ACTIVITY 1

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

ACTIVITY 2

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

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Element</strong></td>
<td><strong>Atom</strong></td>
<td><strong>Mixture</strong></td>
<td><strong>Compound</strong></td>
<td><strong>Molecule of a compound</strong></td>
<td><strong>Molecule of an element</strong></td>
</tr>
<tr>
<td>Made up of just one kind of atom</td>
<td>The fundamental particles that all matter is made up of</td>
<td>A combination of two or more pure substances mixed together</td>
<td>Made up of more than one kind of atom but always combined in a fixed ratio</td>
<td>Two or more different kinds of atoms that have chemically bonded with each other</td>
<td>Two or more of the same kind of atom that have chemically bonded with each other</td>
</tr>
</tbody>
</table>
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

The classifications are as follows:

1. B
2. C
3. E
4. D
5. A
6. B
7. A
8. E
9. C
10. E
11. B
12. D
13. D
14. D
15. D

(Siyavula https://www.siyavula.com/read/science/grade-8/atoms/05-atoms?id=toc-id-12#toc-id-12)
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 C
2. Compound B D E
3. mixture of elements NONE
4. mixture of compounds F
5. mixture of elements and compounds A
6. a pure substance B C D E
**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.

<table>
<thead>
<tr>
<th>Diagram</th>
<th>Atom or molecule or compound?</th>
</tr>
</thead>
</table>
| ![Diagram 1](image1.png) | Atom  
Element |
| ![Diagram 2](image2.png) | Molecule  
Diatomic molecule  
Element  
2 of the same atoms |
| ![Diagram 3](image3.png) | Molecule  
Compound  
4 atoms - 1 blue atom and 3 white atoms |
| ![Diagram 4](image4.png) | Element  
atom |
<table>
<thead>
<tr>
<th>One molecule</th>
<th>Compound</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 different elements</td>
<td>10 atoms in total</td>
</tr>
<tr>
<td>1 x red atom</td>
<td>2 x grey atoms</td>
</tr>
<tr>
<td>6 x white atoms</td>
<td></td>
</tr>
</tbody>
</table>