

# Science

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(Chapter 1)(Matter in Our Surroundings)(Intext Questions)

Class - 9

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## Question 1:

Which of the following are matter?

Chair, air, love, smell, hate, almonds, thought, cold, cold drink, smell of perfume.

## Answer 1:

Anything that occupies space and has mass is called matter. Matter can exist in three physical states—solid, liquid, and gaseous.

Chair and almond are forms of matter in the solid state.

Cold drink is a liquid state of matter.

Air and smell of perfume are gaseous states of matter.

*Note: The sense of smell is not matter. However, the smell or odour of a substance is classified as matter. The smell of any substance (say, perfume) is the gaseous form of that substance which our olfactory system can detect (even at very low concentrations). Hence, smell of perfume is matter.*

## Question 2:

Give reasons for the following observation:

The smell of hot sizzling food reaches you several metres away, but to get the smell from cold food you have to go close.

## Answer 2:

Solids diffuse at a very slow rate. But, if the temperature of the solid is increased, then the rate of diffusion of the solid particles into air increases. This is due to an increase in the kinetic energy of solid particles. Hence, the smell of hot sizzling food reaches us even at a distance, but to get the smell from cold food we have to go close.

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## Question 3:

A diver is able to cut through water in a swimming pool. Which property of matter does this observation show?

## Answer 3:




The ability of a diver to cut through water in a swimming pool shows that matter is made up of particles.

## Question 4:

What are the characteristics of particles of matter?

## Answer 4:

The characteristics of particles of matter are:

-  Particles of matter have spaces between them.
-  Particles of matter are continuously moving.
-  Particles of matter attract each other.

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