

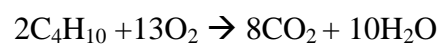
Chapter 6, Lesson 1 Activity Sheet Answers

1. In the chemical reaction that causes a candle to burn, the reactants are molecules in the wax and oxygen in the air.
2. When a candle burns, the products of the reaction are carbon dioxide and water vapor.
3. Oxygen from the air is one of the reactants in the chemical reaction that makes the flame. When a jar is placed over the candle the flame goes out because the oxygen under the jar gets used up and no more can get to the candle. Without one of the reactants, the reaction stops and the flame goes out.
4. The atoms that make up the carbon dioxide and the water on the right side of the equation come from the reactants which are methane and oxygen on the left side of the equation.
- 5.

$\text{CH}_4 + 2\text{O}_2 \rightarrow \text{CO}_2 + 2\text{H}_2\text{O}$		
Atom	Reactant Side	Product Side
Carbon	1	1
Hydrogen	4	4
Oxygen	4	4

6. In a chemical reaction, atoms are not created or destroyed. You can tell by looking at a chemical equation. There is exactly the same number of each type of atom in the products as there are in the reactants.
7. A chemical change is different than a physical change because in a chemical change the identity of the substance actually changes. Like when methane reacts with oxygen, the products, which are carbon dioxide and water, are completely different substances from the reactants.
- 8.

$\text{C}_3\text{H}_8 + 5\text{O}_2 \rightarrow 3\text{CO}_2 + 4\text{H}_2\text{O}$		
Atom	Reactant Side	Product Side
Carbon	3	3
Hydrogen	8	8
Oxygen	10	10



2C ₄ H ₁₀ + 13O ₂ → 8CO ₂ + 10H ₂ O		
Atom	Reactant Side	Product Side
Carbon	8	8
Hydrogen	20	20
Oxygen	26	26