Handout M04-1. Why does the candle go out?

Name: _____________________________

1. Place one votive candle on the metal tray and light it. You will light your long match from this candle, and you’ll probably use the long match more than once.

2. Place the other candle in a beaker or other container.

3. Light the long fireplace match from the burning candle on the metal tray. Then use it to light the candle in the container. If either candle is hard to light, you may need to scrape some wax from around the wick. This step proves that the candle in the container can be lighted.

4. Blow out the candle in the container.

5. Spoon 1-2 tablespoons of baking soda around the base of the candle, about enough to coat the bottom of the container. Be careful not to get the baking soda on the candle. Alternative: Add the baking soda to an empty container and then replace the candle.

6. Light the candle to make sure that the baking soda did not alter its ability to burn. Then blow it out.

7. Pour about ¼ c (60 mL) of vinegar into the baking soda around the candle. Do this slowly so the mixture doesn’t foam so enthusiastically that it wets the candle wick.

8. Relight the fireplace match from the candle on the metal tray. Then use it to relight the candle in the container.

9. Try different techniques for lighting the candle in the container.

10. Use complete sentences to answer the questions below.

A. Describe what you observed when you mixed vinegar and baking soda.

B. Describe what you observed when you were lighting the candle in the container after vinegar was added.

C. Describe any other techniques you used to light the candle in the container, and explain how well each technique worked.

D. Use the Fire Triangle to explain your observations.