



✖ WONDERVILLE ACTIVITY

HOW FAST DO YOU REACT?

In the world of sports, a player's reaction time can mean the difference between a win and a loss. Reaction time is the amount of time that elapses between a stimulus and the response to it.

In this experiment you will determine how long it takes you to respond to the dropping of a ruler (*the stimulus*) and measuring how far the object falls before it is caught (*the response*).

What You Need

- ruler (metric)
- a partner

What To Do

1. Rest your arm near the edge of a table so that your wrist extends over the side.
2. Hold your thumb and index finger about an inch apart.
3. Your partner holds the ruler vertically in the air between (but not touching) your thumb and index finger. The bottom end of the ruler should be between your thumb and finger.
4. Your partner drops the ruler without warning you. As quickly as you can, close your thumb and finger on the ruler.
5. Record the centimetre reading where you caught the ruler.
6. Trade places with your partner and repeat the experiment.

_____ My reaction time in centimetres

_____ Partner's reaction time in centimetres

Most people catch the ruler between 15.25 and 20.3 centimetres. How does your reaction time compare to this?

Use the following table to convert the distance the ruler fell to a reaction time.

CENTIMETRES FALLEN	REACTION TIME IN SECONDS
12.7	0.161
14	0.169
15.25	0.177
16.5	0.184
17.8	0.191
19	0.198
20.3	0.204
21.6	0.210

Did You Know?

The world's top sprinters can start a race in approximately .150 seconds. That's how quickly they can respond to the sound of the starter's pistol and begin running.

Reaction Time and Sports

What sports are dependent on a person's reaction time? List as many as you can.

