Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period \_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



**Lesson 3: Is Wider Better?**

Tornadoes come in a variety of sizes and shapes. Some tornado funnels are narrow and tall, while others are wide and short. Does the shape of the funnel affect the amount of damage a tornado creates?

**Doing the Science**

1. Start the Tornado Simulation by clicking on the “Sim” tab.

2. Make sure the Funnel Width is set on “1-Narrow.” Leave the Pressure on “1,000 millibars” and the Temperature Difference on “0ºC” for this entire lesson.

3. Click the “Run Simulation” button.

4. Note and record in Table 1 the Wind Speed and Damage Rating.

5. Click the “Reset Simulation” button. Change the Funnel Width to “2” and rerun the experiment repeating steps 3 – 4.

6. Continue collecting data for Funnel Widths of 3, 4, and 5-Wide. Make sure to keep Pressure and Temperature Difference constant.

**Table 1.**

|  |  |  |
| --- | --- | --- |
| **Funnel Width** | **Wind Speed (mph)** | **Damage Rating** |
| **1-Narrow** |  |  |
| **2** |  |  |
| **3** |  |  |
| **4** |  |  |
| **5-Wide** |  |  |

**Do You Understand?**

1. How are funnel width and the wind speed associated with a tornado related?

2. How does the width of the funnel impact the damage caused by a tornado?

3. What factors most affect the wind speed of a tornado and the damage caused by a tornado?