

Chapter 6, Lesson 5 Activity Sheet Answers

1. Both of these demonstrations involve chemical changes. In both reactions, hydrogen peroxide (H_2O_2) decomposes to form oxygen gas and water. Since these products are different substances than the hydrogen peroxide, the process was a chemical change.
2. When hydrogen peroxide decomposes, water and oxygen gas are produced. A catalyst causes the chemical reaction to happen faster. Even though a catalyst causes a reaction to happen faster, it is not included as a product of the reaction because the atoms of the catalyst do not become part of the products.
3. When the yeast was added to the hydrogen peroxide, bubbles formed. Production of a gas is evidence that a chemical reaction occurred.
4. The catalyst is a substance in the yeast.
5. When the hydrogen peroxide was originally in the graduated cylinder, no bubbles were being produced. But when the yeast was added, bubbling started. This means that the chemical reaction was happening faster with the yeast than without it.
6. Yeast should not be included on the product side of the equation since it acted as a catalyst and did not become part of the products.
7. When aluminum foil and salt are added to a copper II sulfate solution, the blue solution loses its color and a brownish-colored solid is produced. There is also bubbling. These color changes and production of a gas are evidence of a chemical change.
8. The catalyst in this activity is the salt. Before adding the salt, the copper II sulfate did not react with the aluminum but after adding the salt, it did.
9. Adding salt to the aluminum is like adding yeast to the hydrogen peroxide because in both cases adding the substance caused the reaction to go faster but the atoms of the substance did not become incorporated into the products.