

### Pendulum experiment

Scientists must make sure that they conduct **FAIR TESTS!**

#### **PART 1:**

**Does mass affect the swing of a pendulum?**

Use a 30 cm string

Use a 45° arc angle

Keep these the same. These are your **controlled variables**.

a) use a pendulum with 2 washers

b) use a pendulum with 5 washers

You change only the mass. This is your **independent variable**.

Record how many times each pendulum swung in 15 seconds. This is your **dependent variable**.

#### **PART 2:**

**Does the angle of the arc affect the swing of the pendulum?**

Use a 30 cm string

Use 5 washers

Keep these the same. These are your **controlled variables**.

a) use a 45° angle

b) use a 90° angle

You change only the angle. This is your **independent variable**.

Record how many times each pendulum swung in 15 seconds. This is your **dependent variable**.

#### **PART 3:**

**Does the length of the string affect the swing of the pendulum?**

Use a 45° arc angle

Use a 45° arc angle

Keep these the same. These are your **controlled variables**.

a) use a 30cm string

b) use a 60 cm string

You change only the length of the string. This is your **independent variable**.

Record how many times each pendulum swung in 15 seconds. This is your **dependent variable**.