



EPPro8 Challenge

Engineer Problem Solve Innovate

Royal Wave – Teacher’s Notes

Summary

Teams will construct a vehicle with a waving arm. The arm will be driven with a basic link mechanism.

As the vehicle is pushed along the ground a mechanism makes the arm wave side-to-side.

Principles

Mechanisms, Pendulum, Electronics.

Extra Equipment

Cardboard, Scissors, 2kg Weight.

What to Aim For

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

The Crank Handle Waving challenge uses a window wiper type mechanism to convert the rotating motion of a motor / crank handle to a side to side motion.

It is difficult to explain the “window wiper” mechanism with a diagram. At our events we would have an example on the demo stand. I suggest that the teams have a look at the tutorial video if they can’t understand this (starting at 3:16 into the video).

Our Solution

