



Wonder
Project

Rocket Challenge

Optional Activity: Measuring trajectory

Step 1

Find the best video of your prototype rocket launch.



Now you've launched and filmed your prototype rockets, let's plot their trajectory to give you even more data on how to improve them.

Trajectory is the actual or expected path your rocket follows as it moves through the sky.

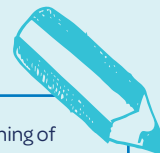
Step 2

Ask Mission Command to project the video onto the whiteboard.

Tip! If you don't have a projector, you can use tracing paper laid over a computer screen or tablet to plot the trajectory.

Step 3

Starting from the beginning of the launch, with the video paused, draw a mark over your rocket.



Step 4

Stop the video frame by frame, each time drawing a mark over your rocket. Stop when your rocket reaches the ground (or goes out of frame).

Step 5

Connect each mark to form your line of trajectory.

Ka rawe space crew!

You have now plotted your rocket's trajectory. You can keep each trajectory line on the board or plot it onto a graph.

Analysis:

In your crew, think about what your rocket trajectory means, and how you could use it to improve your prototypes. Write some ideas below.

Did your rocket fly high, but not long? Long, but not high? Wobble around and make a crash landing? What aerodynamic design variables could you change to fix this?