



মহাশিক্ষা বিভাগ (সংস্কৃত)

DEPARTMENT OF EDUCATION (S)

Government of Manipur

Chapter 4

Sorting Materials into Groups

SOLUTIONS:

Exercises

Q1. Name five objects which can be made from wood?

Ans: Chair, Table, Bullock cart, Plough, Bed.

Q2. Select those objects from the following which shine

Glass bowl, Plastic toy, Steel spoon, cotton shirt

Ans: Glass bowl and Steel spoon.

Q3. Match the objects given below with the materials from which they could be made.

Remember, an object could be made from more than one materials and a given materials could be used for making many objects.

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

Ans:

Objects	Materials
Book	Paper
Tumbler	Glass and Plastics
Chair	Wood and Plastics
Toy	Plastics, Wood and Paper
Shoes	Leather

Q4. State whether the statements given below are true or false.

- i. Stone is transparent, while glass is opaque. **False**
- ii. A notebook has lustre 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**

Q5. 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

Ans: A.

Round shaped	Other shapes
basket ball, orange, globe, apple and earthen pitcher	Water and sugar.

B.

Eatables	Non eatables
Water, Orange, Apple, Sugar	Basket ball, Globe and Earthen pitcher

Q6. List all items known to you that float on water. Check and see if they will float on an oil or kerosene.

Ans:

Items that float on Water	Items that float on oil or Kerosene
Paper, Thermocol, Dry leaves, Wax, cork, Plastic, Dry wood, oil	Paper, Thermocol, Dry leaves, Wax, cork, Plastic, Dry wood.

Q7. Find the odd one out from the following:

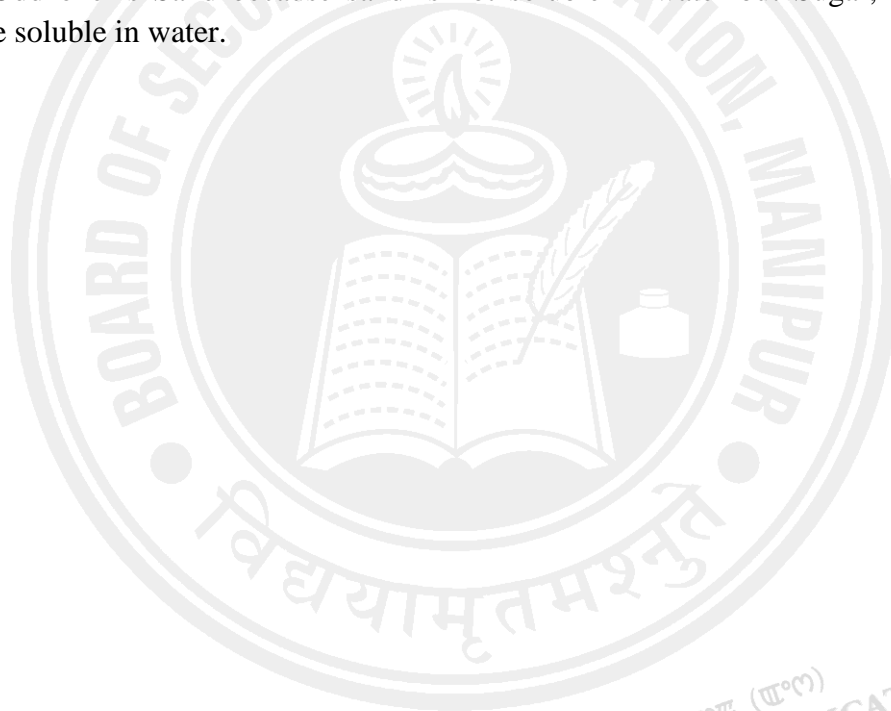
- a) Chair, Bed, Table, Baby, Cupboard
- b) Rose, Jasmine, Boat, Marigold, Lotus
- c) Aluminium, Iron, Copper, Silver, Sand
- d) Sugar, Salt, Sand, Copper sulphate

Ans: a) Odd one is Baby because chair, bed, table, cupboard are non living thing made up of materials like wood and metals whereas Baby is a living being.

b) Odd one is Boat because Rose, Jasmine, Marigold, Lotus are flower and living object whereas Boat is non living object made up of wood and metals

c) Odd one is Sand because Aluminium, Iron, Copper, Silver are metals.

d) Odd one is Sand because sand is not soluble in water but Sugar, Salt, Copper sulphate are soluble in water.



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Extra Questions and Answers:

Q1. Why do we need to group materials?

Ans: Sorting of materials is important because of the following reasons

- a. For our convenience.
- b. To locate them easily.
- c. It helps us to study their properties easily and also observe any pattern in their properties.

Q2. What are the properties of materials that help in sorting of materials?

Ans: Appearance, Hardness, Solubility, Float or Sink in water, Transparency are some properties of materials that help in sorting of materials.

Q3. Why a tumbler is not made with a piece of cloth?

Ans: A tumbler is not made with a piece of cloth because cloth cannot hold water as it is a soft materials and has minute pores through which the liquid flow out.

Q3. Give reason why freshly cut surface of metal like iron, copper are lustrous (shiny) but they appear dull with course of time.

Ans: It is because of the action of air and moisture on them.

Q4. Distinguish between hard materials and soft materials.

Ans:

Hard Materials	Soft Materials
Materials which are difficult to compress or scratch are called hard materials. Example: Stone, Diamond, Coin, Glass etc	Materials which can be easily compressed and scratched are called soft materials. Example: Cotton, Sponge, Rubber etc

Q5. Define solubility.

Ans: Solubility is the ability of a substance that can completely disappear or dissolve in water, or in a solvent.

Q6. What are soluble and insoluble substances? Make a table and sort out soluble and insoluble substance listed below:

Salt, Sugar, Sand, Chalk Powder, Sawdust, Pebbles, Honey, Baking Soda, Wax, Soil

Ans: Soluble substances are substances that are completely dissolved in water whereas insoluble substances are substances that do not dissolve or do not disappear in water even after stirring for a long time.

Soluble substances in water	Insoluble substances in water
Salt, Sugar, Honey, Baking soda	Sand, Soil, Chalk powder, Sawdust, Pebbles, Wax.

Q7. Write the roles of water in our body.

Ans: On an average 60 -70 % of our body is made up of water and it can dissolve a large number of substances and help in functioning of our body.

Q8. When you add mustard oil in water, it forms a separate layer. Why?

Ans: Oil and water are immiscible solution so oil does not dissolve in water and form a separate layer.

Q9. Name two gases that are dissolved in water and important for survival of aquatic plants and animal.

Ans: Oxygen and Carbon dioxide

Q10. Define the following:

- a. Transparent materials
- b. Opaque materials
- c. Translucent materials

Ans:

Transparent materials	Opaque materials	Translucent materials
Any substances or materials through which light can pass through and object can be seen clearly are called transparent materials. Example: Glass, Water etc.	Opaque materials are the materials which light cannot pass through and object cannot be seen through them. Example: wooden box cardboard, metal container etc.	The materials through which objects can be seen but not clearly. Example: oil paper, our palm etc.