

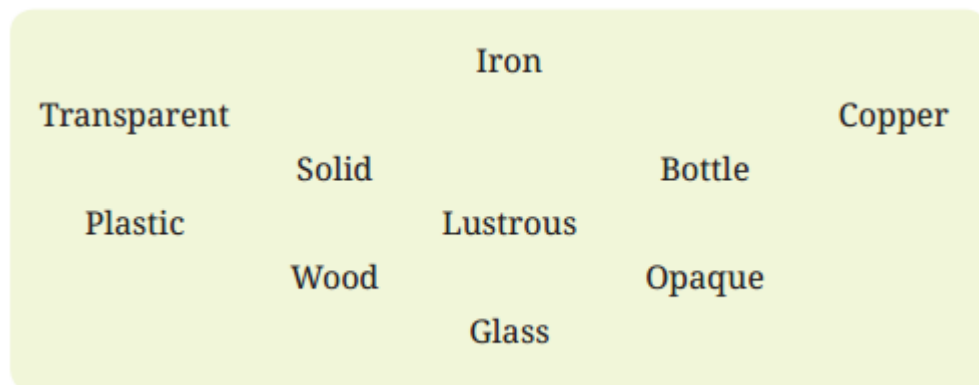
Materials Around Us

Chapter-6

Ques 1.

Find the companion.

Link the following words by putting arrows between words that have a connection



Answer:

Glass	Transparent
Wood	Opaque
Iron	Lustrous
Bottle	Plastic
Copper	Solid

Ques 2.

Win the 'Word-hub'

The following words from the chapter like lustrous, non-lustrous, soluble, insoluble, hard, soft, matter, mass, transparent, opaque, volume and translucent are picked up.

- Students should randomly choose nine words from the given list and write them in the grid.
- Then, the facilitator either reads the definition of a word or the word itself (randomly) from the given list.
- The learners have to tick if the particular word is there in the grid.
- Whoever finishes ticking off all nine words first will shout out 'Hurray!'. That person will be the winner if his/her words are marked correctly.

Answer:

Hints:

Grid		
lustrous	translucent	soluble
volume	insoluble	non-lustrous
hard	opaque	matter

- Lustrous: Materials that are shiny, or their freshly cut surfaces are shiny are called lustrous materials and their shine is called lustre.
- Non-lustrous: Non-lustrous materials are those that do not have shiny surfaces and have dull appearance.
- Soluble: Substances which completely disappear or dissolve in water are called soluble in water.
- Insoluble: Substances which do not mix with water or do not disappear in water even after stirring for a long time are called insoluble in water.
- Hard: A material which is difficult to compress or scratch is said to be hard. Soft: A material which can be compressed or scratched easily is called soft.
- Matter: Anything that occupies space and has mass.
- Mass: It is the amount or weight of the substance or object.
- Transparent: The materials through which things can be seen clearly and light can pass completely through them are said to be transparent.

- Opaque: The materials through which we are not able to see and light cannot pass through them are said to be opaque.
- Volume: The space occupied by matter is its volume.
- Translucent: The materials through which objects can be seen but not clearly and light can pass partially through them are said to be translucent.

Play the game Word-hub' with your classmates.

Let Us Enhance Our Learning

Ques 1.

Visit your kitchen and observe how your parents have organised various edibles. Can you suggest a better sorting method? Write it in your notebook.

Answer:

Hints: Do it yourself with the help of your parents

Yes, you can suggest a better sorting method. Edibles can be segregated into different groups viz., Fruits, Vegetables, Spices, Pulses, Grains, Frozen food items, etc.

Ques 2.

Unscramble the letters (Column I) and match with their properties (Column II).

Column I	Column II
(i) T R E M A T	(a) Objects can be seen clearly through it
(ii) U L S B E L O	(b) Occupies space and has mass
(iii) T N E R P A S N A R T	(c) Shiny surface
(iv) E R U S T L	(d) Mixes completely in water

Answer:

(i) Matter	(b) Occupies space and has mass
(ii) Soluble	(d) Mixes completely in water
(iii) Transparent	(a) Objects can be seen clearly through it
(iv) Lustre	(c) Shiny surface

Ques 3.

The containers which are used to store materials in shops and at home are usually transparent. Give your reasons for this.

Answer:

The transparent containers are used to store materials in shops and at home because it helps us to identify the things placed in these containers from outside, without opening them as we can see through them clearly.

Ques 4.

State whether the statements given below are True [T] or False [F], Correct the False statement(s).

(i) Wood is translucent while glass is opaque.

Answer:

False

Correct statement: Wood is opaque while glass is transparent.

(ii) Aluminium foil has lustre while an eraser does not.

Answer:

True

(iii) Sugar dissolves in water whereas sawdust does not.

Answer:

True

(iv) An apple is a matter because it occupies no space and has mass.

Answer:

False

Correct statement: An apple is a matter because it occupies space and has mass.

Ques 5.

We see chairs made up of various materials, such as wood, iron, plastic, bamboo, cement and stones. Following are some desirable ' properties of materials which can be used to make chairs. Which materials used to make chairs fulfil these properties the most?

- (i) Hardness (does not bend or shake on sitting even after long use).
- (ii) Lightweight (easy to lift or to take from one place to another).
- (iii) Does not feel very cold when sitting during winters.
- (iv) Can be cleaned regularly and made to look new even after long use.

Answer:

- (i) Wood, iron, cement and stones are hard material, so chair made of any of these materials does not bend or shake on sitting even after long use.
- (ii) Plastic and bam.booo are lighter in weight so, chair made of any of these material can be easy to lift or to take from one place to another.
- (iii) The chair made of wood, plastic or bamboo does not become cold in winters.
- (iv) The chair made of plastic can be regularly and made to look new even after long use.

Ques 6.

You need to have containers for collection of

- (i) food waste,
- (ii) broken glass and
- (iii) wastepaper. Which materials will you choose for containers of these types of waste? What properties of materials do you need to think of?

Answer:

- (i) Plastic containers or stainless steel dustbins can be used to collect food waste as these are non-porous, durable, resistant to moisture, and easy to clean. Plastic containers are lightweight, and can be easily washed. Stainless steel is resistant to corrosion. Avoid materials that absorb odour or allow leakage.

(ii) Cardboard boxes with polypropylene bags can be used for safe and convenient disposal of broken glass. As these are non-porous. Cardboard boxes are cost- effective and recyclable. Avoid using glass containers for broken glass due to safety concerns. Plastic containers are also suitable.

(iii) Containers used to collect wastepaper should be able to hold paper without tearing or deforming. Jute bags, paper or cardboard bags, plastic bags/containers can be used to collect wastepaper. Avoid using glass or metal containers for wastepaper.

Ques 7.

Air is all around us but does not hinder us from seeing each other. Whereas, if a wooden door comes in between, we cannot see each other. It is because air is ____ and the wooden door is _____. Choose the most appropriate option:

- (i) transparent, opaque
- (ii) translucent, transparent
- (iii) opaque, translucent
- (iv) transparent, translucent

Answer:

- (i) transparent, opaque

Air is all around us but does not hinder us from seeing each other. Whereas, if a wooden door comes in between, we cannot see each other. It is because air is transparent and the wooden door is opaque.

Ques 8.

Imagine you have two mysterious materials, X and Y. When you try to press material X, it feels rigid and does not change its shape easily. On the other hand, material Y easily changes its shape when you press it. Now, when you mix both materials in water, only material X dissolves completely, while material Y remains unchanged. What can materials X and Y be? Can you identify whether material X is hard or soft? What about material Y? Justify your answer.

Answer:

As material X feels rigid and does not change its shape easily hence, it is hard. It is completely soluble in water so, it could be rock salt. On the other

hand, as material Y easily changes its shape on pressing, thus, it is soft and is insoluble in water thus, material Y could be sand ball or clay ball.

Ques 9.

(i) Who am I? Identify me on the basis of the given properties.

(a) I have lustre. _____

(b) I can be easily compressed. _____

(c) I am hard and soluble in water. _____

(d) You cannot see clearly through me. _____

(e) I have mass and volume but you cannot see me. _____

(ii) Make your own Who am I?

Answer:

(i) (a) The material with lustre is metal such as iron, aluminium, copper, etc.

(b) The material that can be easily compressed can be air, sponge, clay ball, etc.

(c) Rock salt is hard and soluble in water.

(d) From translucent material we cannot see clearly, we can see through it partially such as frosted glass.

(e) Air has mass and volume but we cannot see it.

(ii) Hints: You can make your own Who am I?' by using the various terms given in the chapter.

One example is given for you.

(a) I am insoluble in water.

Sand

(b) I am incompressible.

Stone

(c) I am hard and opaque.

Wood

(d) I am soft and can be rolled into different shapes

Cotton

(e) I have mass and volume but you cannot hold me on your hand.

Water

Ques 10.

You are provided with the following materials— vinegar, honey, mustard oil, water, glucose and wheat flour. Make any two pairs of materials where One material is soluble in the other. Now, make two pairs of materials where one material remains insoluble in the other material.

Answer:

Pairs of materials where one, material is soluble in the other:

- Vinegar in water
- Honey in water
- Glucose in water

Pairs of materials where one material remains insoluble in the other material:

- Mustard oil in Water
- Wheat flour in water