

Name _____ Date _____

Challenge: Resisting the Flow Worksheet

1. Currently, you have one 9-volt battery and one motor on your breadboard. Turn the motor on using only copper wire and resistors.

2. List the components you used to complete this challenge. BE SPECIFIC!

3. Change the resistors to speed up or slow down the propeller. After each change to a resistor, use the multimeter to measure the current (A) and voltage (V) across the motor. Try at least two different resistors. What current and voltage changes did you notice?

4. How does increasing or decreasing the resistance change the voltage (V) and current (A)?

5. Explore: What resistance will stop the propeller from spinning?

6. Explore: Can you burn out the motor? If so, how?

7. Attempt to test your predictions from the previous question. When you have “burned out” the motor, take a photo.