



Backpack-tivity:

An @Home Learning Activity

Secret Message

Introduction:

As you complete this activity, you'll learn that heat turns lemon juice and oxygen into a compound called an oxide.

Materials:

You'll need a piece of white paper, a calligraphy pen, a candle, and lemon juice.

Directions:

Student: Pour a little lemon juice in a cup. Dip your writing pen into the lemon juice and write a message in large letters on the sheet of paper. When the liquid dries, the message will be invisible.

Family Partner:

To make the message appear, hold the paper close to the flame of a candle . The message will gradually show as faint brown scorching.

Talk About It:

What happened? The paper absorbed the lemon juice. When the lemon juice was heated, a chemical reaction occurred: the lemon juice combined with oxygen from the air and formed a compound called an oxide. The oxide is brown, so the message became visible. Look up the definitions for oxygen, oxide, and oxidized in a dictionary and write the definitions on the lines below.

Learn More:

Read more about oxidation at Internet Chemistry at http://library.kcc.hawaii.edu/external/chemistry/redox_title.html.

This activity was completed by _____ and _____.