

Chemistry Grade 5 Lab Practical

Teacher's Answer Key

This is your chance to see how well your students have picked up on important key concepts, and if there are any holes. Your students also will be working on their homework assignment as you do this test individually with the students.

Materials:

- goggles
- teaspoon
- cobalt chloride
- distilled water
- cotton swab
- test tube with stopper
- funnel
- test tube stand
- index card
- hair dryer
- blue litmus paper
- dropper
- vinegar
- baking soda solution

Lab Practical: Ask the student *Note: Answers given in italics!*

1. Give student blue litmus paper and a dropper. Have two unlabeled flasks on the table, one with an acid (such as vinegar) and one with a base (such as a baking soda solution). Ask student to first demonstrate how to determine if a solution is an acid or a base. Then, follow the correct procedure to make red litmus paper. He or she should do the following:
 - a. *Use the dropper to drop a sample from each flask onto the blue litmus paper.*
 - b. *Student should identify the acid because the blue litmus paper turns red in the presence of an acid.*
 - c. *To make red litmus paper, the student should use the acid to turn the blue litmus paper completely red, then rinse in cold water and set aside to dry.*
2. Give student a test tube with stopper, test tube stand, funnel, teaspoon, distilled water, and cobalt chloride. Ask him or her to make a saturated solution of cobalt chloride. *(Student should pour water into the test tube and add cobalt chloride, a little bit at a time. Between each addition they should cap and shake the test tube. The solution is saturated when they cannot dissolve any more cobalt chloride into the water.)*
3. Ask student to demonstrate the effect of temperature and humidity on the chemical cobalt chloride by writing a message (perhaps their favorite thing about chemistry class!) on an index card using a cobalt chloride solution, then making it appear. Students should do the following:
 - a. *Using the cotton swab, dip into the cobalt chloride solution and write on the index card. Use a hair dryer to blow across the solution and reveal the message.*

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Student Worksheet

This is your chance to show how much you have picked up on important key concepts, and if there are any holes. You also will be working on a homework assignment as you do this test individually with a teacher.

Materials:

- goggles
- teaspoon
- cobalt chloride
- distilled water
- cotton swab
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- funnel
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- index card
- hair dryer
- blue litmus paper
- dropper
- vinegar
- baking soda solution

Lab Practical: Ask the student

1. Find blue litmus paper, a dropper, and two unlabeled flasks. Can you demonstrate how to determine if a solution is an acid or a base? Do this now.

Next, follow the correct procedure to make red litmus paper.

2. Find a test tube with stopper, test tube stand, funnel, teaspoon, distilled water, and cobalt chloride. Make a saturated solution of cobalt chloride.
3. Demonstrate the effect of temperature and humidity on the chemical cobalt chloride by writing a message (perhaps their favorite thing about chemistry class!) on an index card, and then making it appear.