

**1 Match the words and the definitions.**

a pure substance    an atom    an element    a molecule    a compound

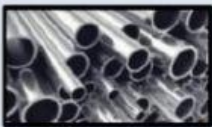
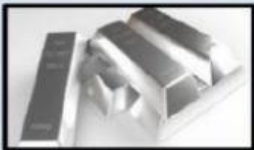
1. This is the smallest particle of matter. It's \_\_\_\_\_.
2. This is formed by two or more different atoms. It's \_\_\_\_\_.
3. This is a substance made of one type of atom. It's \_\_\_\_\_.
4. This is a substance made of one type of molecule. It's \_\_\_\_\_.
5. These are elements and compounds. It's \_\_\_\_\_.

**2) Now classify the following words:**

Fe                  CO<sub>2</sub>                  Gold                  water                  vinegar

| Atom | Molecule | Pure substance<br>element | Pure substance<br>compound | Mixture |
|------|----------|---------------------------|----------------------------|---------|
|      |          |                           |                            |         |

**3) Write conductor or insulator.**

|                                                                                     |                                                                                     |                                                                                       |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|  |  |  |
| <b>STEEL</b>                                                                        | <b>PLASTIC</b>                                                                      | <b>WOOD</b>                                                                           |
|  |  |   |
| <b>SILVER</b>                                                                       | <b>COPPER</b>                                                                       | <b>GLASS</b>                                                                          |
|  |  |  |
| <b>ALUMINIUM</b>                                                                    | <b>CORK</b>                                                                         | <b>WATER</b>                                                                          |
|                                                                                     |                                                                                     |   |
|                                                                                     |                                                                                     | <b>IRON</b>                                                                           |

**4 Complete the paragraph.**

can    can't    insulator    conductor    slowly    fast    heat    move

Molecules in matter always \_\_\_\_\_. At low temperatures they move \_\_\_\_\_ and at high temperatures they move \_\_\_\_\_. We feel this movement as \_\_\_\_\_.

In metal the molecules \_\_\_\_\_ move a lot. Metal gets very hot. It's a thermal \_\_\_\_\_.

In plastic the molecules \_\_\_\_\_ move a lot. Plastic doesn't get hot. It's a thermal \_\_\_\_\_.

**5 Match and write the sentences in your notebook.**

- |                                              |                                             |
|----------------------------------------------|---------------------------------------------|
| a) Two or more different atoms...            | 1. the molecules can move about.            |
| b) A pure substance has...                   | 2. join together to make a molecule.        |
| c) In a thermal conductor...                 | 3. new molecules are formed.                |
| d) In a solution different molecules from... | 4. only one type of atom or molecule.       |
| e) In a chemical change...                   | 5. the solvent and the solute mix together. |

**6 Think Choose the correct answer.**

- |                                  |                                          |
|----------------------------------|------------------------------------------|
| a) Which are pure substances?    | c) Which is the solute in hot chocolate? |
| 1. elements and compounds        | 1. milk                                  |
| 2. atoms and molecules           | 2. chocolate                             |
| 3. elements and mixtures.        | 3. water.                                |
| b) Which are thermal insulators? | d) Which are physical changes?           |
| 1. wood and metal                | 1. changing place and state              |
| 2. glass and plastic             | 2. burning and rusting                   |
| 3. wood and plastic.             | 3. changing temperature and burning.     |

e) Which is the property of a ceramic pot?

1. Elastic.
2. Fragile.
3. Tough

f) Which is the property of a rubber band?

1. Hard.
2. Elastic.
3. Plastic

g) Which is the property of a golden ring?

1. Soft
2. Tough
3. Fragile

h) Which is the property of a book?

1. Plastic
2. Hard
3. Elastic

**7 Think** Write *homogeneous* or *heterogeneous* under each mixture.



\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**8 Think** Identify the solute and solvent in each of these solutions.

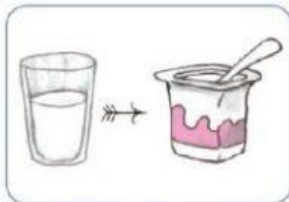
| Solution             | Solute | Solvent |
|----------------------|--------|---------|
| strawberry milkshake | _____  | _____   |
| salt water           | _____  | _____   |
| sweet tea            | _____  | _____   |
| chocolate yogurt     | _____  | _____   |
| lemon sorbet         | _____  | _____   |

**9) Read and identify the types of change: physical or chemical.**

Their molecules move about but their structure doesn't change. The substance is the same.

New molecules are made and the matter is changed forever.

**10 Think** Write under each change *physical* or *chemical*.



Milk changes into yogurt.



A piece of fruit rots.



Milk is warmed for a baby.



A comb falls on the floor.



A can rusts.



A piece of wood burns.