

IEA - Data Enhancement Project

Questionnaire printing

Study: SC2

Population: 1

Instrument: STPR\_1

Student Science Test Lab Exercises (1PRA\_A&B) Population 1

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Experiment I

Before you are two containers. One contains a blue liquid. Place a straw over the stem [ Picture ] in the container and blow into the straw for about one minute.

1 What change did you see take place in the liquid?

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2 What is an explanation for this change?

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Experiment II

Two plastic animal specimens are on display before you.

Look at them carefully.

1 List three ways in which you can see that they are alike.

1. \_\_\_\_\_  
\_\_\_\_\_

2. \_\_\_\_\_  
\_\_\_\_\_

3. \_\_\_\_\_  
\_\_\_\_\_

2 List three ways in which you can see that they are different.

1. \_\_\_\_\_  
\_\_\_\_\_

2. \_\_\_\_\_  
\_\_\_\_\_

3. \_\_\_\_\_  
\_\_\_\_\_

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Experiment III

The diagram below represents an electric tester.

[ Picture ]

Use the materials provided to make such an electric tester.

- 1 What happens when the wires X and Y are connected?  
(Circle "A" or "B")

"A" The bulb lights.                      "B" The bulb does not light.

- 2 Test the objects provided to see which conduct electricity. Place a check (û) in the appropriate column to indicate the result.

Object	Bulb Lights	Bulb Does Not Light	Conductor	Not A Conductor
Aluminium				
Foil				
Paper				
Clip				
Plastic				
Spoon				
Wood				

- 3 How did you find out that some objects are conductors?

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Disconnect the wires when you are asked to clear your area.

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Experiment I

Use the water in the cups marked "X" and "Y" to test the change in temperature when you mix hot and cold water.

- 1 What is the temperature of the water in cup "X"? \_\_\_\_\_
- 2 What is the temperature of the water in cup "Y"? \_\_\_\_\_
- 3 What do you think will be the temperature of the mixture when water from cup "X" and cup "Y" are poured into the larger cup? \_\_\_\_\_

Now pour the water from cup "X" and cup "Y" into the larger cup. Stir the mixture.

- 4 What is the temperature of the mixture? \_\_\_\_\_
- 5 If the temperature of the mixture is different from what you predicted in Question 3, what might be the reason?  
\_\_\_\_\_  
\_\_\_\_\_
- 6 What do you predict would be the temperature if you mixed equal amounts of water at 10 °C and 90 °C? Give a reason for your answer.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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Experiment II

On the table are a plastic cup with water, a cup containing a colored substance, and a small spoon.

Add half a spoonful of the colored substance to the water in the plastic cup.

DO NOT STIR OR MOVE THE CUP.

Observe what happens for several minutes.

- 1 Describe what you saw happen to the colored substance.

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- 2 Explain what you think happened.

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Experiment III

There is a white sheet of paper before you. In a dish you will find a Q-tip. Dip it in the cooking oil and then rub it against the attached "Testing Sheet" in the space labelled "cooking oil" and observe what happens.

- 1 Describe what you saw happen when you rubbed the oily Q-tip against the paper.

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In a container you will find different plant seeds. Rub each of them against the paper in the correct space on the next page.

- 2 List the number of the seed(s) which, according to your tests, contain oil.

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- 3 Describe the procedure you used to determine which seed(s) contained oil.

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Throw away the used Q-tip when you are asked to clear your work area.

COOKING OIL

PEANUT

WALNUT

LIMA BEAN

KIDNEY BEAN

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