Chemistry 8 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:

- large paperclip
- galvanized nail
- copper penny
- brass screw
- aluminum foil
- four alligator wires
- digital multimeter
- lemon
- potato
- apple
- pH paper strips
- salt
- sugar
- glass of water

Lab Practical: *Note: Answers given in italics!*

1. Design an experiment that demonstrates electrochemistry by making a battery from the items provided. Indicate the positive and negative electrodes, ions, electrolyte, electrical current flow direction, and explain the chemical process taking place.

   Refer to Fruit Battery experiment. This experiment shows how a battery works using electrochemistry. This experiment uses electrolytes (solution containing free ions, like salt water or lemon juice) to generate a voltage. The copper electrons are chemically reacting with the lemon juice, which is a weak acid, to form copper ions (cathode, or positive electrode) and bubbles of hydrogen. These copper ions interact with the zinc electrode (negative electrode, or anode) to form zinc ions. The difference in electrical charge (potential) on these two plates causes a voltage.

Chemistry Grade 8 Lab Practical

Student Exam

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:

- large paperclip
- galvanized nail
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- aluminum foil
- four alligator wires
- digital multimeter
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- potato
- apple
- pH paper strips
- salt
- sugar
- glass of water

Lab Practical:

1. Design an experiment that demonstrates electrochemistry by making a battery from the items provided. Indicate the positive and negative electrodes, ions, electrolyte, electrical current flow direction, and explain the chemical process taking place. Make a diagram drawing (label everything!) of your experiment below before completing this exam.