**How Can You Measure Speed?**

**Purpose:** To determine the relationship between speed, distance, and time by rolling the tennis ball a given distance.

**Hypothesis:**

If I roll the ball \_\_\_\_\_\_\_\_\_\_\_\_, then it will travel \_\_\_\_\_\_\_\_\_\_, because \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Materials:**

* Tape
* Meter stick
* Tennis ball
* Stopwatch

**Procedure:**

1. Place a piece of tape on the floor.
2. Measure a distance on the floor 2 meters away from the tape.
3. Mark this distance with a second piece of tape.
4. Roll a tennis ball from one piece of tape to the other, timing how long it takes to travel the 2 meters.
5. Roll the ball again so that it travels the same distance in less time.
6. Roll the ball one more time so that it takes even less time to travel that distance then it did the second time.

**Data:**

|  |  |
| --- | --- |
| **Trial Number** | **Time In Seconds** |
| 1 |  |
| 2 |  |
| 3 |  |

**Conclusion:**

1. How did you change the time it took the ball to travel 2 meters?
2. How did changing the time affect the motion of the ball?