Name: _____ Group: _____ Date: _____

LAB 20
OBSERVATION

THE SYNTHESIS OF WATER

STUDENT BOOK	Chapter 2, page 53
TOOLBOX	Page 40

Goal

Observe the effects of energy released during the synthesis of water.

Observation criteria

1. The chemical formula of water is H_2O. What elements are needed for the synthesis of water?

_____

2. What test can be performed to determine the presence of water?

_____

3. In the case of a positive result, what would be the test result?

_____

Materials

- matches *or* lighter
- wood splint
- test-tube rack
- test tube (25 mm × 150 mm) of hydrogen and stopper (No. 4)
- cobalt chloride paper strip
- thermometer (optional)

Procedure

1. Light the wood splint.
2. Open the test tube and quickly insert the flaming wood splint. Record your observations.
3. Touch the exterior surface of the test tube. Record your observations.
4. Pass the cobalt chloride paper strip along the interior surface of the test tube. Record your observations.
5. Clean up and put away materials.

Name: _____ Group: _____ Date: _____

Observations

Record your observations in the table below. Give the table a title.

Title:

Procedure	Observation

Reflecting on your observations

1. What substance is formed during this procedure? Explain your answer with the help of the tests you performed.

2. What is the source of oxygen necessary for this change?

3. Is energy released or absorbed? Explain your answer.

4. Is this a physical change or a chemical change? Explain your answer.

5. Are all reactions of synthesis the same? Explain your answer.

6. Write the chemical equation for the change observed. Include the place of energy.

7. What forms of energy are involved in this change?

8. How could you improve the protocol for this lab?