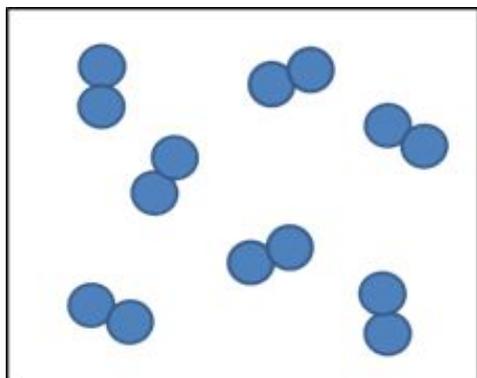


PURE SUBSTANCES AND MIXTURES

ACTIVITY 1

Do you think the substance represented in this diagram is an **element**?



To help you answer the question, let us go through the following questions.

1. Write down what you see in the picture.
2. Do you think it is a mixture of substances or a pure substance? Why do you think so?
3. Are the atoms all of the same kind?
4. What class of substances is made up of only one kind of atom?
5. Is the substance an element? Why?
6. Can elements be made up of molecules?

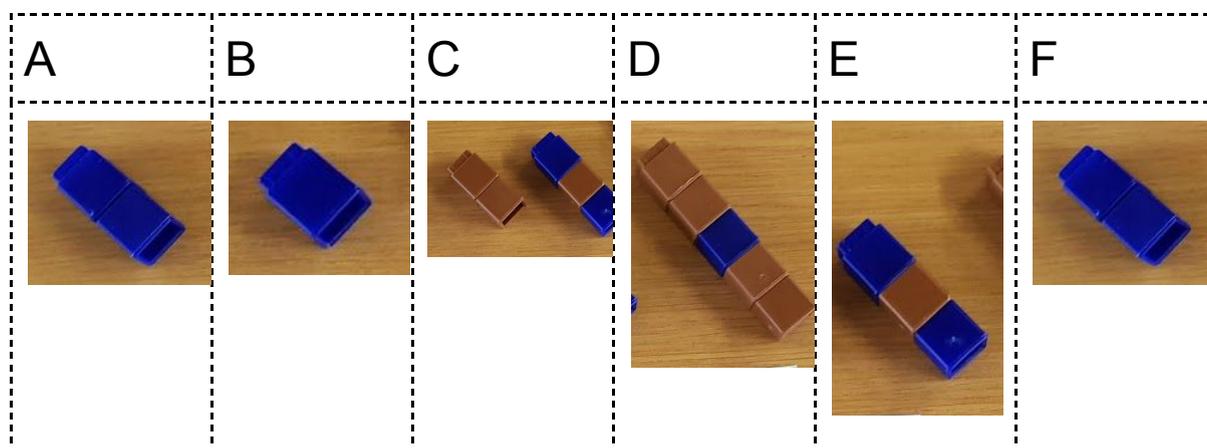
ACTIVITY 2

Using items from around the house. Make models of atoms, elements, compounds, molecules of elements, molecules of compounds and mixtures. These models must show that you understand the terms and definitions and concepts correctly.

Items you can use: Buttons, lego bricks, play dough, beads, coins, plastic bottle lids

This is a cut and paste activity. Cut out the pictures, terms and definitions and stick them together so that they match each other

Pictures



Terminology

Atom	Element	Molecule of an element	Compound	Mixture	Molecule of a compound
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Definitions

Made up of just one kind of atom	Two or more of the same kind of atom that have chemically bonded with each other	A combination of two or more pure substances mixed together	The fundamental particles that all matter is made up of	Made up of more than one kind of atom but always combined in a fixed ratio	Two or more different kinds of atoms that have chemically bonded with each other
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ACTIVITY 3

You must classify the matter in each block using only the letters A to E to identify the categories:

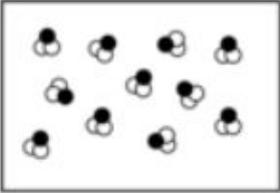
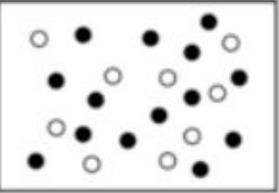
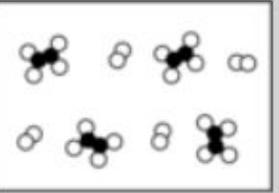
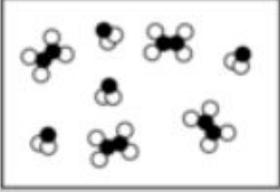
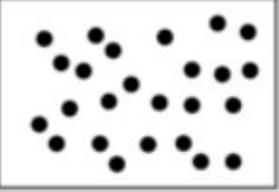
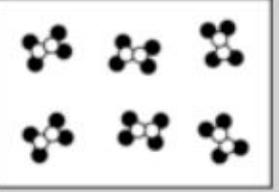
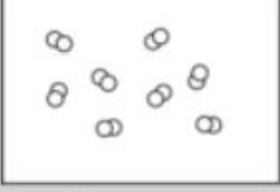
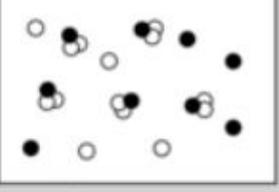
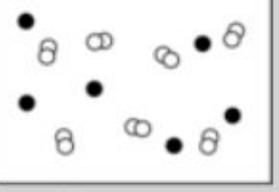
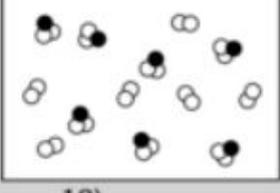
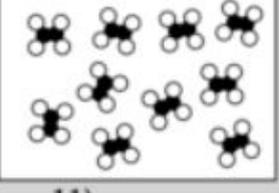
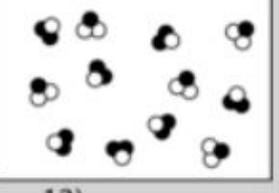
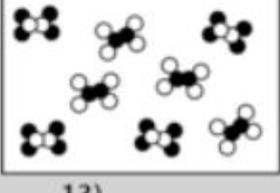
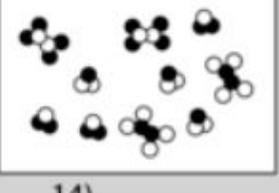
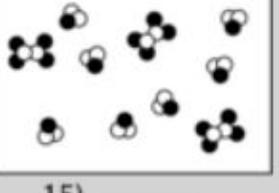
A = element

B = compound

C = mixture of elements

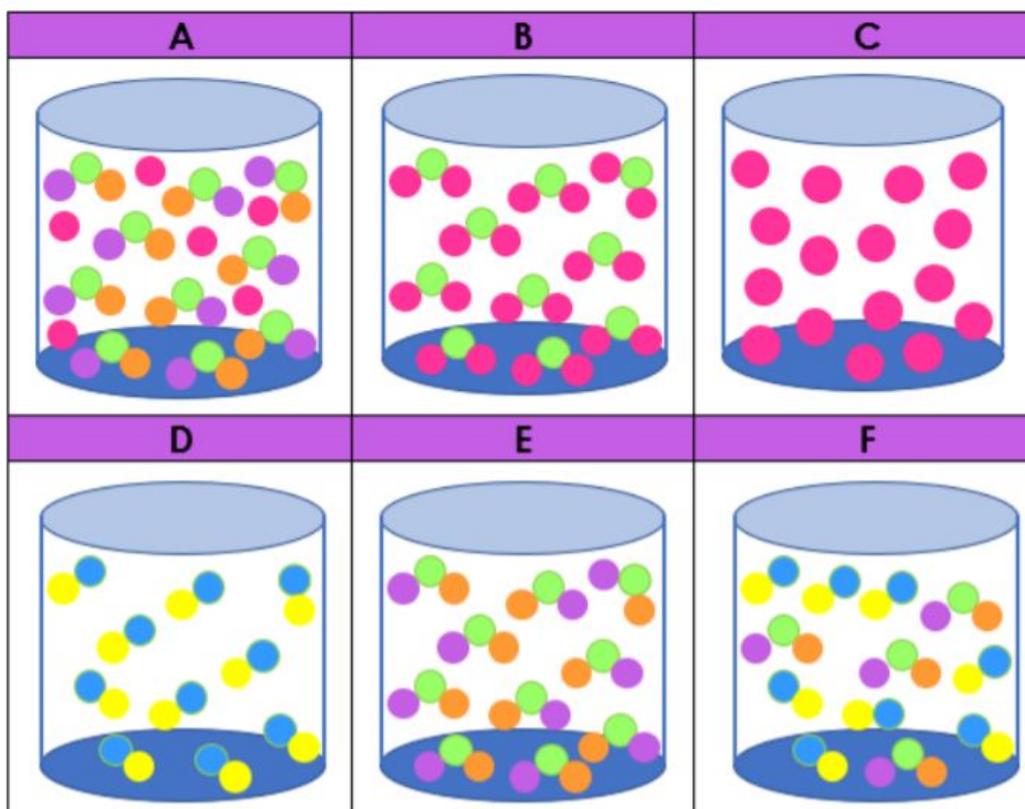
D = mixture of compounds

E = mixture of elements and compounds

 1) _____	 2) _____	 3) _____
 4) _____	 5) _____	 6) _____
 7) _____	 8) _____	 9) _____
 10) _____	 11) _____	 12) _____
 13) _____	 14) _____	 15) _____

ACTIVITY 4

Study the images A to F below and answer the following questions. Each of the six blocks (labelled A to F) contain some matter. You must answer the following questions using the diagrams in the blocks.



You must classify the matter in each block A to F using only the numbers 1 - 6 to identify the following categories: Each question may have more than one answer!

1. Element
2. Compound
3. mixture of elements
4. mixture of compounds
5. mixture of elements and compounds
6. a pure substance

ACTIVITY 5:

Look at the following diagrams. Decide whether each represents an atom or a molecule. If it is a molecule, state how many atoms make up the molecule.

Diagram	Atom or molecule or compound?
