Racing Junkbots

Name: _____

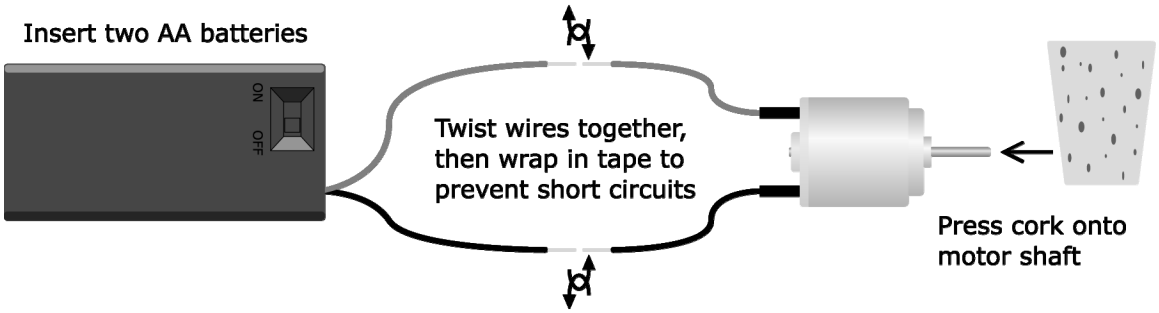
Student worksheet

Date: _____

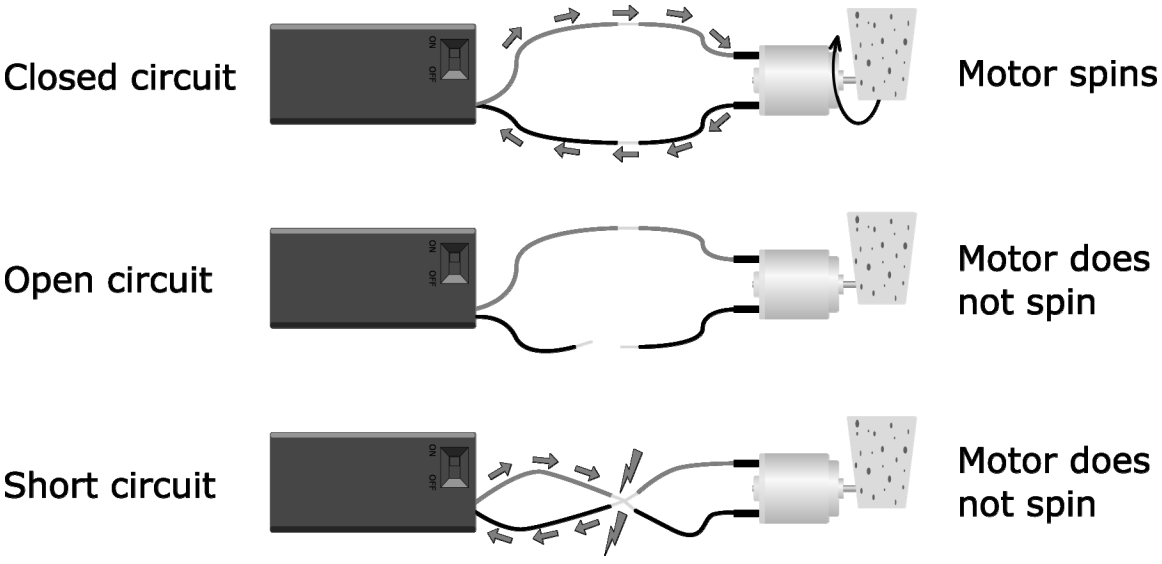
Directions: Follow the instructions below to start building your robot.

1. Connect the circuit.

Follow along with your teacher to connect the motor and battery as shown in the diagram.



In order for your circuit to work properly, you need to have a **closed circuit**. Make sure you avoid **open circuits** and **short circuits**.



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Name: _____

Directions: Before you continue building your robot, complete the design step below.

2. Design

In the space below, draw a sketch of your robot design. Label the materials you will use. You might come back to this page to modify your sketch or make a new one as you test your robot.

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Name: _____

Directions: Follow these steps to test your robot. Use the blank space on this page to take notes.

3. Test

a. Take your robot to an area of open floor space.

b. Put the robot down and turn the battery pack on.

c. Observe how the robot moves. Is it fast or slow? Does it move straight or spin in circles? Does it fall over or stay upright? Does the robot stay together or fall apart?

d. Based on your observations, modify your design and test it again.

4. Race

a. Take your robot to the race course and place it behind the start line.

b. Turn the battery pack on and observe the robot. Does it move forward toward the finish line? Does it eventually cross the line?

c. Continue to modify and re-test your design until you can get it to cross the finish line.