

Chapter 6, Lesson 10 Activity Sheet Answers

1. When breath is blown into the indicator solution, the solution turns slightly acidic.
2. Carbon dioxide (CO_2) gas in breath caused the indicator solution to become acidic.
3. The universal indicator solution exposed to carbonated water is greenish-yellow. This means that the indicator solution is slightly acidic.
4. The indicator solution became slightly acidic and changed color because carbon dioxide (CO_2) gas reacted with water in the solution and formed carbonic acid.
5. The universal indicator solution exposed to the vinegar and baking soda reaction turns yellow. This means that the indicator solution is acidic. The indicator solution in the cup without the reaction stays green so it is neutral.
6. The set of cups with just the indicator solution and vinegar is a control. It is used to compare the color of the indicator solution in the other cups with the chemical reaction.
7. The reaction between baking soda and vinegar produces carbon dioxide (CO_2) gas. The gas reacts with the water and forms carbonic acid. This acid causes the color change in the indicator.
8. When carbon dioxide reacts with water in the ocean, the water becomes more acidic. This is bad for sea animals with shells, especially coral.
9. Since an Alka-Seltzer tablet is made of citric acid and sodium bicarbonate (baking soda) they react to form carbon dioxide gas (CO_2) which inflates the bag.
10. The solution turned green because the acid (citric acid) and the base (sodium bicarbonate) neutralized each other.