



TOPIC: SORTING OF MATERIALS INTO GROUPS

GUIDELINES FOR STUDENTS :

Dear Students

- Refer to NCERT <http://ncert.nic.in/textbook/textbook.htm?gesc1=4-19>
- Solve the assignment in the Science notebook.
- Suitable video link to understand this topic has been provided.

SUBTOPICS :

- a. Difference between materials and objects.
- b. Explanation of the term 'sorting of materials'.
- c. Reason for sorting the materials.



When we look around, we find ourselves surrounded by a number of objects.

1. All these objects are made of materials. These materials may be glass, metal, plastics, wood, cotton, paper, mud or soil.

Some of these objects are made from a number of different **materials**, while others are made using the same material.

For Example, both desk and chair are made from wood while pen and dustbins are made using plastic.

2. All the materials used for making different objects have some characteristics of their own which are called their **properties**.

3. Different materials have different properties. Such as *hard or soft, smooth or rough, shiny or not shiny etc.*

Some materials are *soluble* in water such as salt while some are *insoluble* in water such as sand, oil etc.

There are some materials through which things can be seen. These are called *transparent*. But there are some materials through which things cannot be seen. These are called *opaque*.

4. We choose a material to make an object depending on its properties, and the purpose for which the object is to be used. For example we use stainless steel to make our utensils because-

- ✓ It shines and looks good.
- ✓ Does not rust.
- ✓ Does not react with food stuff.

We use glass to make windowpanes because it is transparent.

5. Various objects can be made from a material and we can also use different materials to make an object. The tables given below will help you to understand this.

DIFFERENT OBJECTS MADE USING A MATERIAL

<i>S. No.</i>	<i>Material</i>	<i>Objects made of these materials</i>
1.	Wood	Chair, table, plough, bullock cart and its wheels
2.	Paper	Books, notebooks, newspaper, toys, calendars
3.	Leather	Shoes, belts, purses, jackets, suitcase, bags
4.	Plastics	Buckets, chairs, tables, bags, briefcase, lunch box
5.	Cotton	Clothes, bandage, bed sheets, cushions, bags
6.	Iron	Chairs, tables, doors, bathroom fittings, mesh, wheels and other railway goods.

DIFFERENT MATERIALS THAT CAN BE USED TO MAKE AN OBJECT

<i>S. No</i>	<i>Object</i>	<i>Material</i>
1.	Chair	Wood, Wrought iron, Cane, Plastic
2.	Plate	Stainless steel, Paper, Bone china, Silver

Sorting of materials or grouping of materials.

Grouping of various materials together is called **sorting**. The **materials** can be grouped on the basis of

1) Similarities in their properties .

For example: The similarities in properties like colour, size and shape are important properties of a matter based on which **materials** can be grouped easily.

2) Differences in their properties.

For example : All materials which are hard can be grouped together while soft materials can be put in another group.

Why do we need to group materials?

We group materials-

- To study their properties.
- To observe any patterns in them.
- Grouping of material saves our time, energy and makes our work easier.
- Grouping helps in gaining systematic knowledge of things.

Click on this link to reinforce the content discussed above-

<https://www.youtube.com/watch?v=FhRIMy7bmmM>

Assignment Questions (to be done in Science notebook)

1. Mention any two materials which can be used for making a table.
2. A material can be used to make more than one objects. Explain citing any two examples.
3. Explain the importance of sorting things at home with the help of a simple example.

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