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Class: VI	Subject: Science	Chapter: Materials Around Us

CHECKPOINT 1.

1. The grouping of things based on some criteria is called classification.
2. Nail, Hammer, Pressure Cooker
3. The basis of identifying an object is its material and shape.

CHECKPOINT 2.

1. Lustre is the shining property of an object. For example, all metals.
2. The roughness and smoothness of a material of an object is called its texture. For example, sandpaper has rough surface, while glazed paper has smooth surface.
3. The property of a hard or a soft material is called hardness.

CHECKPOINT 3.

1. Transparent materials are those which allow light to pass through them. Examples: Glass, water, etc.
Translucent materials are those which allow light to pass through them partially. Examples: Butter paper, etc.
Opaque materials are those which do not allow light to pass through them. Examples: Wood, rubber, etc.
2. Ice, cork and wax
3. Book, cardboard

PRACTICE TIME

A. Tick the correct answers.

1. (a)   **2.** (d)   **3.** (c)   **4.** (c)   **5.** (c)

B. Assertion and Reason.

1. (a)   **2.** (a)   **3.** (d)   **4.** (c)   **5.** (c)

C. Match the columns

1. (e)   **2.** (d)   **3.** (a)   **4.** (c)   **5.** (b)

D. Very short answer type questions.

1. Objects which have shiny surfaces are called lustrous objects, e.g., gold, silver, copper, etc.

2. Wood and rubber are nonlustrous objects.

3. Materials which can be compressed are said to be soft, e.g., eraser, sponge, etc.

4. Materials which cannot be compressed are said to be hard, e.g., metal spoon, glass, etc.

5. The property of dissolving a substance in water is called solubility.

E. Short answer type questions.

1. To choose a material to make an object, the following objectives should be kept in mind:
   - The purpose for which the object is to be used.
   - The properties of the material.

2. The cooking utensils should have the property of heat conduction, but wood does not have such property. Also, if wooden pot is heated, it would catch fire. Hence, utensils are not made of wood.

3. The following properties are crucial for identifying a matter:
   - Mass
   - Volume (space occupied by it)

4. Commonly, the following properties are used to group the objects:
   - Appearance (lustrous or nonlustrous)
   - Texture (rough or smooth)
   - Solubility (soluble or insoluble in water)
   - Ability to float or sink in water
   - Transparency (transparent, translucent or opaque)

5. Transparency is the property of a material of an object which tells whether we can see through the object or not. Based on this property, objects are categorised as transparent, translucent and opaque objects.

F. Long answer Type Questions

1. The process of grouping things based on some criteria is known as classification. Classification of objects is necessary because:
   - It makes it convenient to locate objects, and
   - It makes it easier to study the properties of objects. If we know the properties of one member of a group, it can give an idea about the properties of other members belonging to the same group.

2. To group objects based on their solubility in water, perform the following activity.

Materials Required: Sugar, chalk powder, baking powder, talcum powder, vinegar, mustard oil, corn flour, milk, wax, turmeric powder, coconut oil, lemon juice and honey

Procedure: Add small amounts of each one of these to a glass tumbler of half-filled water. Stir well. Identify the soluble or insoluble materials in water.

Observation: Group the materials and write them on the given table.

Conclusion: Some materials are soluble in water while some are insoluble.

3. I would not prefer to hide behind a glass window while playing hide-and-seek because glass is a transparent material and will allow you to see clearly through it, and hence to be caught easily. A window made of wood is suitable for hiding behind it because wood is an opaque material and it does not allow light to pass through it and will not allow it to be seen clearly.

4. **(a)** Lustrous objects have shiny surfaces. They are generally made up of metals like gold, silver, copper, aluminum, etc.
   Nonlustrous objects do not have shiny surfaces. They are commonly made up of nonmetals like wood, rubber, etc.
   (b) The objects which can be attracted by a magnet are called magnetic objects. They are made up of iron, nickel, cobalt, etc.
   The objects which cannot be attracted by a magnet are called nonmagnetic objects. These objects are made of other kinds of metals and nonmetals.
   (c) Objects through which we can see very clearly are called transparent objects.

   ▪ Objects through which we can see but not clearly are called translucent objects.

   ▪ Objects through which we cannot see at all are called opaque objects

G. HOTS questions

   1. (a) Sponge
   (b) Air
   (c) Opaque object
   2. (a) On the basis of texture because some of them are rough and some are smooth.
   (b) On the basis of solubility because sugar, salt and biscuit are soluble in water while others are not.