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General Science - 6

Semester - 1

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1. The Food we need

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1. Write some examples of animal and plant materials?

Plant food materials: Rice, Wheat, Pulses, Millets, Vegetables, Leafy vegetables and Fruits.
Animal food materials: Eggs, Chicken, Meat, Milk, Fish and Honey

2. Find out the ingredients of the given food items

a) Potato curry **b) Chutney** **c) Gulab jamun** **d) Pongali**

S. No	Food item	Ingredients
1	Potato curry	Potato, Onion, Chillies, Salt and oil
2	Chutney	Coconut, Chillies, Oil, Salt and Tamarind
3	Gulab jamun	Jamun mix, Water, Oil, Sugar and Cardamom
4	Pongali	Rice, Jaggery, Water, Cardamom, Cashew and Kismis

3. How does food get spoilt? Write its effect on human health?

1. If we do not preserve food properly, it can be attacked by germs and get spoiled.
2. Eating of such food causes food poison.
3. Eating of spoiled food causes stomach pain, vomiting and Diarrhoea.

4. If you have a chance to meet a chef, what questions you will ask about preparing tasty food?

1. How can you prepare tasty and healthy food?
2. What are ingredients used for preparing tasty food?
3. What is the dish prepared by you, most liked by customers?
4. What is the cheapest and healthiest food to eat?

5. Prepare slogans on "Wastage of Food"

1. Food is very precious to many – Do not waste it.
2. Taste your food but do not waste.
3. Love your food – give it to needy.
4. Eat to live – Don't live to eat.

6. List out the healthy food habits?

1. Eat all types of vegetables and Fruits
2. Don't take junk food.
3. Take fiber rich food.
4. Eat eggs and take milk regularly.

7. Suppose Fish/ Raw mango/ Lemons are given to you, how would you preserve them?

1. Fish can be preserved by using salt and freezing.
2. Raw mango can be preserved by using salt or sugar and drying.
3. Lemons can be preserved by using salt.

8. Give examples of food items prepared by fermentation process?

Bread, Idli, Dosa, Cake, Jilebi, are the food items prepared by fermentation process.

9. Write down the process of making any food item, which you like?

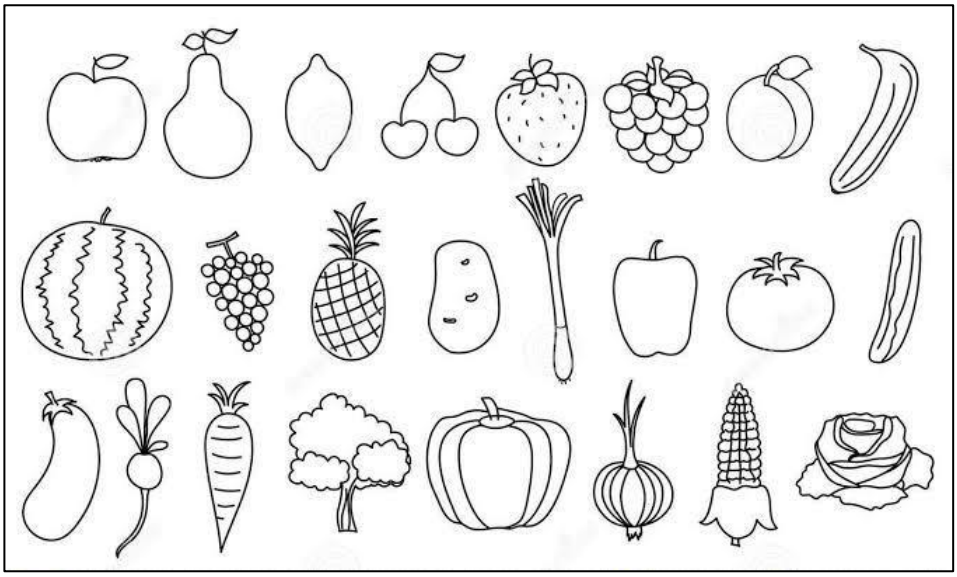
I like the food item vegetable rice.

Ingredients required for vegetable rice: Rice, onion, tomato, green peas, carrot, cinnamon cloves, turmeric powder, garam masala powder, chilli powder, coriander leaves, oil, ghee, salt and water.

Procedure:

1. Wash rice and soak it for 10 to 15 minutes.
2. Place a cooker on the flame. Pour two spoons of ghee and oil in it.
3. Add cinnamon, clove and onion and heat it until it turns brown. Add tomato, green peas, and carrot. stir-and fry them for two or three minutes.
4. Add soaked rice, garam masala powder, turmeric powder red chilli powder and salt. Stir and fry them for 2 or 3 minutes. Add 1 or 2 cup of water and mix well.
5. Close the cooker with lid and cook over medium flame for 2 whistles. Turn off the flame.
6. Let it cool at room temperature. Open the lid carefully and transfer it to a serving bowl.

10. Draw some fruits and vegetable diagrams which you like?



11. What are natural preservatives?

Salt, sugar, oil, turmeric powder and Honey are some natural preservatives.

12 Why should we preserve food?

1. For availability of food throughout the year, we should preserve food properly.
2. If food is not preserved properly, it can spoil due to the microorganisms.

13. Why should we eat cooked food?

We should eat cooked food because by cooking we can kill harmful germs and make it germless. Cooked food can be easily digested and absorbed by our body. Cooking also improves the taste of food.

14. Explain the importance of food for living organisms?

1. It provides energy to do various activities.
2. It helps in growth.
3. It helps to repair and replace damaged parts of the body.
4. It protects us from infections and diseases.

Fill in the Blanks.

1. Salt is obtained from ----- Sea (Ocean)
2. The materials which are required to prepare food are known as ---- (Ingredients)
3. We use... to preserve food for some time. (Preservatives)
4. Eating foods after the expiry date may damage our... (Health)
5. Expand FAO ---- (Food and Agriculture Organisation)
6. Expand UNDP -------- (United Nations Development Programme)
7. World food day is celebrated in -------- (16th October)
8. Junk food cause ----- (Obesity)

Choose the correct Answer.

1. The method of preparing idly is.. (C)

A. Roasting B. Fermentation C. Steaming D. Boiling

2. The source of sugar is.. (A)

A Plant B. Animal C. Sea D All of above

Match the following words from Group "A" with "B"

Group-A	Group-B
A. Raagulu	1. Pearl millet
B. Sajjalu	2. Prose millet
C. Jonnalu	3. Foxtail millet
D. Korralu	4. Finger millet
E. Samalu	5. Great millet

A-4, B-1, C-5, D-3, E- 2

2. KNOWING YOUR PLANT

1. What are the important parts of a plant?

The important parts of a plant are 1. Roots 2. Stem 3. Leaves 4. Flower 5. Fruit

2. How does the stem help the plant?

Functions of the stem:

1. Supports the branches, leaves, flowers and fruits.
2. Transports water and minerals from roots to upper aerial parts of plants.
3. Transports food from leaves to other parts through stem.
4. Stores food as in the case of sugarcane.

3. What is the relation between the type of root system and venation?

The relation between the type of root system and venation is

1. Plants with tap root system have leaves with reticulate venation.
2. Plants with fibrous roots have parallel venation.

4. Give examples for monocots and dicots?

Monocots: sugarcane, grass, coconut, banana, Maize

Dicots: Mango, Neem, Datura, Tridax

5. Rajani said "Respiration takes place in leaves" is she correct? How can you support this statement?

A) What Rajani said is correct.

1. The stomata acts like nose to the leaf.
2. They are useful in the exchange of gases between the plant and atmosphere.

6. What will happen if a plant doesn't have any leaves?

1. Leaves prepare food by the process of photosynthesis.
2. Leaves carry out transpiration.
3. Leaves help in respiration.
4. If plants do not have any leaves it will not able to do all above functions.

7. How can you show that plants absorb water through their roots?

Aim: To observe absorption of water by root

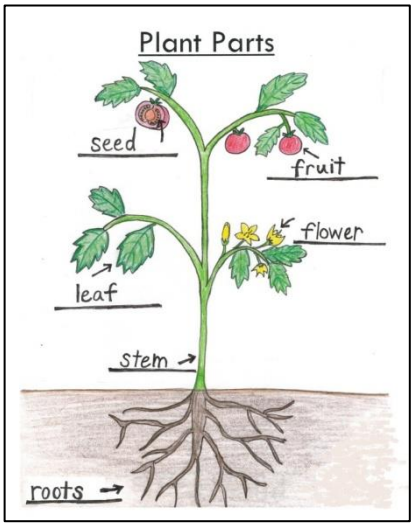
What you need: A carrot, a glass of water, and blue ink

What to do: Place a carrot in a glass of water with a few drops of blue ink. Leave the carrot in water for 2 to 3 days. Then cut the carrot into half, length-wise and observe.

What do you see: Blue colour appears in the carrot.

What do you learn: The blue colour indicates that water moved upwards in the carrot showing that root conducts water.

8. Explain the various parts of a plant with the help of a diagram?



The important parts of a plant are 1. Root 2. Stem 3. Leaves 4. Flower 5. Fruit

Root: The underground part of the main axis of a plant is known as root.
It fixes the plant to the soil and absorbs water and minerals from the soil.

Stem: The aerial part of the plant above the ground is called as stem.
It supports the branches, leaves, flowers and fruits.
It helps in transport of water, minerals and food.

Leaves: Leaves are part of a plant that's usually green and attached to it by a stalk. It helps in photosynthesis, respiration and transpiration.

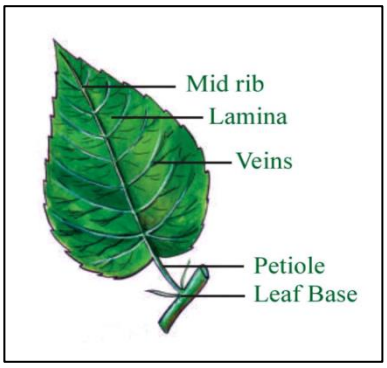
Flower: Flowers are the reproductive parts of the plant. They develop into fruits.

Fruit: It developed from the flowers and contains seeds.

9. Observe a plant which has green leaves and beautiful flowers. Write your feelings about the plant?

1. When I see a plant with green leaves and flowers, I felt wonder and happy.
2. The beauty of flowers made me relax and its fragrance gave me aroma.
3. The green colour of leaves gives good scenery.
4. We also feel to grow plants in our surroundings.

10. Explain the parts of a leaf with the help of a diagram?



The parts of leaf are a) Leaf base b) Petiole c) Lamina d) Midrib e) Veins.

Leaf base: The lower part of the leaf that connects the leaf to the stem.

Petiole: It joins the lamina to the leaf base.

Lamina: It is the green blade like structure of the leaf.

Midrib: It is the long vein present in the lamina.

Veins: These are branch like structures arising from midrib.

11. John has no sufficient place around his house to grow plants but he wants to grow vegetables like tomato or brinjal. Suggest him some ways to grow plants?

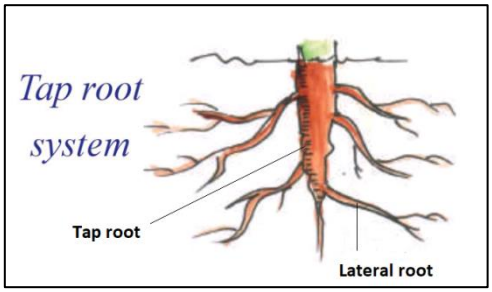
The following methods can be followed by John.

1. He can grow plants in small tubs filled with compost and soil.
2. He can use terrace for garden.
3. He may use hanging pots to grow plants.
4. He can grow plants in kitchen garden

12. What is transpiration?

Plants release excess water in their body through stomata and some other parts as well. This process of releasing water in the form of vapour by leaves is called transpiration.

13. Collect any plant from your surroundings. Draw its root structure. What can you say about its root system?



1. The root system in collected plant exhibits tap root system.
2. The main root is thick and called as tap root.
3. The smaller roots arising from the tap root are called as lateral roots.
4. It fixes the plant to the soil and absorbs water and minerals from the soil.

14. Collect the leaves and roots of various plants and write a report on their shapes, venation and root system.

S.No.	Plant	Leaf Venation	Leaf Shape	Leaf Size	Root system
1	Coconut	Parallel	Compound	Large	Fibrous root
2	Neem	Reticulate	Compound	Small	Tap root
3	Mango	Reticulate	Simple	Small	Tap root
4	Banana	Parallel	Simple	Large	Fibrous root
5	Datura	Reticulate	Simple	Large	Tap root

15. Explain an activity to show that stem conducts water and other substances.

1. Take some water in a glass. Add few drops of red ink to the water.
2. Cut the stem of a herb plant from its base.
3. Put it in the glass as shown in figure.
4. We will see that some parts of the stem become red.
   This activity shows that stem conducts water.

Fill in the blanks

1. Tap root system is present in **Dicot** plant.
2. The bud at the tip of the stem is known as **Terminal bud.**
3. Part of the leaf that helps in exchange of gases is **Stomata.**
4. Primary organs of photosynthesis are **Leaves.**
5. The arrangement of veins in the lamina is called as **Venation.**
6. Plants prepare food by the process of **Photosynthesis.**

Choose the correct answer

1. The important function of stomata is (b)
a) Conduction b) Transpiration c) Photosynthesis d) Absorption
2. Part of plant that helps in absorption of water and minerals (a)
a) Root b) Stem c) Leaf d) Flower
3. Part of the stem from where leaves arise is called (a)
a) Node b) Bud c) Cotyledon d) Internodes

3. ANIMALS AND THEIR FOOD

1. List some animals in your surroundings which have the same kind of food habit.

1. Cow, buffalo, rabbit and goat are the animals which have same kind of food habits.
2. All of them are herbivores and dependent upon the small shrubs, plants and grasses.

2. Compare the legs and nails of a dog and hen and say why they are different.

S.No	DOGS	HENS
1	Dogs have 4 long legs	Hens have 2 short legs
2	The use their legs to run and catch the prey	They use their legs to dig and find food
3	They have curved sharp nails	They have elongated nails
4	The nails are used for tearing the food	The nails are used to scratch the soil

3. Name some animals which use tongue as a tool for taking food.

Dogs, cats, cows, Buffaloes, frogs, lizards are some animals that use tongue as a tool for taking food.

4. Identify which of the following statements are wrong give reasons.

(a) All the animals living in water feed only on plants.
(b) Elephants and deer are herbivores living in the forest
(c) Birds' beaks are designed to suit their food habits.
(d) Sharp claws are useful for hunting.
(e) Most of the food chains end with herbivores animals.

Answer: 'A' is wrong statement. Because Fish eats small animals.
'E' is wrong statement. Because Food chain starts with herbivores. And ends with Carnivores.

5. Write the importance of the food chain.

1. Food chain describes how organisms get energy by eating other organisms.
2. A food chain shows the relationship between producers and consumers.
3. Food chain explains the interdependence of diverse organisms in nature.

6. Arrange the following in a correct sequence and form food chain.

1. Rabbit > Carrot > Eagle > Snake
2. Human > Insect > Algae > Fish

Answer: Correct order of the given food chain:

1. Carrot > Rabbit > Snake > Eagle
2. Algae > Insect > Fish > Human

7. How can you appreciate the role of producers in a food chain?

1. Producers play very important role in the food chain.
2. Food chain is incomplete without producers.
3. If there are no producers, consumers will be unable to get food.
4. Producers provide food and oxygen to the earth.

8. If you want to understand more about food chain. What questions would you like to ask?

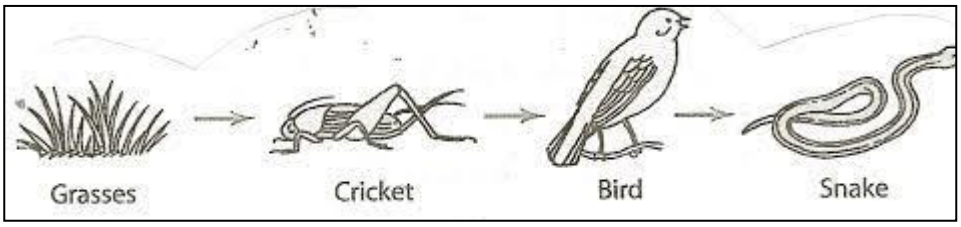
I can ask the following questions to know about food chain.

1. How is the food chain made?
2. How is its function helping us?
3. What are its main functions?
4. Is food chain forming a food Web?

9. What happens if there are no decomposers on the earth?

If there were no decomposers on the Earth, the Earth would have been filled with dead and decaying matter of plants and animals.

10. Draw a food chain of your choice.



11. What can we learn from ants?

We can learn life lessons from an ant.

1. Ants work as a team.
2. Ants have a time to rest and a time to work.
3. Ants carry workloads they can handle.
4. Ants serve one another.

12. Define Food chain and Food web?

Food chain: The feeding relationship between different organisms in a habitat.
Food Web: The interconnection of food chains in a habitat.

13. What is rumination?

Animals like cow, bring back food from stomach to the mouth and chew it again. This process is called Rumination.

14. Define following and give examples?

A) Herbivores B) Carnivores C) Omnivores

Herbivores: Animals that depend on only plants for food. Eg: Goat, Cow, Deer.
Carnivores: Animals that depend on animals for food. Eg: Lion, Tiger, Dog.
Omnivores: Animals that take food from both plants and animals. Eg: Man, Dog, Crow

Fill in the Blanks.

1. The butterfly uses ---------- to suck honey from flowers. (Proboscis)
2. Tiger is a ---------- because it eats only meat. (Carnivore)
3. Decomposers are also called ---------- (Recyclers)
4. Leeches get their food by the process of ---------- (Sucking)
5. Example for a natural scavenger ---------- (Crow)
6. Bacteria and fungi are examples of --------- (Decomposers)

Choose the correct Answer.

1. The source of energy for a food chain is --- (C)

A. Producers B. Consumers C. Sun D. Decomposers

2. Identify the omnivore from the following (A)

A. Dog B. Cow C. Lion D. Tiger

3. At which position of the food chain would you place a human being. (D)

A. Primary consumer B. Secondary consumer C. Tertiary consumer D. All the above

4. WATER

1. List out the activities in our daily life where we use water.

We use water for...

Cooking food, Drinking, Washing clothes, Washing utensils, Washing vehicles, Bathing and cleaning house.

2. How are clouds formed? Explain?

A. 1. The water present on the earth evaporates due to heating by the sun.
2. Water vapour then rises up in the atmosphere.
3. On reaching a certain height, water vapour in air condenses to form tiny droplets of water.
4. These water droplets collect to form clouds that float in air.

3. Which of the following days is more suitable for drying of washed clothes? Explain Why?

A. Windy day. B. Cloudy day.

A. Windy day is more suitable for drying of washed clothes.

Explanation:

1. Windy days are more suitable to dry the clothes.
2. Wet clothes dry quickly when the wind blows.
3. Because the water in the clothes evaporates quickly when the wind blows well.
4. But when the clouds cover, the humidity in the air increases. So the clothes do not dry quickly.

4. Why we experience cloud like smoke near our mouth while we speak during the winter season?

A. 1. When the water vapor in our breath touches the cold air, fog forms.
2. The water vapor in our breath touches the cold air around us and condenses to form a cloud like smoke.

5. Why does the driver of a vehicle wipe the glass inside, even if the wiper is working on the outer surface of the glass when he drives in rain?

A. 1. The inner surface of the glass cools when it rains on the outside glass.
2. Water vapor in the air condenses in the region and water droplets form on the inner surface of the glass.
3. Therefore the driver often wipes the inside glass.

6. What is water cycle? Explain briefly.

A. The circulation of water between earth surface and air is called "Water Cycle . It is also called the "Hydrological Cycle"

There is four main stages in the water cycle.

1. Evaporation: Liquid water becomes water vapour.
2. Condensation: Water vapour changes into liquid water.
3. Precipitation: Water or frozen water falling to Earth.
4. Collection and Run off: Water soaks into the ground.

7. Revanth blew air from his mouth on the mirror while he was getting ready to go to school. He observed that the image in the mirror was not clear. Do you know, why? Prepare questions to get clarity.

A. The air from the mouth contains moisture. When the air touches the glass surface, it turns into fine water droplets known as water vapour.

1. Can you tell by touching the mirror what made it not clear?
2. Is the air you blew from your mouth dry or wet?
3. Is this happened in all seasons?

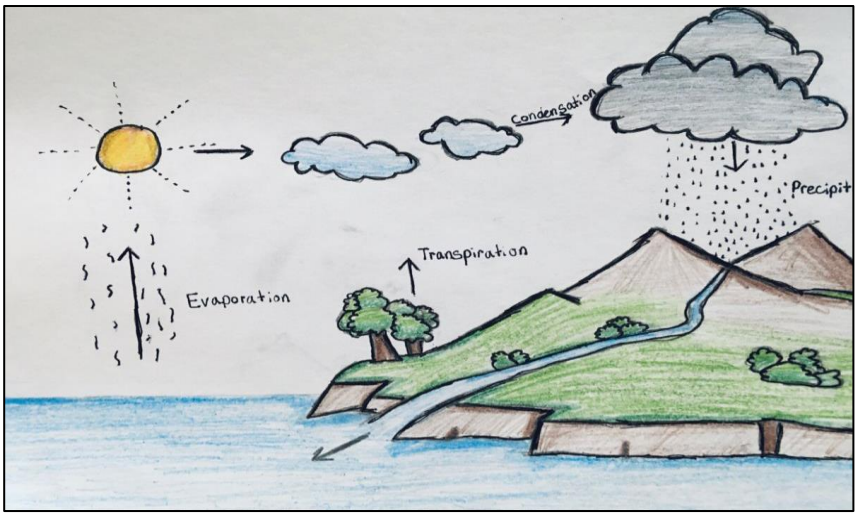
8. If we waste water, what will happen in future?

A. 1. If we use water in the same way it causes scarcity of water in future.
2. Life without water is not possible.
3. It leads to global warming.
4. We and other animals do not get food.

9. How can you demonstrate condensation water by using a glass, water and pieces of ice?

A. 1. Mix some ice cubes in a glass of water.
2. Wait for one or two minutes
3. Water drops appear on the outer surface of the glass.
4. The cold surface of the glass cools the air around it.
5. Water vapor in the air around the glass condenses and water droplets form on the glass surface.

10. Draw the diagram showing water cycle?



11. How do you appreciate the contribution of water cycle in making water available for various needs of plants and animals?,

A. Water cycle helps us in many ways.
1. Water cycle provides water for the various needs of plants and animals.
2. Water cycle is responsible for rainfall.
3. Water cycle helps in reducing Global warming.
4. Without water no organism can live on earth.

12. Write your suggestions to prevent water wastage.

A. 1. Turn off water while brushing your teeth.
2. Recycle the water for other purposes in house.
3. Drinking water should not be used for other activities.
4. Pipes and other leaks should be closed.

13. If people are suffering due to severe floods, what would you do help them?

A. The following are some of the ways by which we can help such people:
1. By providing them with food as during flood.
2. By providing medicines, things related with sanitary hygiene, etc.
3. By providing clothes.
4. By helping old people to reach shelters.

14. What is rainwater harvesting? Describe the method of rainwater harvesting?

1. Rainwater harvesting is the collection of rainwater and storing for future use.
2. In this system rainwater in collected from the rooftops by means of pipes into storage tank for later use.

Fill in the Blanks

1. The process of changing water into its vapour is called ----- (Evaporation)
2. The water cycle is also called as ------ (Hydrological cycle)
3. No rainfall for a year or more may lead to--- (Drought)
4. Excessive rains may cause ------ (Floods)
5. Expand NDRF ----- (National Disaster Relief Force)
6. Deforestation decreases the --- (Rainfall)

Choose the correct Answer

1. The nature of sea water is ---- (A)
A. Salty B. Tasteless C. Odorless D. Sweet
2. Which of the following is not a part of water cycle? (D)
A. Evaporation B. Condensation C. Rain. D. Distillation
3. Which of the following processes add water vapour to the atmosphere? (D)
A. Solidification B. Precipitation C. Condensation D. Evaporation

5. Materials – Separating Methods

1. List five things which we can make using each of the following materials:

a) Glass b) Metal c) Plastic d) Wood

Glass: Drinking glass, Bottles, Doors, Lenses, Bulbs, Jars.
Metals: Chairs, Vessels, Doors, Jewellary, Scale.
Plastic: Buckets, Chairs, Bottles, Doors, Bags.
Wood: Tables, Doors, Cupboards, Chairs, Agricultural tools.

2. Why is hand picking necessary after winnowing?

Only light particles like husk can be separated from grains during winnowing. Heavy particles like small stones will remain in the grains. So hand picking necessary after winnowing.

3. Which separation process is used when one component is in a mixture?

A) Heavier than the other?
Winnowing
B) Bigger than the other?
Sieving
C) Different shape and colour from the other?
Hand picking
D) One is soluble in water and the other is not?
Filtration
E) One floats and the other sinks in water?
Sink and float separation

4. Siri saw a ship travelling on a sea. She knows that iron nail sinks in water. She has many doubts. What are her doubts? Write them.

1. A ship made of iron can float in water but an iron nail sinks. Why?
2. What is the secret of ships floating in the sea?
3. Is there any scientific reason behind the floating of ships?
4. Are there any other heavy objects that float on water?

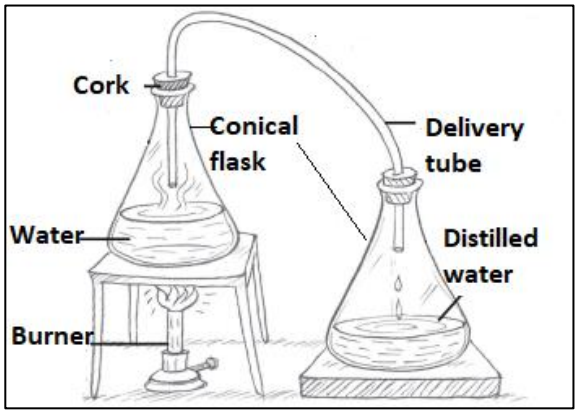
5. We use so many wooden items in our daily life. Is it good to use wood? What happens by excessive use of it? What is the reason? Is there any alternative for this?

1. Using excess wood means cutting down of more trees.
2. It leads to deforestation.
3. It disturbs environment.
4. Cutting of more trees causes global warming.
5. We can use bamboo instead of trees.

6. What is distilled water?

1. When water is boiled, it evaporates.
2. The vapoures of water collected in a flask and cooled.
3. This water is free from impurities and is called as distilled water.
4. The distilled water is used in industries and for medical purposes.

7. How can you get your own distilled water in laboratory?



Aim: To get distilled water from normal water.

What we need: Water, conical flasks-2, Corks-2, one holed rubber cork, delivery tube, Bunsen burner, stand

What to do:

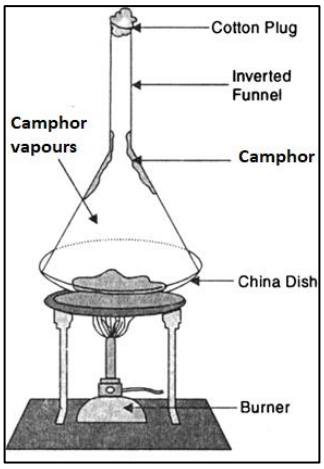
1. Fill a conical flask with water. Close it with a cork having a hole.
2. Take another conical flask with a cork having a hole.
3. Connect both flasks with a delivery tube.
4. Now heat the flask containing water using a Bunsen burner.

Observations:

1. After some time, water vapour goes into the second conical flask through the delivery tube.
2. The water vapour will slowly turn to water.
3. This water is called distilled water.
4. It is free from impurities.

Results: Impurities can be removed from water by distillation.

8. Draw a labeled diagram showing experimental setup required for sublimation of camphor?



9. We know that a ship, even though it is made up of tons of iron, floats on water. How do you feel about the scientists who found the scientific principles and efforts in making a ship?

1. I wondered that a ship made of iron can float in water but an iron nail sinks.
2. Ship is made by the principle of Archimedes.
3. The ship is so constructed that it is full of air which make density of ship lower.
4. The efforts of scientists are appreciable that they make impossible things possible.

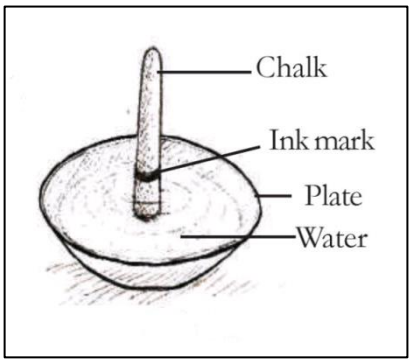
10. How is salt extracted from sea water?

1. Sea water is stored in wide pans and is exposed to sunlight.
2. The water evaporates and the salt is left behind in the pans.
3. This process is called crystallization.

11. What is distilled water?

1. When water is boiled, it evaporates.
2. The vapoures of water collected in a flask and cooled.
3. This water is free from impurities and is called as distilled water.
4. The distilled water is used in industries and for medical purposes.

12. Explain the process of chromatography?



Aim: To separate colours from a mixture of colours.

What you need: Stick of white chalk, Ink, Plate and water.

What to do:

1. Put an ink mark on the chalk piece.
2. Now pour some water in a plate and put piece of chalk in the water as shown in the diagram.
3. Ensure that the ink mark does not touch the water.

What do you see: Different colours are formed around the chalk from the bottom to top

What do you learn: 1. The ink appears to be made of single colour. But It is actually a mixture of colours.
2. Those colours are separated by this method called "Chromatography".

Fill in the blanks

1. Combination of more than one substance forms a _____ (Mixture)
2. The method used to separate stones from rice is _____ (Handpicking)
3. The process in which a substance changes directly from solid to gaseous form and vice-versa is called_____ (Sublimation)
4. The reverse process of evaporation is _____ (Condensation)
5. The principle in the process of sedimentation is _____ (Gravity)
6. Separation of colours from a mixture of colours is called _____ (Chromatography)
7. Mercury is _____ at room temperature. (Liquid)
8. The universal solvent is _____ (Water)

Choose the correct answer

1. Which of the following does not change its shape? (A)
A. Solid B. Liquid C. Gas D. None of these

2. This method is useful for the separation of substances from a liquid. (C)
A. Sedimentation B. Chromatography C. Crystallization D. Filtration

3. Chromatography is the method used to separate.. (B)
A. Mud from Water B. Colours C. Impurities from water D. Husk from grains

6. FUN WITH MAGNETS

1. List the magnetic and non-magnetic materials in your classroom?

S.No.	Material	Magnetic / Non-magnetic
1	Chalk pieces	Non-magnetic
2	Duster	Non-magnetic
3	Iron scale	Magnetic
4	Iron Benches	Magnetic
5	Plastic Chair	Non-magnetic
6	Nails in the Doors	Magnetic

2. If you have two similar bars, one a magnet and another piece of iron. Can you find out which one of these is a magnet? Explain the process.

1. Take the first bar and suspend it in a stand with the help of a thread, so that it is free to rotate in a horizontal plane.
2. If the direction of the bar when it sets is north-south, it will be magnetic.
3. If it doesn't set in the north-south direction, it means that the bar is soft iron.

3. The teacher said that the Earth is a magnet. But Sreevidya has some doubts and she asked her teacher some questions. What may be the questions?

1. How can you tell that Earth is a magnet?
2. How is this magnet inside the earth discovered?
3. Where are the South and North poles of Earth's magnet?
4. How the earth's magnetic force is different from normal magnets?

4. Does the Earth behave as a magnet? How do you prove it?

We can prove it by using compass. If we move in different direction holding compass, the magnetic needle will always point same direction which shows that earth has two poles which is North and South Pole.

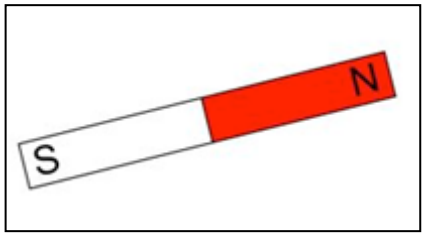
5. Predict which of the following materials are magnetic and non-magnetic. Test with a bar magnet and check your predictions. What do you say after testing all materials? Plastic, Iron, Stainless steel, Wood, Aluminum, Gold, Silver, Copper, Paper, Cloth.

S. No.	Material	My Prediction	Test with a bar magnet
1	Plastic	Magnetic	Non-magnetic
2	Iron	Non-magnetic	Magnetic
3	Stainless steel	Magnetic	Non-magnetic
4	wood	Non-magnetic	Non-magnetic
5	Aluminum	Non-magnetic	Non-magnetic
6	gold	Non-magnetic	Non-magnetic
7	silver	Non-magnetic	Non-magnetic
8	copper	Non-magnetic	Non-magnetic
9.	Paper	Non-magnetic	Non-magnetic
10	Cloth	Non-magnetic	Non-magnetic

6. Write any two properties of a magnet?

1. A magnet has two poles: North pole and South pole.
2. Like poles (N-N, S-S) repel each other and unlike poles (N-S, S-N) attract each other.

7. Draw a bar magnet and locate the poles.



8. Surya was wonderstruck to know that Earth is a big magnet and appreciated the efforts of scientists to discover this. Do you notice any such things in magnets to appreciate?

The following things in magnets are made me to appreciate:

1. Electricity is produced by using magnets.
2. The direction property of a magnet is helpful in using Compass.
3. We can make a piece of iron into new magnet with the help of normal magnet.
4. Iron nail kept near magnet act as magnet due to magnetic induction.

9. Mention some situations where you use magnets in your day-to-day life?

We use various things with magnets in our day to day life. For example:

1. In speakers 2. In small electric motors 3. In some door locks 4. In Bags 5. In some toys 6. In compass 7. In pencil boxes 8. In stickers on refrigerators 9. In phone covers 10. In pin holders

10. Why does bar magnet always point in north-south directions?

Bar magnet always points in north-south directions when left freely suspended because earth itself behaves like a magnet and north-pole of bar magnet is attracted towards south-pole of earth's magnet and vice versa.

11. When do magnets lose their properties?

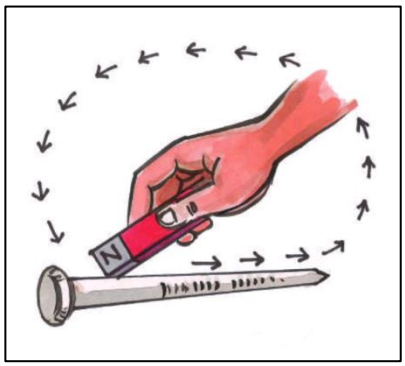
1. When they are heated or dropped from a height or hit with a hammer.
2. When they are placed near Cell phone, Computer and DVDs.

12. What precautions to be taken to keep magnets safe?

1. Magnets should be kept in pairs with their unlike poles on the same side.
2. They must be separated by a piece of wood.

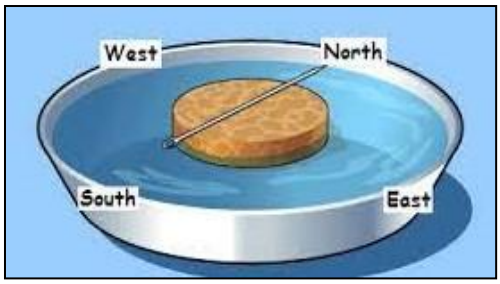
13. How can a magnet be made?

1. Take a nail and place it on the table.
2. Now take a bar magnet and place one of its poles near one edge of the nail.
3. Rub from one end to another end of nail without changing the direction.
4. Repeat the process for 30 to 40 times. Now the nail turns into a magnet.



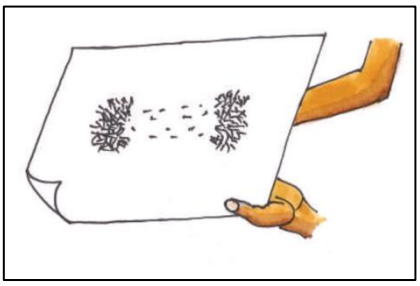
14. How can you make a compass?

1. Take a magnatised needle and tape it to a light cork.
2. Float the cork in a glass of soap water.
3. The needle points in North-South direction.
4. Thus it acts as a magnetic compass.



15. How do we identify the magnetic poles?

1. Spread some iron fillings uniformly on a sheet of paper.
2. Place a bar magnet below this sheet.
3. We will notice that more iron fillings get concentrate at two points of the paper sheet.
4. It means the attractive property is more at its ends. They are the poles of the Bar magnet.



Fill in the blanks.

1. The materials which are attracted towards a magnet are called ———. (Magnetic material)
2. Paper is not a ——— material. (Magnetic)
3. A magnet always has ——— poles. (two)
4. A freely suspended magnet always comes to rest in the direction ——— (North-South).
5. Earth is the ——— (Natural magnet).
7. The instrument used to detect directions is ——— (Compass).
8. ——— is the ore of magnet. (Magnetite).
9. An electromagnetic train works on the ----- principle. (Repulsion)