

Dr. R. N. International School

Class 6 Science - Chapter 6: Materials Around Us Word Meanings & Question Answers

Word Meanings (English to Hindi)

S.No.	English Word	Hindi Meaning
1	Matter	पदार्थ (Padarth)
2	Mass	द्रव्यमान (Dravyaman)
3	Volume	आयतन (Aayatan)
4	Atoms	परमाणु (Parmanu)
5	Molecule	अणु (Anu)
6	Solid	ठोस (Thos)
7	Liquid	तरल / द्रव (Taral / Drav)
8	Gas	गैस (Gas)
9	Rigid	दृढ़ / कठोर (Dridh / Kathor)
10	Shape	आकार (Aakar)
11	Material	सामग्री (Samagri)
12	Property	गुण / विशेषता (Gun / Visheshta)
13	Texture	बनावट (Banawat)
14	Classification	वर्गीकरण (Vargikaran)
15	Lustre	चमक (Chamak)
16	Hardness	कठोरता (Kathorta)
17	Compress	दबाना / संपीड़ित करना (Dabana)
18	Flexible	लचीला (Lachila)
19	Transparent	पारदर्शी (Pardarshi)
20	Translucent	पारभासी (Parbhasi)
21	Opaque	अपारदर्शी (Apardarshi)
22	Soluble	घुलनशील (Ghulanshil)
23	Insoluble	अघुलनशील (Aghulanshil)
24	Dissolve	घुलना (Ghulna)
25	Density	घनत्व (Ghanatva)
26	Flotation	प्लवनशीलता (Plavanshilta)
27	Float	तैरना (Tairna)
28	Sink	डूबना (Doobna)
29	Absorbent	सोखने वाला (Sokhne wala)
30	Space	स्थान / जगह (Sthan / Jagah)

Section E: Answers in 20-30 Words

1. What is matter?

Matter is defined as anything that has mass and occupies space. It is made up of extremely small particles called atoms.

2. Define solubility.

Solubility refers to a substance's ability to dissolve in water. When a material is soluble, it disappears and mixes evenly throughout the liquid.

3. How does a solid differ from a liquid in terms of shape?

Solids feature closely packed molecules, giving them a rigid and definite shape. Liquids have loosely packed molecules, allowing them to flow and take their container's shape.

4. Give an example of a material that is transparent.

Glass is a common transparent material. It allows light to pass through it completely, meaning you can clearly see objects on the other side.

5. What happens when a material is soluble in water?

When a material is soluble, it completely dissolves, meaning it disappears and mixes evenly into the water. Sugar and salt are common examples.

6. Explain the term density.

Density is the mass per unit volume of a material. This specific property determines whether an object will sink or float when placed in water.

7. What are opaque materials?

Opaque materials, such as wood or cardboard, completely block light from passing through them. Because of this, you cannot see objects through them.

8. How can objects be grouped?

Objects can be classified into groups based on shared properties, including their shape, colour, texture, shininess (lustre), or the type of material they are made from.

9. Why does an iron ship float on water?

An iron ship floats because its shape occupies a large volume. This makes its overall density lower than the density of water, preventing it from sinking.

10. Key difference between transparent and translucent?

Transparent materials allow light to pass through completely, making objects clearly visible. Translucent materials allow light to pass partially, so objects behind them appear unclear.

Section F: Answers in 60-80 Words

1. Describe the three states of matter with examples.

Matter exists as solid, liquid, or gas. Solids, like wood or iron, feature tightly packed molecules that provide a rigid, definite shape and volume. Liquids have loosely packed molecules, allowing them to flow and take the shape of their container while maintaining a definite volume. Gases, like air, have molecules spread far apart that move freely, resulting in neither a definite shape nor a definite volume.

2. Explain how the hardness of materials can be compared.

The hardness of materials is compared by pressing or scratching them. Hard materials, such as iron and stones, are difficult to compress or scratch and feel very solid. Soft materials, like chalk, wax, or erasers, are easily compressed or scratched. Hardness is also a relative property; for example, rubber is considered harder than a sponge but softer than iron.

3. What are the properties of gases and how are they different from liquids?

In gases, molecules are spread far apart and move freely, which means gases do not have a definite shape or a definite volume. In contrast, liquids have molecules that are loosely packed; while they also lack a definite shape and flow to fit their container, they maintain a definite volume.

4. How can materials be classified based on their appearance and texture?

Materials can be classified by appearance as either lustrous (having a shiny surface that reflects light, like gold or iron) or non-lustrous (having a dull, matte finish, like paper or wood). Based on texture, they can be grouped by whether they feel smooth, rough, soft, or hard. These physical characteristics help determine what objects the materials are best suited to make.

5. Discuss the importance of solubility in daily life with examples.

Solubility, the ability of a substance to dissolve in water, is vital for everyday tasks like cooking and healthcare. For example, mixing soluble sugar and salt in water is essential for preparing food and drinks. Knowing about solubility is also crucial for creating Oral Rehydration Solution (ORS), which requires dissolving salt and sugar in water to treat severe dehydration.

6. Explain how materials are grouped based on their transparency.

Materials are grouped based on how much light they allow to pass through. Transparent materials (like window glass) let light pass completely, allowing clear visibility. Translucent materials (like frosted glass or butter paper) let light pass partially, meaning objects behind

them look blurred. Opaque materials (like wood or cardboard) block all light, making it impossible to see through them.

7. Why is the density of an object important in determining whether it floats or sinks?

Density, which is the mass per unit volume of a material, directly controls flotation. If an object has a lower density than water, it will float; if it has a higher density, it will sink. For instance, a small iron nail sinks, but a heavy iron ship floats because its shape occupies a massive volume, lowering its overall density below that of water.

Section H: Higher-Order Thinking Questions

1. If you had to design a new type of water bottle, what material properties would you consider and why?

I would choose a hard, durable material to prevent the bottle from breaking when dropped, but one with low mass so it remains lightweight to carry. The material must be strictly insoluble and waterproof so it does not dissolve into or leak the drinking water. Finally, I would make it transparent or translucent (like glass or certain plastics) so the user can easily monitor how much liquid is left inside.

2. How would life be different if all materials were transparent?

If all materials were transparent, privacy would completely disappear, as opaque materials used for building walls, doors, and clothing would no longer block vision. Furthermore, because no materials would block light entirely, it would be impossible to create shade or dark rooms, making protection from harsh sunlight extremely difficult.

Objective Questions Answer Key

A. Multiple Choice: 1. (c), 2. (d), 3. (c), 4. (b), 5. (b)

B. Fill in the Blanks: 1. volume, 2. lustrous, 3. soluble; insoluble, 4. mass, 5. space; mass

C. True/False: 1. False, 2. False, 3. False, 4. False, 5. True

D. Match the Columns: 1 - c, 2 - e, 3 - a, 4 - b, 5 - d

G. Assertion/Reason: 1. c, 2. a, 3. a