ENGLISH

CHAPTER 1-THE ONE WHO SURVIVED:ADA BLACKJACK

Explanation of the Chapter

Setting – Somewhere in the Arctic region, where Ada was born and brought up, and Wrangel Island where she went with the explorers.

Main character – Ada Blackjack

Supporting characters - Lorne Knight, Milton Galle, Fred Maurer, Allan Crawford, Vilhjalnmer Stefansson, Ada's grandmother and Ada's son Bennet

SUMMARY

- Ada was born in the year 1898. Curiously, she avoided going out to play with other children preferring to stay indoors to do household chores to help her grandma.
- Ada had married, and become a mother, but sadly had lost two of her babies. The five-year-old Bennett lay in bed, suffering from TUBERCULOSIS.
- At this point of time, entered Stefansson, the leader of the expedition. He made a proposal to Ada. He would make arrangements for Bennett's comprehensive medical care if she joins the expedition.
- On 21st September, the group set out for Wrangel Island. Initially, the other members of the group felt Ada was too frail to survive the cold hazardous journey, but Ada showed remarkable determination.
- Lorne's condition deteriorated fast. Leaving him to the care of Ada, the three other crew members left the camp for their onward journey.
- She managed to kill a few animals, and could deal with starvation but Lorne passed away, leaving Ada heart-broken, and alone
- On August 23, 1923, a merchant ship named Donaldson laid anchor in the shore. The sailors took good care of Ada, by then half-starved and battered by the cold.
- Ada narrated her learning experience – how she studied maps, and how she hunted foxes with the help of traps. Her story became an inspiring story of struggle and survival.

Crisis in the story – Lorne Knight falls sick and they get no news of any help. Their food supply had depleted and they were almost starving as winter set in. Leaving Ada with Lorne,

the three other explorers went out in search of help never to return. Lorne dies and Ada is left all alone to survive the Arctic.

Resolution of the crisis – Ada learns how to hunt animals using a rifle. She kills animals and birds like ducks, foxes and seals. She survives the island and comes back to her family finally.

WORKSHEET

NOTEBOOK WORK

I. Answer the following questions:

1. **Why did Ada agree to join the expedition?**
2. **Why did Lorne knight not traverse the icy sea with other explorers?**
3. **Write down the character sketch of "Ada Blackjack".**
4. **What happened to son of Ada Blackjack?**
5. **How was Ada Blackjack rescued in the end from the isolated island?**

II. Complete the graphic organiser given below:

SETTING OF THE STORY

RESOLUTION OF THE STORY

MAIN CHARACTER

CRISES IN THE STORY

SUPPORTING CHARACTERS
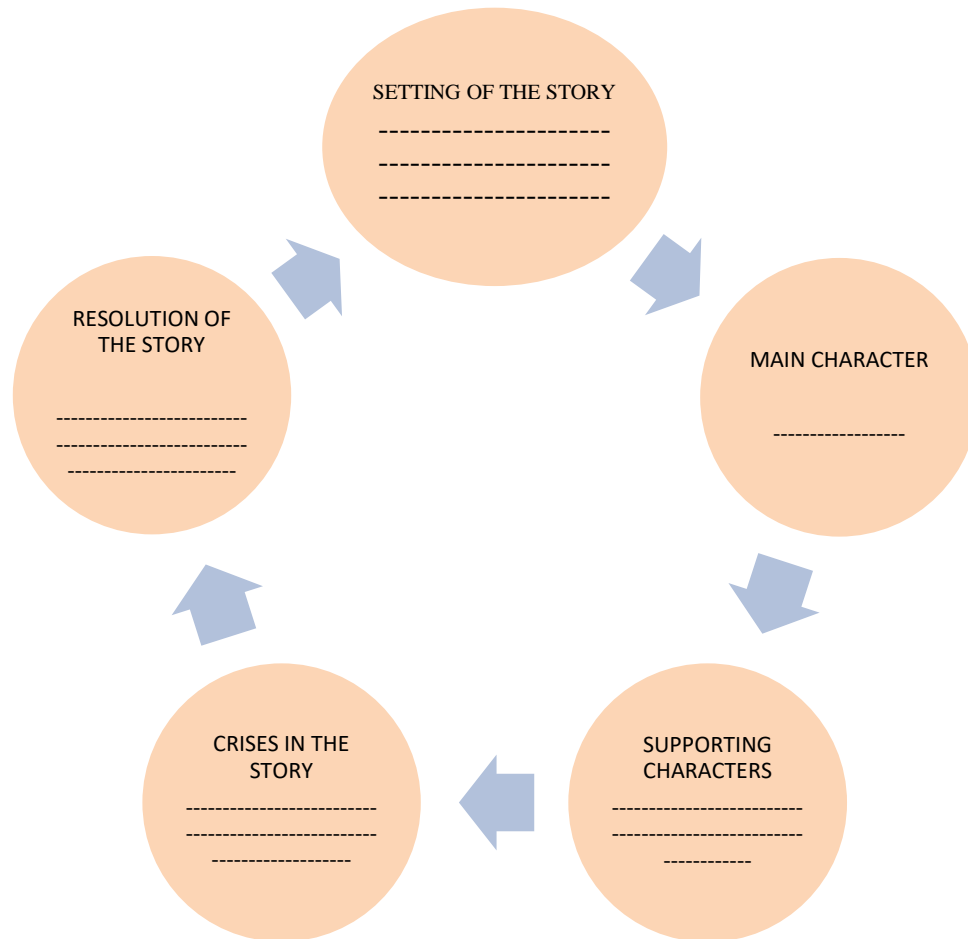
Hindi

पाठ 10

अपूर्व अनुभव

Note- please refer to the above given link to study the chapter.

अपूर्व अनुभव

- तेत्सुको कुरियानागी

इस कहानी को तेत्सुको कुरियानागी ने लिखा है। उन्होने इस कहानी में बड़ी ही सरलता से बहुत बड़े मुद्दे के बारे में बात की है। तोमोए नामक स्थान पर हर बच्चे का अपना एक पेड़ होता है जिसपर वह चढ़कर अपने आस-पास की दुनिया को एक अलग नजरिये से देखता है। आज भी ग्रामीण इलाकों के बच्चों को इस तरह पेड़ पर चढ़कर खेलने के मौके मिलते हैं। इस कहानी में तोत्तो-चान नाम की एक लड़की है जिसका दोस्त यासुकी-चान पोलियो से ग्रसित है। पोलियो से ग्रसित होने के कारण यासुकी-चान ठीक से चल फिर नहीं पाता है। लेकिन तोत्तो-चान को लगता है कि यासुकि चान को भी पेड़ पर चढ़कर उस सुख को महसूस करना चाहिए। जिस बच्चे के लिए चलना-फिरना भी दुश्वार हो उसके लिए पेड़ पर चढ़ने के बारे में सोचना भी दुष्कर है। लेकिन तोत्तो-चान एक तिपाई सीढ़ी लाती है और यासुकी-चान की हर संभव मदद करती है ताकि वह पेड़ पर चढ़ पाये। काफी मेहनत के बाद आखिर में यासुकी-चान पेड़ पर चढ़ने में सफल हो जाता है। पेड़ पर चढ़ने के बाद दोनों काफी देर तक इधर उधर की बातें करते हैं।

नीचे दिए गए प्रश्नों के उत्तर दीजिए –

प्रश्न 1.यासुकी चान ने अथक-चान को अपने पेड़ पर चढ़ाने के लिए तोत्तो-प्रयास क्यों किया? लिखिए। (2)

प्रश्न 2: दृढ़ निश्चय और अथक परिश्रम से सफलता पाने के बाद तोत्तो-चान और यासुकी-चान को अपूर्व अनुभव मिला, इन दोनों के अपूर्व अनुभव कुछ अलग-अलग थे। दोनों में क्या अंतर रहे? लिखिए। (2)

प्रश्न 3.पाठ में खोजकर देखिएकब सूरज- का ताप यासुकीचान पर पड़ रहा था-चान और तोत्तो-, वे दोनों पसीने से तरबतर हो रहे थे और कब बादल का एक टुकड़ा उन्हें छाया देकर कड़कती धूप से बचाने लगा था। आपके अनुसार, इस प्रकार परिस्थिति के बदलने का कारण क्या हो सकता है? (3)

प्रश्न 4. 'यासुकी-चान के लिए पेड़ पर चढ़ने का यह ....अंतिम मौका था।' इस अधूरे कथन को पूरा कीजिए और लिखकर बताइए कि लेखिका ने ऐसा क्यों लिखा होगा?
(3)

असाइनमेंट प्रश्न

प्रश्न) **अनुच्छेद लेखन**

विषय : 'खेल और स्वास्थ्य'

संकेत बिंदु :

➢ खेल हमारे जीवन में आवश्यक हैं
➢ खेल शारीरिक और मानसिक विकास में मदद करते हैं
➢ खेल शरीर को स्वस्थ बनाते हैं
➢ स्वस्थ शरीर में स्वस्थ मस्तिष्क का विकास होता है

MATHEMATICS

Class 7 Maths - Chapter Lines and Angles | Lines and Angles - Bing video

GENERAL OBJECTIVES

1. **Students will be able to differentiate between line and line segment**
2. **Students will be able to classify the triangle on the bais of the sides and angles**
3. **Students will be able to relate with day to day life situations.**

Line:

A line is a straight figure which doesn't have an endpoint and extends infinitely in opposite directions.

Ray:

A ray is a straight line, which starts from a fixed point and moves in one direction.

Line Segment

A portion of the line formed with two definite points is called a Line Segment. A line is a one-dimensional figure and has no thickness.
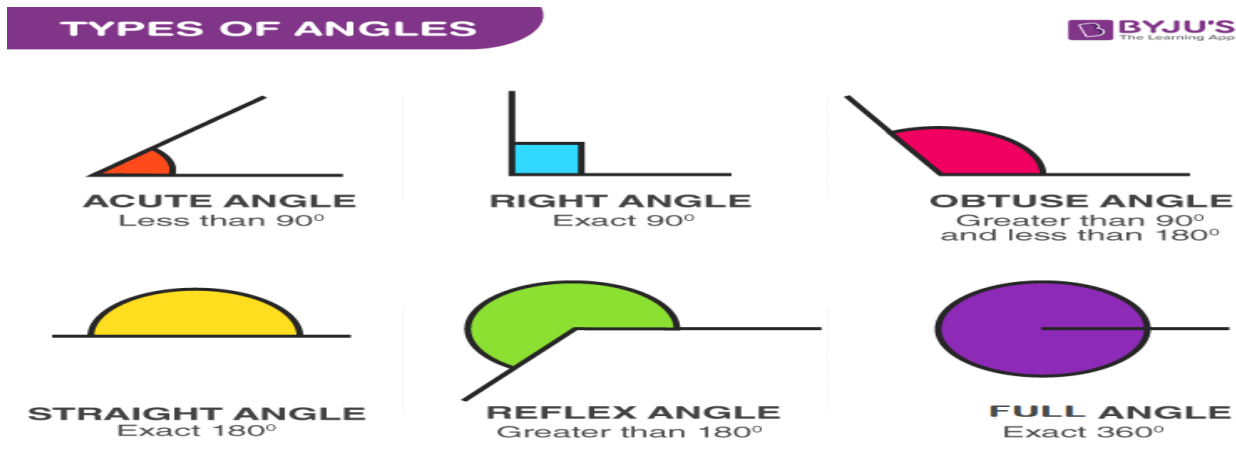
Angle

When we join two line segments at a single point, an angle is formed, or we can say, an Angle is a combination of two line segments at a common endpoint. This common point is called Vertex of the angle and the two line segments are sides or arms of the angle formed.
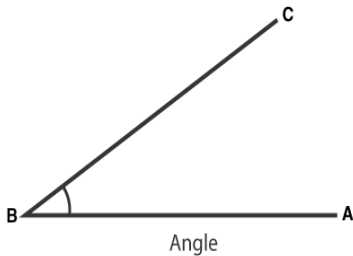
Angle

Types of Angles

There are basically 6 types of angles which are:

1. **Acute Angle:** If an angle is less than 90 degrees, then it is called an Acute angle
2. **Obtuse Angle:** If an angle is more than 90 degrees, then it is called Obtuse Angle
3. **Right Angle:** If an angle is exactly at 90 degrees, then it is called Right Angle.
4. **Straight Angle:** If an angle is exactly 180 degrees, then it is called Straight Angle.
5. **Reflex Angle:** If the angle is more than 180 degree but less than 270 degrees, it is denoted as a Reflex angle.
6. **Full Angle:** A 360-degree angle is called a Full angle.

Complementary Angle: The sum of the measures of two angles is 90°

Supplementary Angle: The sum of the measures of two angles is 180°

Adjacent Angle: Adjacent angles have a common vertex and a common arm but no common interior points

Linear pair: A linear pair is a pair of adjacent angles whose non-common sides are opposite rays

Vertically Opposite Angles: when two lines intersect, the vertically opposite angles so formed are equal.

Pairs of Lines

Intersecting lines: Two lines intersect if they have a point in common. This common point O is their point of intersection.

Transversal: A line that intersects two or more lines at distinct points is called a transversal.

Angles made by the transversal: There are different angles formed when the transversal cuts the lines. They are:

- Interior angles
- Exterior angles
- Pairs of Alternate interior angles
- Pairs of Alternate exterior angles
- Pairs of Corresponding angles
- Pairs of interior angles on the same side of the transversal

Transversal of Parallel Lines: We know that the parallel lines are the lines that do not meet anywhere. Transversals of parallel lines give rise to quite interesting results.

Checking for Parallel Lines

If a transversal cuts two lines, such that, each pair of corresponding angles are equal in measure.

Similarly, if a transversal cuts two lines, then each pair of the alternate interior angles are equal.

Also, if the transversal cuts the lines, then each pair of interior angles on the same side of the transversal are supplementary.

WORKSHEET

Q1. When the sum of the measures of two angles is 90°, the angles are called
(a) supplementary angles
(b) complementary angles
(c) adjacent angles
(d) vertically opposite angles

Q2. The sum of the measures of two complementary angles is
(a) 180°
(b) 60°
(c) 45°
(d) 90°

Q3. The measure of the complement of the angle 30° is
(a) 30°
(b) 16°
(c) 60°
(d) 160°

Q4. Which of the following statements is true?
(a) Two acute angles can be complementary to each other
(b) Two obtuse angles can be complementary to each other
(c) Two right angles can be complementary to each other
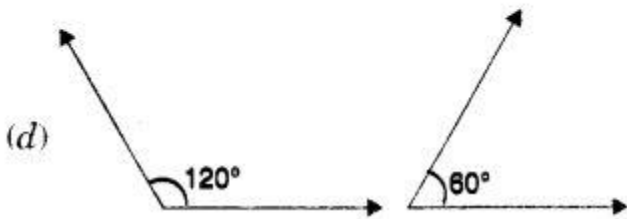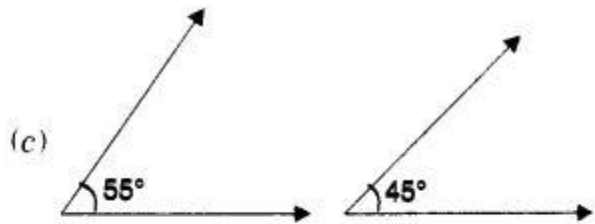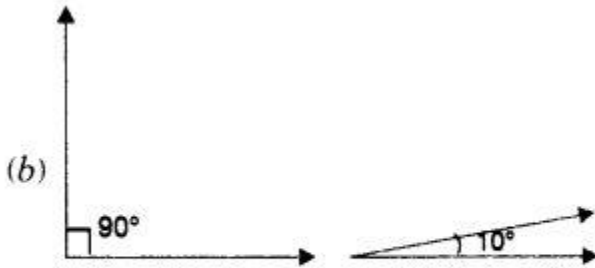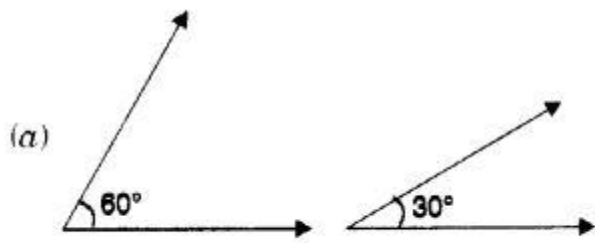(d) One obtuse angle and one acute angle can be complementary to each othe

Q5. The measure of the complement of the angle 46° is
(a) 90°
(b) 44°
(c) 16°
(d) 136°

Q6. What is the measure of the complement of the angle 80°?
(a) 10°
(b) 100°
(c) 36°
(d) 20°

Q7. Which pair of the following angles are complementary?

(a)

60°   30°

(b)

90°   10°

(c)

55°   45°

(d)

120°   60°

Q8. The measure of the angle which is equal to its complement is
(a) 30°
(b) 60°
(c) 46°
(d) 90°

Q9. Which of the following pairs of angles is not a pair of complementary angles?
(a) 60°, 30°
(b) 66°, 34°
(c) 0°, 90°
(d) 160°, 30°

Q10. What is the measure of the complement of the angle 90°?
(a) 90°
(b) 0°

(c) 180°
(d) 46°

Q11. When the sum of the measures of two angles is 180°, the angles are called
(a) adjacent angles
(b) complementary angles
(c) vertically opposite angles
(d) supplementary angles

Q12. The sum of the measures of two supplementary angles is
(a) 90°
(b) 180°
(c) 360°
(d) none of these

Q13. The measure of the supplement of the angle 120° is
(a) 30°
(b)45°
(c) 60°
(d) 90°

Q14. Which of the following statements is true?
(a) Two acute angles can be supplementary.
(b) Two right angles can be supplementary.
(c) Two obtuse angles can be supplementary.
(d) One obtuse angle and one acute angle cannot be supplementary

Q15. The measure of the supplement of the angle 90° is
(a) 45°
(b) 60°
(c) 30°
(d) 90°

SCIENCE

Acid Rain
- When the rainwater has increased amounts of acids in it, it is called **Acid Rain**.
- The acid rain is formed because of the presence of air pollutants such as Nitrogen dioxide, Carbon dioxide and Sulphur dioxide in the air.
- These pollutants mix with the rainwater and form acids such as Nitric acid, Sulphuric acid and Carbonic acid respectively.

- The acid rain in severely affect the vegetation, animal life and even buildings of the region where it falls.
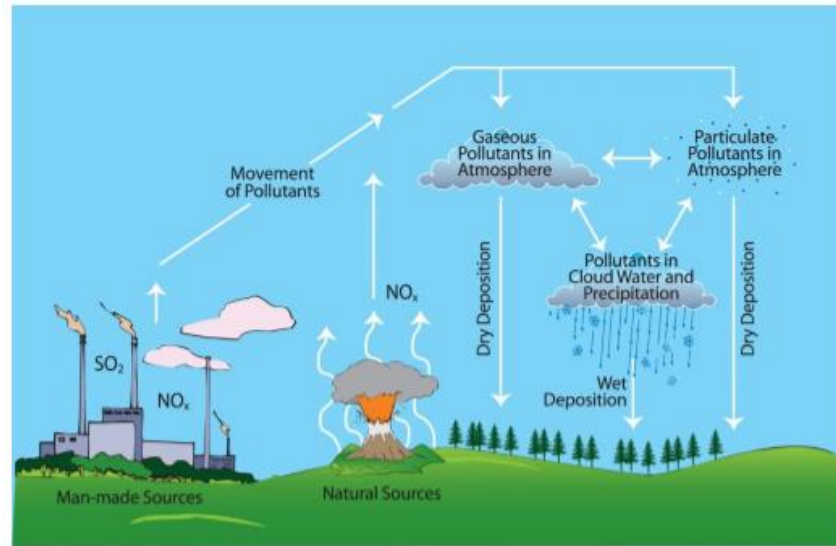

Figure 7: Acid Rain formation

pH scale

- The measure of acidity or basic nature of a substance can be determined by its pH value.
- The pH value range from 1 to 14 with 1 being the most acidic substance and 14 being the most basic substance while 7 is a neutral substance.
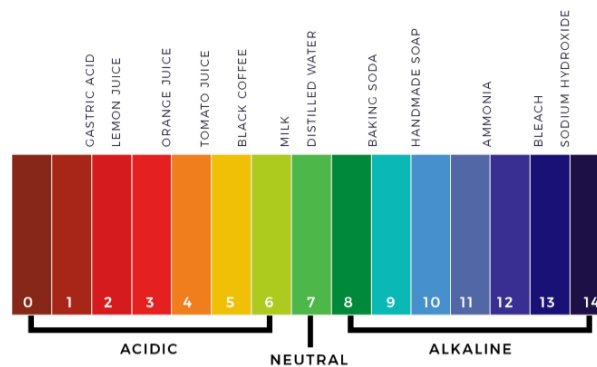- The pH value is generally determined by using pH strips or solutions

Figure 8: pH scale showing different colors

Acids are never stored in metal containers. They are rather stored in glass containers. This is so because acids are generally reactive in nature. If we keep them in metal containers they may react with the metal and erode them. Glass, on the other hand, does not react with acids at all.

Neutralization

- Neutralization is a process or a chemical reaction in which an acidic and basic substance is mixed with each other in order to neutralize their acidic and alkaline nature.
- The product that is formed after the neutralization process is called a **Salt**.
- The salt can have basic, acidic or neutral nature.

- The neutralization process results in the generation of heat which raises the temperature of the reacting mixture.

- A synthetic indicator often used for testing neutralization reactions is **Phenolphthalein** solution. It is pink in color.

- When an acid is added to Phenolphthalein solution, the solution turns colorless, indicating the presence of an acid.

- When a base is added to Phenolphthalein solution, the solution retains its pink color, indicating the presence of a base.

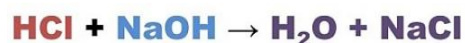**Figure 9: Neutalization using Phenolphthalein**

Formation of Salt

$$\text{Acid} + \text{Base} \rightarrow H_2O + \text{Salt}$$

$$HCl + NaOH \rightarrow H_2O + NaCl$$

Figure 10: Formation of Salt

Neutralization in Everyday Life
1. Indigestion

- We know that our stomach produces hydrochloric acid which helps in the digestion of food.

- But sometimes the stomach releases too much of acid which leads to **indigestion** or sometimes hyperacidity.

- Hence, we need to neutralize this acid by taking substances that are basic in nature commonly known as antacids.

- For Example, milk of magnesia is a basic substance that can neutralize the acid of the stomach.
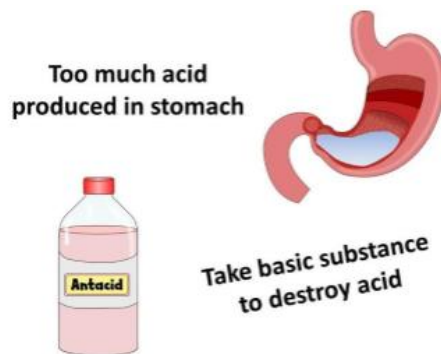
Figure 11: Indigestion caused in stomach

2. Ant Bite

- The irritation of the skin due to ant bite is caused because of the presence of formic acid that the ant injects into the skin while biting.

- Hence we use a basic substance to neutralize the effect.

- For Example, baking soda or hydrogen carbonate, calamine solution or zinc carbonate are generally used to treat ant bites

3. Soil Treatment

- Plants need a soil which is neutral in nature but using chemical fertilizers on soil can turn it into acidic.

- To treat acidic soil we use quicklime (calcium oxide) or slaked lime (calcium hydroxide).

- Basic soil can be treated by adding organic substances to it as they release acids while decomposing into the soil.
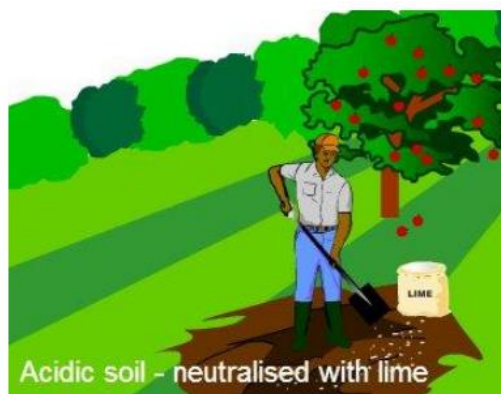

Figure 12: Soil treatment

4. Factory Wastes

The factory waste is acidic in nature and cannot be directly dumped anywhere. Hence bases are added to it before it falls off into a river or stream so that the aquatic life does not get affected.

Geography Chapter – 4
Air

Learning Objective - Students will learn about the Layers of Atmosphere, Temperature and Air pressure.

Video Link: https://www.youtube.com/watch?v=VThdaxqcQmA

CHAPTER SUMMARY

Atmosphere

A huge blanket of air that surrounds earth is called <u>atmosphere</u>.

It provides us the air we breathe and protects us from the harmful effects of the sun's rays which is essential for our survival.

Composition of the Atmosphere

Nitrogen and oxygen are two gases which make up the bulk of the atmosphere.

Carbon dioxide, helium, ozone, argon and hydrogen are found in lesser quantities.

Apart from these gases, tiny dust particles are also present in the air.

Percentage of different constituents of air:
→ Nitrogen: 78 %
→ Oxygen: 21 %
→ Argon: 0.93 %
→ Carbon Dioxide: 0.03 %
→ All Others: 0.04 %

<u>Nitrogen</u>:
→ Plants need nitrogen for their survival. They cannot take nitrogen directly from the air. Bacteria, that live in the soil and roots of some plants, take nitrogen from the air and change its form so that plants can use it.

<u>Oxygen</u>:
→ Humans and animals take oxygen from the air as they breathe.
→ Green plants produce oxygen during photosynthesis which make oxygen content in the air remains constant.

<u>Carbon Dioxide</u>:
→ Green plants use carbon dioxide to make their food and release oxygen.
→ Humans or animals release carbon dioxide which is equal to the amount used by the plants which make a perfect balance.

→ However, the balance is upset by burning of fuels, such as coal and oil which result in increased volume of carbon dioxide that affecting the earth's weather and climate.

Structure of Atmosphere

Atmosphere is divided into five layers starting from the earth's surface:
→ Troposphere
→ Stratosphere
→ Mesosphere
→ Thermosphere
→ Exosphere

Troposphere

Most important layer as the air we breathe exists here and almost all the weather phenomena like rainfall, fog and hailstorm occur in this layer.

Its average height is 13 km.

Stratosphere

It lies above the troposphere.

It extends up to a height of 50 km.

This layer is almost free from clouds and associated weather phenomenon, making conditions most ideal for flying aeroplanes.

It contains a layer of ozone gas which protects us from the harmful effect of the sun rays.

Mesosphere

Third layer of the atmosphere which lies above the stratosphere.

It extends up to the height of 80 km.
Meteorites burn up in this layer on entering from the space.

Thermosphere
Temperature rises very rapidly with increasing height in this layer.

Ionosphere is a part of this layer.

It extends between 80-400 km.

This layer helps in radio transmission.

Exosphere

The upper most layer of the atmosphere is known as exosphere.

This layer has very thin air.

Light gases like helium and hydrogen float into the space from here.

Weather and Climate

Weather is this hour-to-hour, day to day condition of the atmosphere.
→ It can change dramatically from day to day.

The average weather condition of a place for a longer period of time represents the climate of a place.

Temperature

The degree of hotness and coldness of the air is known as temperature.

The temperature of the atmosphere changes not only between day and night but also from season to season.

Insolation is an important factor that influences the distribution of temperature.
→ Insolation is the incoming solar energy intercepted by the earth.
→ The amount of insolation decreases from the equator towards the poles. Therefore, the temperature decreases in the same manner.

Temperature in cities is much higher than that of villages.
→ The concrete and metals in buildings and the asphalt of roads get heated up during the day which is released during the night.

Air Pressure

Air pressure is defined as the pressure exerted by the weight of air on the earth's surface.
The air pressure is highest at sea level and decreases with height.
→ Horizontally the distribution of air pressure is influenced by temperature of air at a given place.
Where temperature is high the air gets heated and rises which creates a low-pressure area.
→ Low pressure is associated with cloudy skies and wet weather.

Where temperature is low, the air is cold and therefore, heavy. Heavy air sinks and creates a high pressure area.
→ High pressure is associated with clear and sunny skies.

The air always moves from high pressure areas to low pressure areas.

Wind

The movement of air from high pressure area to low pressure areas is called <u>wind</u>.

Winds can be broadly divided into three types:

→ Permanent winds: The trade winds, westerlies and easterlies are the permanent winds. These blow constantly throughout the year in a particular direction.

→ Seasonal winds: These winds change their direction in different seasons. For example monsoons in India.

→ Local winds: These blow only during a particular period of the day or year in a small area. For example, land and sea breeze.
The hot and dry local wind of northern plains of India is called <u>loo</u>.

Moisture

When water evaporates from land and different water bodies, it becomes water vapour.

Moisture in the air at any time, is known as humidity.→ When the air is full of water vapour we call it humid day.

As the air gets warmer, its capacity to hold the water vapour increases and so it becomes more and more humid.

When the water vapour rises, it starts cooling.
→ The water vapour condenses causing formation of droplets of water. Clouds are just masses of such water droplets.
→ When these droplets of water become too heavy to float in air, then they come down as precipitation.
→ Precipitation that comes down to the earth in liquid form is called rain.

There are three types of rainfall:
→ the convectional rainfall
→ the orographic rainfall
→ the cyclonic rainfall

Importance of Rainfall:
→ It is very important for the survival of plants and animals.

→ It brings fresh water to the earth's surface.

If rainfall is less – water scarcity and drought occur. On the other hand, if it is more, floods take place.

Activity: **Make the diagram on Layers of Atmosphere.**

SANSKRIT

पण्डिता रमाबाई

प्रश्न: 1.
एकपदेन उत्तरत- (एक शब्द में उत्तर दीजिए-)

(क) 'पण्डिता' 'सरस्वती' इति उपाधिभ्यां का विभूषिता?
उत्तराणि:
रमाबाई

(ख) रमा कुतः संस्कृतशिक्षा प्राप्तवती? ।
उत्तराणि:
स्वमातुः

(ग) रमाबाई केन सह विवाहम् अकरोत् ?
उत्तराणि:
विपिनबिहारीदासेन

(घ) कासां शिक्षायै रमाबाई स्वकीयं जीवनम् अर्पितवती?
उत्तराणि:
नारीणाम्

(ङ) रमाबाई उच्चशिक्षार्थं कुत्र अगच्छत् ?
उत्तराणि:
इंग्लैण्डदेशम्।

प्रश्न: 2.
रेखाङ्कितपदानि आधृत्य प्रश्ननिर्माणं कुरुत- (रेखांकित पदों के आधार पर प्रश्न निर्माण कीजिए

(क) रमायाः पिता समाजस्य प्रतारणाम् असहत।
उत्तराणि:
कस्याः पिता समाजस्य प्रतारणाम् असहत?

(ख) पत्युः मरणान्तरं रमाबाई महाराष्ट्र प्रत्यागच्छत्।
उत्तराणि:
कस्य मरणान्तरं रमाबाई महाराष्ट्र प्रत्यागच्छत् ?

(ग) रमाबाई मुम्बईनगरे 'शारदा-सदनम्' अस्थापयत्।
उत्तराणि:
रमाबाई कुत्र 'शारदा-सदनम्' अस्थापयत् ?

(घ) 1922 तमे ख्रिष्टाब्दे रमाबाई-महोदयायाः निधनम् अभवत्।
उत्तराणि:
1922 तमे ख्रिष्टाब्दे कस्याः निधनम् अभवत् ?

(ङ) स्त्रियः शिक्षां लभन्ते स्म।
उत्तराणि:
काः शिक्षां लभन्ते स्म?

प्रश्न: 3.
प्रश्नानामुत्तराणि लिखत- (प्रश्नों के उत्तर लिखिए-)

(क) रमाबाई किमर्थम् आन्दोलनं प्रारब्धवती?
उत्तराणि:
रमाबाई बालिकानां स्त्रीणां च कृते संस्कृतस्य वेदशास्त्रादिकस्य च शिक्षायै आन्दोलनं प्रारब्धवती।

(ख) निस्सहायाः स्त्रियः आश्रमे किं लभन्ते स्म?
उत्तराणि:
निस्सहायाः स्त्रियः आश्रमे मुद्रण-टङ्कण-काष्ठकलादीनां च प्रशिक्षणम् लभन्ते स्म।।

(ग) कस्मिन् विषये रमाबाई-महोदयायाः योगदानम् अस्ति? ।
उत्तराणि:
लेखनक्षेत्र-विषये रमाबाई-महोदयायाः योगदानम् अस्ति।

(घ) केन रचनाद्वयेन रमाबाई प्रशंसिता वर्तते?
उत्तराणि:
'स्त्रीधर्म नीति' 'हाई कास्ट हिन्दू विमेन' इति रचनाद्वयेन रमाबाई प्रशंसिता वर्तते ।

प्रश्न: 4.
अधोलिखितानां पदानां निर्देशानुसारं पदपरिचयं लिखत- (निम्नलिखित शब्दों के निर्देश के अनुसार पद-परिचय लिखिए-)

उत्तराणि:

प्रश्न: 5.
अधोलिखितानां धातूनां लकारं पुरुषं वचनञ्च लिखत- (निम्नलिखित शब्दों के धातु, लकार, पुरुष और वचन लिखिए-)

उत्तराणि:

प्रश्न: 6.
अधोलिखितानि वाक्यानि घटनाक्रमानुसारं लिखत। (निम्नलिखित वाक्यों को घटना के क्रम के अनुसार लिखिए।)

(क) रमाबाई-महोदयायाः विपिनबिहारीदासेन सह विवाहः अभवत्।
उत्तराणि:
1858 तमे ख्रिष्टाब्दे रमाबाई जन्म अलभत।

(ख) 1858 तमे ख्रिष्टाब्दे रमाबाई जन्म अलभत।
उत्तराणि:
सा स्वमातुः संस्कृतशिक्षा प्राप्तवती।

(ग) सा उच्चशिक्षार्थम् इंग्लैण्डदेशं गतवती।
उत्तराणि:
रमाबाई-महोदयायाः विपिनबिहारीदासेन सह विवाहः अभवत् ।

(घ) 1922 तमे ख्रिष्टाब्दे रमाबाई-महोदयायाः निधनम् अभवत्।
उत्तराणि:
सा उच्चशिक्षार्थम् इंग्लैण्डदेशं गतवती।

(ङ) सा मुम्बईनगरे शारदा-सदनम् अस्थापयत्।
उत्तराणि:
सा मुम्बईनगरे शारदा-सदनम् अस्थापयत्।

(च) सा स्वमातुः संस्कृतशिक्षा प्राप्तवती।
उत्तराणि:
1922 तमे ख्रिष्टाब्दे रमाबाई-महोदयायाः निधनम् अभवत्।