

CHAPTER- 4 SORTING MATERIALS INTO GROUPS

Question 1. Name five objects which can be made from wood.

Answer- a) Table, b) Chair, c) Doors, d) Desk, e) Box.

Question 2. Select those objects from the following which shine: Glass bowl, plastic toy, steel spoon, cotton shirt.

Answer- Glass bowl, steel spoon.

Question 3. Match the objects given below with the materials from which they could be made. Remember, an object could be made from more than one material and a given material could be used for making many objects.

Objects	Material
Book	Glass
Tumbler	Wood
Chair	Paper
Toy	Leather
Shoes	Plastics

Answer- Book - Paper,
Tumbler - Glass or Plastic,
Chair - Wood or Plastic,
Toy - Wood or Plastic,
Shoes - Leather.

Question 4. State whether the statements given below are True or False.

- (i) Stone is transparent, while glass is opaque. **(False)**
- (ii) A notebook has luster while eraser does not. **(False)**
- (iii) Chalk dissolves in water. **(False)**
- (iv) A piece of wood floats on water. **(True)**
- (v) Sugar does not dissolve in water. **(False)**
- (vi) Oil mixes with water. **(False)**
- (vii) Sand settles down in water. **(True)**
- (viii) Vinegar dissolves in water. **(True)**

Question 5. Given below are the names of some objects and materials:

Water, basket ball, orange, sugar, globe, apple and earthen pitcher.

Group them as: (a) Round shaped and other shapes (b) Eatables and non eatables.

Answer- a) Round shaped- basket ball, orange, globe, apple.

Other shapes- water, sugar, earthen pitcher.

b) Eatables- Orange, Sugar, apple.

Non eatables- basket ball, earthen pitcher, globe, water.

Question 6- List all items known to you that float on water. Check and see if they will float on an oil or kerosene.

Answer- Sponge, Plastic Bottle, Paper, thermocol and hair etc can float on water. They also float on oil or kerosene.

Question 7. Find the odd one out from the following:

a) Chair, Bed, Table, Baby, Cupboard.

Answer- Baby.

b) Rose, Jasmine, Boat, Marigold, Lotus.

Answer- Boat.

c) Aluminum, Iron, Copper, Silver, Sand.

Answer- Sand.

d) Sugar, Salt, Sand, Copper sulphate.

Answer- Sand.

CHAPTER - 5 SEPARATION OF SUBSTANCES

Question 1. Why do we need to separate different components of a mixture? Give two examples.

Answer- We need to separate different components of a mixture:

- (i) To separate harmful or non-useful substances that may be mixed with it.
- (ii) To separate even useful components if we need to use them separately.

Examples: (i) Milk or curd is churned to separate the butter.

(ii) Grain is separated from stalks, while harvesting

Question 2. What is winnowing? Where is it used?

Answer- Method of separating the components from a mixture is known as winnowing. In this method heavier and lighter components of a mixture are separated by wind or by blowing air. This method is used to separate grains from husk.

Question 3. How will you separate husk or dirt particles from a given sample of pulses before cooking?

Answer- Husk and dirt particles are separated from pulses by hand picking.

Question 4. What is sieving? Where is it used?

Answer- Sieving is a method of separation which allows the fine flour particles to pass through the holes of the sieve while the bigger impurities remain on the sieve. It is used at home to separate pebbles and stones from sand.

Question 5. How will you separate sand and water from their mixture?

Answer- By Sedimentation and decantation: The mixture is allowed to stand without any disturbances, and sand settles down. Now slowly pour the water into another container to obtain sand in the bottom. We can also use filtration.

Question 6. Is it possible to separate sugar mixed with wheat flour? If yes, how will you do it?

Answer- Yes. Mix sugar and wheat flour in water. Stir the solution to allow sugar to dissolve. Now filter the mixture. Filtrate contains sugar solution and residue will be wheat flour.

Question 7. How would you obtain clear water from a sample of muddy water?

Answer- By Sedimentation and decantation: Allow muddy water to stand. Mud gets settled down in the water. Slowly pour water to another container. We can also obtain pure water from muddy water by filtration.

Question 8. Fill up the blanks-

- (a) The method of separating seeds of paddy from its stalks is called **threshing**.
- (b) When milk cooled after boiling is poured onto a piece of cloth, the cream (malai) is left behind on it. This process of separating cream from milk is an example of **filtration**.

(c) Salt is obtained from seawater by the process of **evaporation**.

(d) Impurities settled at the bottom when muddy water was kept overnight in a bucket. The clear water was then poured off from the top. The process of separation used in this example is called **Sedimentation and decantation**.

Question 9. True or false?

(a) A mixture of milk and water can be separated by filtration. **(False)**

(b) A mixture of powdered salt and sugar can be separated by the process of winnowing. **(False)**

(c) Separation of sugar from tea leaves can be done with filtration. **(True)**

(d) Grain and husk can be separated with the process of decantation. **(False)**

Question 10. Lemonade is prepared by mixing lemon juice and sugar in water. You wish to add ice to cool it. Should you add ice to the lemonade before or after dissolving sugar? In which case would it be possible to dissolve more sugar?

Answer- We should add ice after dissolving sugar because the dissolving power of water decreases with decrease in temperature. So, if we add ice before dissolving sugar, less amount of sugar will get dissolved.

CHAPTER – 11 LIGHT, SHADOWS AND REFLECTIONS

Question 1. Rearrange the boxes given below to make a sentence that helps us understand opaque objects.

OWS	AKE	OPAQ	UEO	BJEC	TSM	SHAD
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Answer-

OPAQ	UE O	BJEC	TS M	AKE	SHAD	OWS
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Question 2. Classify the objects or materials given below as opaque, transparent or translucent and luminous or non luminous:

Air, water, a piece of rock, a sheet of aluminum, a mirror, a wooden board, a sheet of polythene, a CD, smoke, a sheet of plane glass, fog, a piece of red hot iron, an umbrella, a lighted fluorescent tube, a wall, a sheet of carbon paper, the flame of a gas burner, a sheet of cardboard, a lighted torch, a sheet of cellophane, a wire mesh, kerosene stove, sun, firefly, moon.

Answer- Opaque objects: a piece of rock, a sheet of aluminium, a mirror, a wooden board, a CD, an umbrella, a wall, a sheet of carbon paper, a sheet of cardboard.

Transparent objects: Air, Water, a sheet of plane glass.

Translucent objects: A sheet of polythene, smoke, fog, a sheet of cellophane, a wire mesh.

Luminous objects: A piece of red hot iron, a lighted fluorescent bulb, the flame of a gas burner, a lighted torch, kerosene torch, sun, firefly.

Non-luminous object: Air, water, a piece of rock, a sheet of aluminium, a mirror, a wooden board, a sheet of polythene, a CD, smoke, a sheet of plane glass, fog, an umbrella, a wall, a sheet of carbon paper, a sheet of cardboard, a sheet of cellophane, a wire mesh, moon.

Question 3. Can you think of creating a shape that would give a circular shadow if held in one way and a rectangular shadow if held in another way?

Answer- A cylindrical shape can give a circular shadow when light is incident from its top or bottom. It will give a rectangular shadow when light is incident from its side.

Question 4. In a completely dark room, if you hold up a mirror in front of you, will you see a reflection of yourself in the mirror?

Answer- No. Because there is no source of light in the room.

CHAPTER- 14 WATER

Question 1. Fill up the blanks in the following:

- (a) The process of changing of water into its vapor is called evaporation.
- (b) The process of changing water vapor into water is called condensation.
- (c) No rainfall for a year or more may lead to drought in that region.
- (d) Excessive rains may cause floods.

Question 2. State for each of the following whether it is due to evaporation or condensation:

- (a) Water drops appear on the outer surface of a glass containing cold water- **(Condensation)**
- (b) Steam rising from wet clothes while they are ironed. - **(Evaporation)**
- (c) Fog appearing on a cold winter morning. - **(Condensation)**
- (d) Blackboard dries up after wiping it.- **(Evaporation)**
- (e) Steam rising from a hot girdle when water is sprinkled on it- **(Evaporation)**

Question 3. Which of the following statements are “true” ?

- (a) Water vapor is present in air only during the monsoon. **(False)**
- (b) Water evaporates into air from oceans, rivers and lakes but not from the soil. **(False)**
- (c) The process of water changing into its vapor, is called evaporation. **(True)**
- (d) The evaporation of water takes place only in sunlight. **(False)**
- (e) Water vapor condenses to form tiny droplets of water in the upper layers of air where it is cooler. **(True)**

Question 4. Suppose you want to dry your school uniform quickly. Would spreading it near an anghiti or heater help? If yes, how?

Answer- Yes, Spreading uniform near an anghiti or heater will help because it increases the rate of evaporation due to heat.

Question 5. Take out a cooled bottle of water from refrigerator and keep it on a table. After some time you notice droplets of water around it. Why?

Answer- Because the surface of the air around the bottle cool down, and air condenses around the bottle.

Question 6- To clean their spectacles, people often breathe out on glasses to make them wet. Explain why the glasses become wet.

Answer- Air coming out from mouth cool down on the surface of glass, hence glass becomes wet.

Question 7. How are clouds formed?

Answer- When the air moves up, it gets cooler and cooler and after reaching sufficient heights, the air becomes so cool that the water vapours present in it condenses to form tiny drops of water called droplets which remain floating in air and thus clouds are formed.

Question 8. When does a drought occur?

Answer- If it does not rain for two or more years, water is lost from the soil due to evaporation and transpiration. This dries the soil and the water in the ponds and lakes are dried up, leading to drought condition.