

## Fidget Spinner Motion

In this activity you will investigate the variables that affect the motion of a fidget spinner.

1. Describe your fidget spinner. Try to identify some characteristics that might affect its motion. Record your observations in Table 1.

**Table 1 Fidget spinner characteristics**

1.
2.
3.
4.

2. Measure both the length and the mass of your fidget spinner. Record the data in Table 2.

3. Spin your fidget spinner and time it. Try to be as consistent as possible when you spin it. Record the results in Table 2. Calculate the average spin time. Why is it important to be consistent when you spin the fidget spinner?

4. Collect data from others for four other spinners.

**Table 2 Length, mass and spin times of fidget spinners**

Fidget spinner	Length (cm)	Mass (g)	Spin time 1	Spin time 1	Average spin time
1					
2					
3					
4					
5					

5. From the data you collected in Table 2, can you identify any effect of fidget spinner mass and length on spin time?

6. Why is it difficult to compare the average spin time from one group to another?

7. a) Identify another variable that might affect spin time and describe how you would investigate its effect.

b) Perform the investigation.

8. a) Find out what a control variable is and describe why control variables are important in experiments.

b) What were some control variables in this experiment?

