirai Festival of 10 days is celebrated in summer.

Baisakhi, the harvest festival, marks the arrival of new year in Punjab. It is celebrated in a grand manner with dancing and feasts.

**Autumn:**

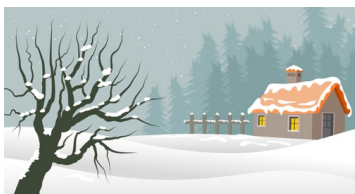
Autumn falls in between summer and winter (after summer and before winter).

This season marks the transition from the summer into the winter.

It begins in September and ends in December in the northern hemisphere.

It is not a clearly demarcated season in India.

Many festivals like Ramzan, Durga Puja- famously celebrated in West Bengal, Dussara or Navratri, Deepavali- celebrated all over India are celebrated in autumn.

**Winter:**

Winter is the coldest season of the year. Winter is from December to February in the northern hemisphere and it is from June to August in the southern hemisphere.

It falls in between autumn and spring seasons.

Christmas on December 25 th, New Year's Day on January 1st, harvest festival of Tamilnadu – Pongal in mid-January are popular festivals of the season.

It is interesting to note that we have six seasons in India, though the changes between the seasons are not distinctly distinguishable. The seasons in India are spring, summer, monsoon, autumn, pre-winter and winter.

URLs

Spring flowers- <https://pixabay.com/photos/spring-awakening-spring-1197602/>

Meenakshi amman temple - https://www.flickr.com/photos/ajay_g/6357534075/(attribution – **BOMBMAN**)

Baisakhi - <https://www.flickr.com/photos/44845583@N02/8695080679/> (Attribution – Guy Evans)

Autumn – <https://pixabay.com/photos/avenue-away-trees-chestnut-4591121/>

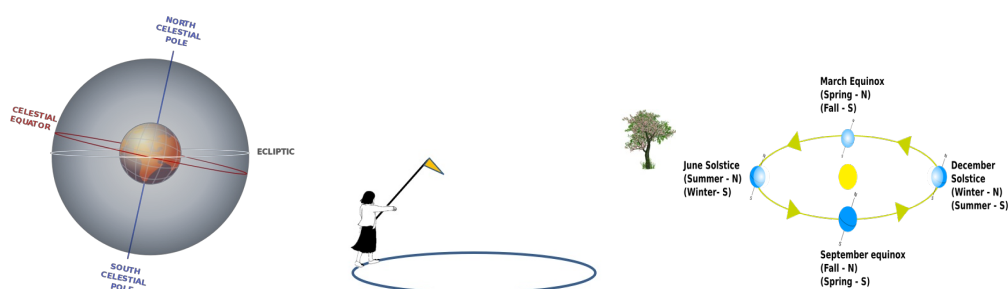
Celebration - <https://pixabay.com/photos/fireworks-light-festival-beautiful-180553/>

Time to teach	Asset Type	Theme	SubTheme
5 Minutes	Day-to-day Relevance	Climate and vegetation	The Seasons, The Seasons

11. SA_The Tilted Earth

The Tilted Earth

AIM: To demonstrate the tilt of the earth by performing a simple physical activity.



MATERIALS REQUIRED:

A flag or any piece of cloth tied to a stick.

Chalk for drawing.

PROCEDURE:

1. The teacher takes the children to an open space outside the classroom.
2. The teacher draws a large ellipse on the ground, large enough for walking around on its line.
3. The teacher holds the flag tied to a stick and points it in a tilted manner at some distant object, say, a tree-top.
4. The teacher now begins to walk on the line of the ellipse drawn, always keeping the flag tilted and pointed at the same distant object chosen.
5. As the teacher completes one trip along the entire ellipse, he/she explains that the tilted flag is the earth's tilted axis, the distant object pointed by the flag is the sun and the ellipse is the elliptical orbit of the earth's revolution.
6. The teacher also explains the occurrence of different seasons as the earth completes one revolution. Usually, during revolution of the earth, when the Southern hemisphere receives direct rays of the sun, it is hot in those regions and the season is summer. At the same time, in the Northern hemisphere, away from the sun, temperatures are low and it is winter season there.

OBSERVATION:

The students take turn holding the flag tilted and moving along the ellipse drawn.

They interact with the teacher and understand the occurrence of seasons.

CONCLUSION:

Students are able to clearly understand the revolution of the earth and occurrence of seasons due to earth's tilted axis.

NOTE TO THE TEACHER:

This is an activity included in the textbook chapter.

It can be done indoors too, if there is sufficient space.

URLs

https://commons.wikimedia.org/wiki/File:Axial_Tilt_of_Earth.svg

Girl-

<https://pixabay.com/illustrations/imagination-fairy-tale-creativity-5153704/>

Flag- using PPT shapes

Tree - <https://pixabay.com/illustrations/tree-deciduous-tree-blossom-1511608/>

https://commons.wikimedia.org/wiki/File:Orbital_relations_of_the_Solstice_Equinox_%26_Intervening_Seasons.svg

Time to teach	Asset Type	Theme	SubTheme
10 Minutes	Suggested Activity	Solar system & the earth	Revolution, Revolution

12. QA_Quiz on Leap Year

Quiz on Leap Year

1. What is a leap year?
2. How do you verify that a particular year is a leap year?
3. Why do we get a leap year?
4. Which of the following are leap years?

NOTE TO THE TEACHER: Some more such years can be given as home-work. Students can find out if their family members' birth years are leap years or not.

- a. 1945.
 - b. 1600.
 - c. 1826.
 - d. 2014.
 - e. 2016.
 - f. 1996.
5. Which month has 29 days in a leap year?

Answers:

1. A leap year has 366 days whereas a normal year has 365 days.
2. A leap year can be divided by four evenly (i.e., without any remainder).
3. Earth rotates about 365.25 (approx) times a year, but we have only 365 days a year. Therefore to adjust the 0.25 times that is left every year, we have a day added in the 4th year.
4. a. not a leap year.
b. a leap year.
c. not a leap year.
d. not a leap year.
e. a leap year.
f. a leap year.
5. February.

February 2014						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	

Not a leap year

February has 28 days

February 2012						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29			

A leap year

February has 29 days

URLs

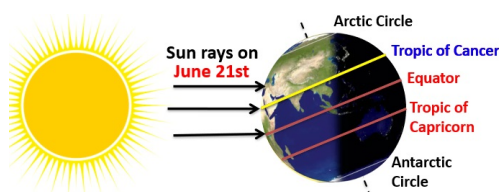
Own Creation

Time to teach	Asset Type	Theme	SubTheme
3 Minutes	Assessments	Solar system & the earth	Revolution, Revolution

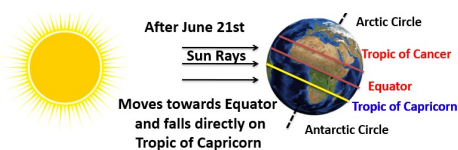
13. MS_ Summer and Winter Solstices, Equinox

SUMMER AND WINTER SOLSTICES, EQUINOX

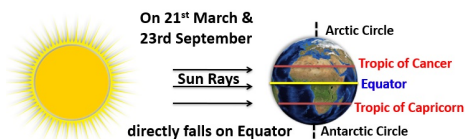
On June 21, the sun's rays fall directly on the Tropic of Cancer. During this time, the northern hemisphere gets more sunlight as it is turned towards the sun. Therefore it is summer here. The Arctic region faces the sun continuously for six months and therefore it experiences daylight for the entire period. Places in northern hemisphere have the longest day on June 21st. This is called the **Summer Solstice**.



After June 21st, the sun's rays move towards the equator and fall directly on the Tropic of Capricorn on December 22. The places in the southern hemisphere now get maximum sunlight and experience summer. The South Pole gets continuous daylight for six months. December 22nd is the **Winter Solstice**.



On 21st March and 23rd September, the sun's rays fall directly on the equator. During this time, the poles are not turned towards the sun. As a result, the earth experiences equal days and nights. 21st March and 23rd September are called the **Equinox**. The northern hemisphere has spring in March and the southern hemisphere has autumn. The situation is reversed in September.



URLs

.Sun: <https://pixabay.com/illustrations/sun-vector-illustration-free-image-1837376/>

.Earth: <https://www.flickr.com/photos/tonynetone/29071022038/in/photostream/> (Attribution - **tonynetone**)

<https://creativecommons.org/licenses/by/2.0/>

.Earth: <https://pixabay.com/illustrations/world-globe-earth-planet-blue-1303628/>

Time to teach	Asset Type	Theme	SubTheme
4 Minutes	Main Script	Solar system & the earth	Revolution, Revolution

14. VC_Be Disciplined Always

Be Disciplined Always

What would happen if the earth did not rotate? The portion of the earth facing the sun would always experience day, thus bringing continuous warmth to the region. The other half would remain in darkness and be freezing cold all the time. Life would not have been possible in such extreme conditions.

Rotation of the earth takes exactly 24 hours and revolution takes a year i.e. 365 days. It follows discipline in accordance with the time.

The teacher starts a discussion;

1. Children! what happens if you get up late on any day?

Let children come out with answers

(Suggested answer: You will miss your breakfast or you will eat hurriedly, you will reach school after the bell rings, you will miss the assembly, etc.)

2. What happens when you play more and don't get enough time to study / do your homework?

Let children come out with answers

(Suggested answer: You will lag behind in class, will not be able to get good grades, you might get scolding from teacher, etc)

3. Do you know why does all this happen?

Let children come out with answers

(Suggested answer: because you are not disciplined)

The teacher narrates a story:



Raju would not do anything on time, be it waking up in the morning or any of his daily tasks. It was getting very difficult for his mother to make him disciplined. His mother had to keep shouting every minute from the kitchen while making breakfast and lunch box for him, "Raju wake up. It's time for you to go to school".

He would pull the blanket over him and pretend to ignore his mother's repeated attempts to wake him up.

She would force him from bed, make him brush his teeth, have his milk, shower and rush him to school so that he is not late to school.

Once she would see him off at the school gate, she would heave a sigh of relief.

This was becoming a daily routine.

One day she thought of a plan to teach Raju discipline. She didn't wake Raju as usual. Raju kept sleeping till 10 o'clock. He went running to his mother and cried, "Amma. Why didn't you wake me up today? I have a Science test in the first period. I might miss it. The teacher would punish me."

His mother looked calmly at him and didn't say anything. Raju cried, 'Amma, please help me. If you speak to my teacher, I promise, I'll wake up on time hereafter.'

His mother said, "And promise me you will do all other tasks too in a disciplined way without me following up with you all the time."

Raju promised to do so. His mother took him to school and spoke to the science teacher to excuse him. His teacher understood and allowed him in the class.

Sure enough Raju missed his test and failed that month.

Raju learnt a lesson. From then on, he became a disciplined boy.

Children! Taking the first step is perhaps the most difficult thing to do in achieving a dream. But that first small step makes a huge difference. What is that first step?

(let children come up with answers)



Teacher continues:

- It's to be disciplined and to work hard towards your goal
- Sure enough no dream is easy to achieve, but not impossible. Working in a disciplined way melts the obstacles away.

URLs

<https://pixabay.com/vectors/blue-morning-blanket-boy-pajamas-2759824/>

<https://pixabay.com/vectors/crying-girl-sad-tears-cry-2821469/>

<https://pixabay.com/illustrations/friends-family-friendship-happy-4187953/>

<https://pixabay.com/illustrations/cartoon-character-2679133/>

Time to teach	Value Type	Value Sub Type	Value Attribute
7 Minutes	Peace		Group Activities

15. QA_Rotation and Revolution of Earth

Rotation and Revolution of Earth

1. MATCH THE FOLLOWING

- a. Rotation of the Earth – i. An imaginary circle dividing the earth into upper and lower halves
- b. Earth's Axis – ii. $66\frac{1}{2}^{\circ}$
- c. Circle of Illumination – iii. Movement of the earth around itself
- d. Angle of tilt of Earth's axis - iv. Elliptical path followed by the earth
- v. An imaginary fixed line along which the earth rotates
- vi. An imaginary circle denoting the boundary between day and night.
- vii. $63\frac{1}{2}^{\circ}$

ANS. a. ---iii, b.---v, c.---vi, d.---ii

Note to the teacher Q.1 – Extra choices are provided to check the students' understanding of the concepts.

2. Check if True or False, correct the False statement:

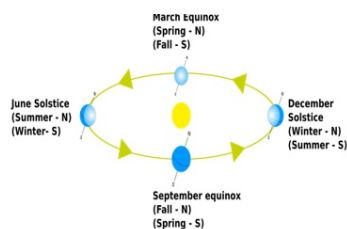
- a. Revolution of the earth causes day and night



- b. The sun revolves around the earth once , in $365\frac{1}{4}$ days.



- c. Seasons change due to the tilt of the earth's axis as it revolves .



- d. Spring is the hottest season of the year.

ANS. a. False. (Rotation of the earth causes day and night)

b. False. (It is the earth that revolves around the sun)

c. True

d. False. (Summer is the hottest season)

3. Can you calculate and find out the next 4 leap years after the year 2020.

Ans. 2024, 2028, 2032, 2036

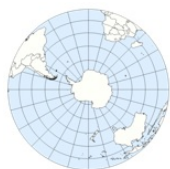
- 4 . Can you explain the significance of the dates - 21st June and 22nd December, in terms of length of day and night?

ANS. On June 21, the sun's rays fall directly on the Tropic of Cancer. During this time, the northern hemisphere gets more sunlight as it is turned towards the sun. Places in northern hemisphere have the longest day on 21st June, called as Summer Solstice.

fall directly on the Tropic of

The sun's rays fall directly on the Tropic of Capricorn on December 22. The places in the southern hemisphere now get maximum sunlight. December 22nd is the Winter Solstice, having the longest day and shortest night in southern hemisphere.

5. Christmas, falling on December 25, is usually associated with winter season and snow. What is special about Christmas in Australia?



ANS. Australia is in the southern hemisphere which experiences summer season during December. Hence, Christmas, falling on December 25, is celebrated in summer in Australia.

6. Please note down from a newspaper, the timings of sunrise and sunset at your place on the 21st of each month. Now discuss with your teacher -

(a) In which month are the days the longest?

(b) In which months are the days and nights nearly equal?

Note to the teacher: Though this chapter will be taught in Term I, please remind the children on 20th of every month to do this activity. On the last working month of the school academic year, please ask the students to present their findings.

URLs

Rotation of earth - <https://pixabay.com/illustrations/earth-rotation-world-universe-star-1994069/>

Earth revolving around Sun - <https://www.flickr.com/photos/121935927@N06/13598100735/> (Attribution - [Siyavula Education](#))

Season change due to tilted earth - https://commons.wikimedia.org/wiki/File:Orbital_relations_of_the_Solstice_Equinox_%26_Intervening_Seasons.svg

South hemisphere - https://en.wikipedia.org/wiki/File:Southern_Hemisphere_LamAz.png (Attribution - Sean Baker)

Christmas – <https://pixabay.com/photos/christmas-christmas-tree-decorate-1869902/>

Santa - <https://pixabay.com/photos/santa-claus-christmas-beard-2918/>

Time to teach	Asset Type	Theme	SubTheme
8 Minutes	Assessments	Solar system & the earth	Revolution, Revolution

16. Summary_ Motion of the Earth

1. Rotation is the movement of the earth on its axis. This rotation causes day and night.
2. Revolution is the movement of the earth around the sun. As the earth's orbit is tilted, this brings about a change in seasons.
3. The tilt in the earth combined with an elliptical orbit brings about the solstices. During this time either the poles are tilted towards the sun continuously or facing away from the sun.
4. When the poles are not tilted towards or against the sun, days and nights are equal. This is the equinox.

Time to teach	Asset Type	Theme	SubTheme
2 Minutes	Main Script	Solar system & the earth	Revolution, Revolution