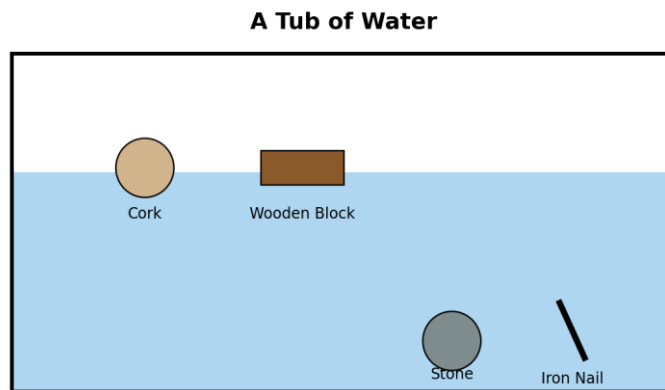


## Materials Around Us — Picture-Based Worksheet Set A

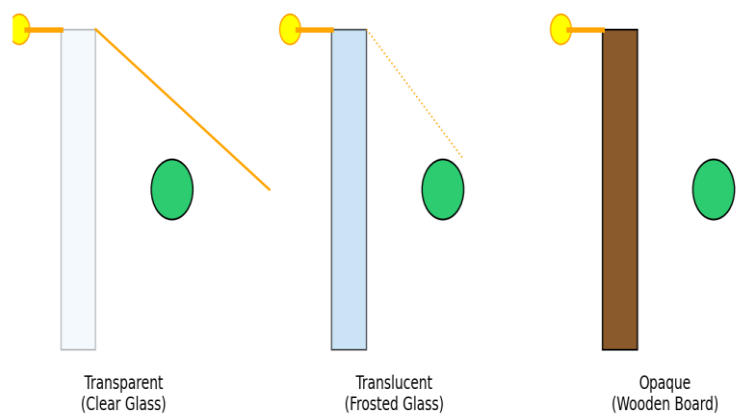
Name: \_\_\_\_\_ Class & Section: \_\_\_\_\_ Date: \_\_\_\_\_

### Picture 1: Objects in a Tub of Water



1. Which objects in the picture are floating on water, and which are sinking?
2. Why do the cork and the wooden block float?
3. What property of materials is being tested in this picture?

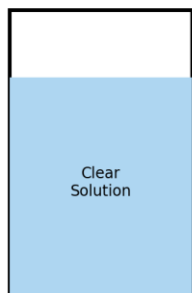
**Picture 2: Testing Materials with Light**



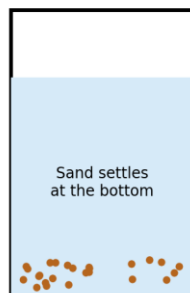
1. Name the three types of materials shown in the picture based on how light passes through them.
2. In which panel can the object behind the material be seen clearly?
3. Give one real-life example of a translucent material shown or similar to the one in the picture.

**Picture 3: Two Beakers of Water**

**Beaker 1: Salt + Water**



**Beaker 2: Sand + Water**



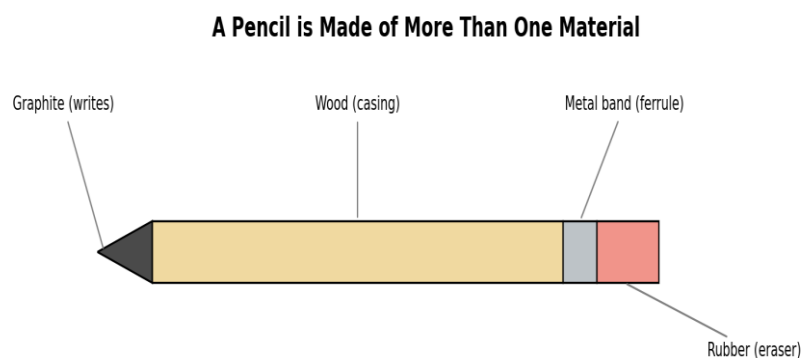
1. What is the difference between what happens in Beaker 1 and Beaker 2?
2. What do we call substances like salt, which dissolve completely in water?
3. What do we call substances like sand, which do not dissolve in water?

**Picture 4: Sorting Materials Chart**

| Sorting Materials Based on Hardness and Lustre                                          |                                                                                          |                                                                                          |                                                                                            |
|-----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| HARD                                                                                    |                                                                                          | SOFT                                                                                     |                                                                                            |
|  Stone |  Iron   |  Cotton |  Sponge |
| LUSTROUS                                                                                |                                                                                          | DULL                                                                                     |                                                                                            |
|  Gold  |  Mirror |  Wood   |  Chalk  |

1. Name one material from the picture that is both hard and lustrous.
2. Name one material from the picture that is soft and dull.
3. Based on the chart, in which group would you place a piece of chalk?

**Picture 5: Parts of a Pencil**



1. Name the different materials used to make the pencil shown in the picture.
2. Which part of the pencil is used for writing, and what material is it made of?
3. Why do you think the pencil is made using several different materials instead of just one?

## Answer Key — Picture-Based Worksheet Set A

### Picture 1: Objects in a Tub of Water

1. The cork and the wooden block are floating on water, while the stone and the iron nail are sinking to the bottom.
2. They float because they are lighter (less dense) than water of the same size.
3. This picture tests the floating and sinking property of different materials in water.

### Picture 2: Testing Materials with Light

1. The picture shows a transparent material, a translucent material, and an opaque material.
2. The object can be seen clearly in the first panel, where the clear glass (transparent material) is placed.
3. Frosted glass, as shown in the picture, or butter paper are examples of translucent materials.

### Picture 3: Two Beakers of Water

1. In Beaker 1, the salt dissolves completely to form a clear solution, while in Beaker 2, the sand does not dissolve and settles at the bottom.
2. Substances like salt, which dissolve completely in water, are called soluble substances.
3. Substances like sand, which do not dissolve in water, are called insoluble substances.

### Picture 4: Sorting Materials Chart

1. Iron is a material shown in the picture that is both hard and lustrous.
2. Cotton and sponge are shown as soft and dull materials in the picture.
3. Chalk would be placed in the 'soft' and 'dull' group, similar to wood shown in the chart.

### Picture 5: Parts of a Pencil

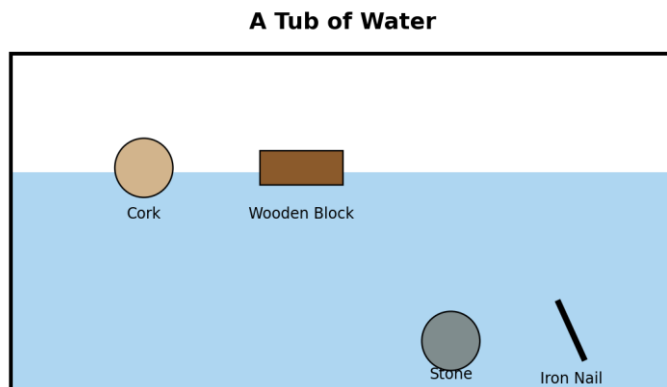
1. The pencil is made using wood, graphite, metal, and rubber.
2. The graphite tip is used for writing, and it is made of graphite, a soft, dark material.
3. Different parts of the pencil need different properties — wood for easy holding, graphite for writing, metal to hold the eraser, and rubber to erase — so multiple materials are used together.

## Materials Around Us — Picture-Based Worksheet Set B

CBSE Class 6 | Science | Chapter: Materials Around Us | Study each picture carefully and answer the questions (2 marks each)

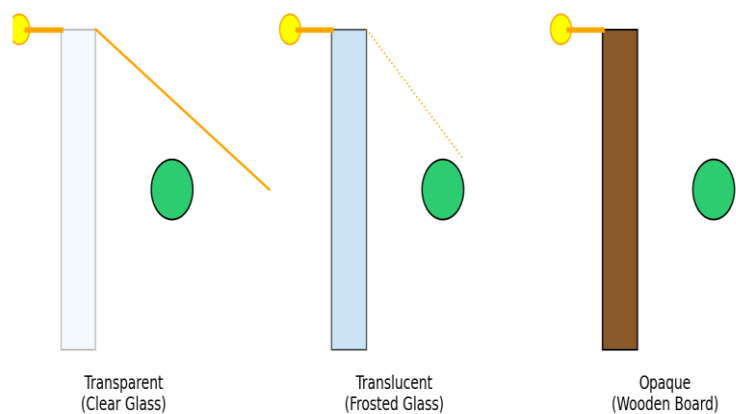
Name: \_\_\_\_\_ Class & Section: \_\_\_\_\_ Date: \_\_\_\_\_

### Picture 1: Objects in a Tub of Water



1. List the objects in the picture that are denser than water.
2. If a plastic bottle cap were added to this tub, would it most likely float or sink? Give a reason.
3. How is this floating and sinking property useful in designing a life jacket?

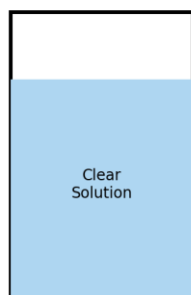
**Picture 2: Testing Materials with Light**



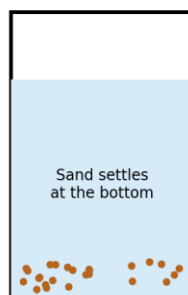
1. Which material in the picture would be most suitable for a bathroom window, and why?
2. Which material in the picture completely blocks the object from view, and what is this property called?
3. Why is transparent glass, and not opaque wood, used for a car's windscreen?

**Picture 3: Two Beakers of Water**

**Beaker 1: Salt + Water**



**Beaker 2: Sand + Water**



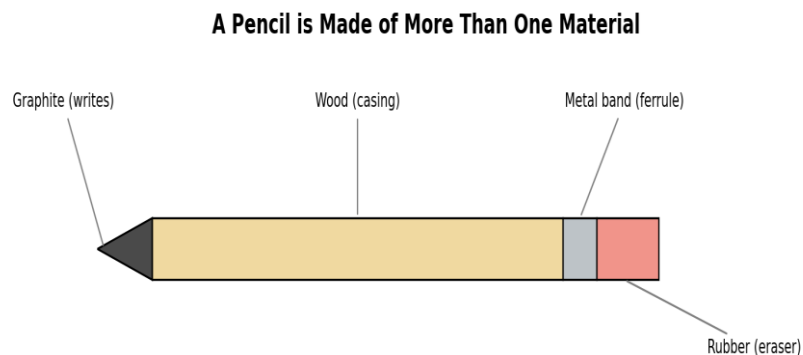
1. If sugar were added to a third beaker of water and stirred, which beaker's result would it resemble more, Beaker 1 or Beaker 2? Why?
2. Why does the sand in Beaker 2 settle at the bottom instead of staying spread through the water?
3. How could you separate the sand shown in Beaker 2 from the water?

**Picture 4: Sorting Materials Chart**

| Sorting Materials Based on Hardness and Lustre                                                                                                                                                     |                                                                                                                                                                                                    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>HARD</b><br> Stone  Iron      | <b>SOFT</b><br> Cotton  Sponge |
|  Gold  Mirror<br><b>LUSTROUS</b> | <b>DULL</b><br> Wood  Chalk    |

1. Why are gold and mirror placed together in the same group in the chart?
2. Suggest one more object that could be added to the 'hard' group in the chart.
3. Why is it useful to sort materials into groups like the one shown in the chart?

**Picture 5: Parts of a Pencil**



1. Which part of the pencil is made of rubber, and what is its function?
2. What is the purpose of the metal band shown near the eraser?
3. Name one other everyday object, apart from a pencil, that is made of more than one material.

## Answer Key — Picture-Based Worksheet Set B

### Picture 1: Objects in a Tub of Water

1. The stone and the iron nail are denser than water, which is why they sink.
2. It would most likely float, because plastic is generally lighter than water and behaves like the cork and wooden block shown.
3. Life jackets are made from materials that are lighter than water, similar to cork and wood, so they help a person float and stay safe.

### Picture 2: Testing Materials with Light

1. The translucent (frosted glass) material would be most suitable because it lets light in while still giving privacy.
2. The wooden board completely blocks the object from view, and this property is called opacity (the material is opaque).
3. Transparent glass allows the driver to see clearly through it, which is necessary for safe driving, unlike opaque wood, which blocks all view.

### Picture 3: Two Beakers of Water

1. It would resemble Beaker 1, because sugar is soluble in water and would dissolve completely, just like the salt.
2. Sand particles do not dissolve and are denser than water, so they sink and settle at the bottom.
3. The sand could be separated from the water by filtration, using a filter paper or cloth, or by letting it settle and then decanting the clear water.

### Picture 4: Sorting Materials Chart

1. Gold and mirror are placed together because both are lustrous materials that shine and reflect light well.
2. A material like a steel scale or a stone could be added, as these are also hard materials.
3. Sorting materials into groups helps us quickly identify their properties and choose the right material for a particular use.

### Picture 5: Parts of a Pencil

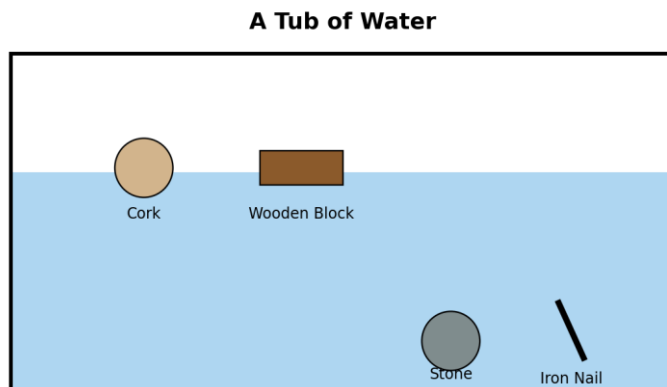
1. The eraser is made of rubber, and its function is to remove or rub off pencil marks from paper.
2. The metal band, called the ferrule, holds the rubber eraser firmly attached to the wooden body of the pencil.
3. A pair of scissors is another example, as it is made of metal (blades) and plastic (handles).

## Materials Around Us — Picture-Based Worksheet Set C

CBSE Class 6 | Science | Chapter: Materials Around Us | Study each picture carefully and answer the questions (2 marks each)

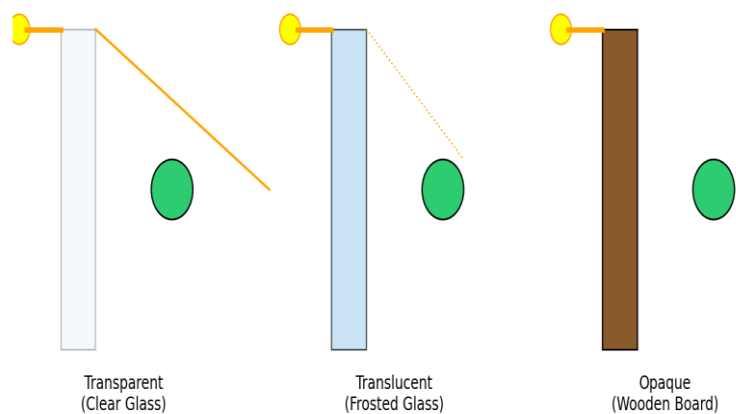
Name: \_\_\_\_\_ Class & Section: \_\_\_\_\_ Date: \_\_\_\_\_

### Picture 1: Objects in a Tub of Water



1. Predict what would happen if you placed a small piece of thermocol into this tub, and explain why.
2. The iron nail sinks in this tub, but a large iron ship floats on the sea. Explain this difference.
3. Based on the picture, write one conclusion about the relationship between an object's density and its ability to float.

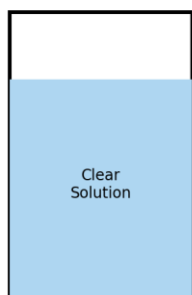
**Picture 2: Testing Materials with Light**



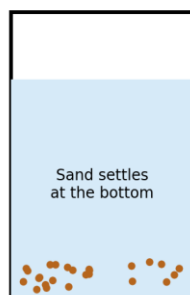
1. Arrange the three materials shown in the picture in order of the amount of light they allow to pass through, from most to least.
2. Why might curtains for a living room be made of a translucent material rather than a fully transparent or fully opaque one?
3. How could you test at home whether a piece of cloth is transparent, translucent, or opaque?

**Picture 3: Two Beakers of Water**

**Beaker 1: Salt + Water**



**Beaker 2: Sand + Water**



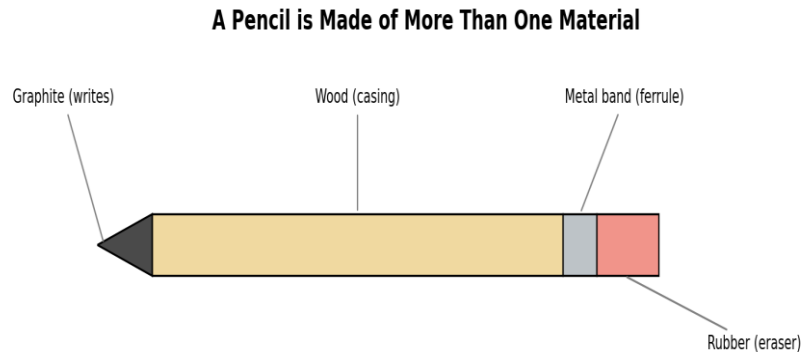
1. Design a simple table with two columns to record the results shown in the picture for salt and sand.
2. If you heated the clear solution from Beaker 1 until all the water evaporated, what would you expect to find at the bottom, and why?
3. Explain why it is important to know whether household substances like salt, sugar, and washing powder are soluble in water.

Picture 4: Sorting Materials Chart

| Sorting Materials Based on Hardness and Lustre                                          |                                                                                          |                                                                                          |                                                                                            |
|-----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| HARD                                                                                    |                                                                                          | SOFT                                                                                     |                                                                                            |
|  Stone |  Iron   |  Cotton |  Sponge |
| LUSTROUS                                                                                |                                                                                          | DULL                                                                                     |                                                                                            |
|  Gold  |  Mirror |  Wood   |  Chalk  |

1. Using the chart as a guide, create your own two properties and sort three classroom objects using them.
2. Explain why a single material, such as iron, can appear in more than one group when sorted by different properties.
3. Why might scientists prefer to use precise properties, like hardness and solubility, rather than just 'looks nice' while sorting materials?

**Picture 5: Parts of a Pencil**



1. If the pencil's wooden body were replaced with a metal body, suggest one advantage and one disadvantage of this change.
2. Explain how the choice of each material in the pencil is linked to a specific property that material has.
3. Apart from a pencil, describe one more object you use daily that combines at least three different materials, naming the materials.

## Answer Key — Picture-Based Worksheet Set C

### Picture 1: Objects in a Tub of Water

1. The thermocol would float, because it is a very light material with a density much lower than water.
2. The nail is a solid, dense shape and sinks, while a ship's hollow, wide shape displaces a large amount of water, allowing it to float despite being made of iron.
3. Objects that are less dense than water float, while objects that are denser than water sink.

### Picture 2: Testing Materials with Light

1. In order from most to least light passed: transparent (clear glass) first, translucent (frosted glass) second, and opaque (wooden board) last, which allows no light through.
2. A translucent curtain lets in soft daylight while still blocking a clear view from outside, balancing brightness and privacy better than fully transparent or fully opaque options.
3. Hold the cloth up against a light source or sunlight and observe how much light and shape you can see through it — clear view means transparent, blurred view means translucent, and no view means opaque.

### Picture 3: Two Beakers of Water

1. Sample table — Column 1: Substance (Salt, Sand); Column 2: Result in Water (Salt: Dissolves completely / Soluble, Sand: Settles at bottom / Insoluble).
2. You would expect to find salt crystals left behind, because the salt did not disappear permanently; it only dissolved in the water and separates again once the water evaporates.
3. Knowing their solubility helps us understand how to use them correctly, such as dissolving them to prepare food, drinks, or cleaning solutions, and storing them away from moisture.

### Picture 4: Sorting Materials Chart

1. Sample answer — Properties: Transparent vs Opaque. Objects: Glass tumbler (transparent), wooden desk (opaque), steel scale (opaque); this shows how different property pairs can be used to sort the same or different objects.
2. A material can have several properties at once; iron is both hard and lustrous, so it can appear in the 'hard' group when sorted by hardness and the 'lustrous' group when sorted by appearance.
3. Precise, testable properties give consistent and reliable results for everyone, while a description like 'looks nice' is based on opinion and can differ from person to person.

### Picture 5: Parts of a Pencil

1. One advantage could be that a metal body would be more durable and less likely to break; one disadvantage is that it would be heavier, colder to hold, and more expensive than wood.
2. Wood is chosen for the body because it is light and easy to shape and sharpen; graphite is chosen because it leaves a visible mark and is soft enough to write with; metal is chosen for the band because it is strong enough to hold the eraser firmly; and rubber is chosen for the eraser because it can rub off pencil marks.
3. A mobile phone is one example — it uses glass for the screen, metal for the frame, and plastic for parts of the body and buttons.