Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Block:\_\_\_\_\_\_

**Reaction Time Lab:**

The Nervous System is the apparatus through which information travels throughout the human body. Information travels to the part of your brain known as the **Cerebrum**—say a baseball is flying toward your face—the Cerebrum sends this message to the **Cerebellum**, which decides whether to duck, move away, or try to catch the ball. The time it takes from when your eyes first notice the threat of a baseball to the face to when you finally reach out and catch it is an example of **Reaction Time**. Your body does not react instantly. In this activity, you will work with a partner to explore whether Reaction Time is constant or can be improved with practice.

Materials: Ruler, Partner

**Hypothesis:**

**Procedure:** Hold a ruler between the thumb and forefinger of your partner in such a way so that, when dropped, your partner can close his thumb and forefinger and try to catch the ruler before it hits the ground. The ruler should be approximately 2cm above your partner’s hand before release. Do not tell your partner when you will drop the ruler. Your partner will try and catch it as soon as they react to it being dropped. The number directly above your partner’s thumb (cm) will be the recordable data. The lower the number, the faster the reaction time. Do 10 trials and record the data on the chart below and then graph the data:

| Trial # | Reaction Time (cm) |
| --- | --- |
| 1 |  |
| 2 |  |
| 3 |  |
| 4 |  |
| 5 |  |
| 6 |  |
| 7 |  |
| 8 |  |
| 9 |  |
| 10 |  |

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**1) Did your Reaction Time improve or decline after 10 completing 10 trials? According to these results do you accept or refute your original hypothesis?**

**2) What does this experiment tell you about the human brain?**

**3) What are some real life situations where it would be beneficial to possess incredible reaction time?**