



# EPPro8 Challenge

*Engineer Problem Solve Innovate*

## Rope Swing – Teacher’s Notes

### Summary

Teams will construct a pendulum (a swing). They will then experiment to see what variables affect the speed that a pendulum oscillates.

They will then apply this knowledge to make their swing oscillate at certain speeds.

### Principles

Measurements, Structures, Experimental Method.

### Extra Equipment

1kg, 500g and 200g weight. If you don’t have a set of weights in your school then see the “additional resources” page at [www.eppro8challenge.co.nz/SchoolActivities](http://www.eppro8challenge.co.nz/SchoolActivities) for how to easily make your own using recycled equipment.

Stopwatch

### What to Aim For

See the “Getting the Most from your Equipment” document for guidelines on what to aim for from these challenges.

The key to this challenge is for teams to work out what affects the speed that a swing oscillates at. They will brainstorm what might affect it, then try varying the weight, the length and the angle.

It is the length that makes the only significant difference.

### Our Solution

