

WorksheetCloud: WORKSHEET

Grade

Subject: Natural Sciences

Topic: Chemical Reactions

Activity 1

Suppose you mix some chemicals in a beaker. How will you know if a reaction has taken place? Write a paragraph describing each of the signals that would indicate a reaction has taken place and what each signal tells you about that reaction. [6 marks]

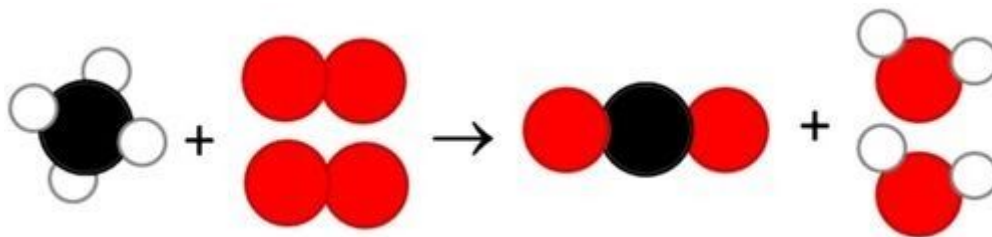
Write your own definition for what a reactant is. [1 mark]

Write your own definition for what a product is. [1 mark]

Explain what happens to the bonds between atoms in the reactants and products in a chemical reaction. [2 marks]

Activity 2

1. Methane gas (CH₄) is a natural fuel gas that burns in oxygen gas to produce carbon dioxide and water. The reaction can be represented by the following diagram:



Key: Carbon atoms (C): black Oxygen atoms (O): red Hydrogen atoms (H): white

2. Use the diagram and the 'key' below it to write formulae for each of the substances in the reaction. [4 marks]

| Name of compound | Formula |
|------------------|---------|
| Methane | |
| Oxygen gas | |
| Carbon dioxide | |
| Water | |

What are the reactants of the above reaction? [2 marks]

What are the products of the above reaction? [2 marks]

Write the names of the reactants and products under the colourful picture representations of each of the molecules. [2 marks]