Name: _____
Date: _____

Lab 3: The Electric Circuit /33

/2 INTRODUCTION

1. List the 4 parts of an electric circuit.

   _____

2. What happens if a circuit is allowed to operate without a load?

   _____

/2 PURPOSE

In this lab, you will _____ and _____ various simple electric circuits.

/1 MATERIALS

- _____
- _____
- _____
- _____
- _____
- _____

/1 PROCEDURE

- refer to pages _____ of Nelson Science 9: Concepts and Connections

/7 OBSERVATIONS

The voltage rating of the battery is _____ V.

LOAD USED	DIAGRAM OF CIRCUIT
light bulb	
electric motor	
LED	

Name: _____
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/20 ANALYSIS

1. What is the function (job) of each of the following electric parts? (6 marks)

PART	FUNCTION
dry cell	
switch	
light bulb	
electric motor	
LED	
wires	

2. (A) Which of the 4 parts of an electric circuit (energy source, wires, load, switch) can be removed while allowing the circuit to continue working? (1 mark)

   _____

   (B) Why is this part usually included in a circuit? (1 mark)

   _____

3. List 2 different ways of turning the electrical devices (light bulb, electric motor, LED) on or off. (2 marks)

   (1) _____

   (2) _____

4. Would the circuit operate differently if:
   (A) the connections on the switch were reversed? Why? Try this! (2 marks)

   _____

   (B) the switch were connected on the other side of the electrical device? Why? Try this! (2 marks)

   _____

5. What effect would reversing the connecting wires have on the:
   (A) light bulb? Why? Try this to check your answer. (2 marks)

   _____

   (B) electric motor? Why? Try this to check your answer. (2 marks)

   _____

   (C) LED? Why? Try this to check your answer. (2 marks)

   _____