

Rocket Launch 1

Launch your own hand built rocket, through the force of a big stomp and using everyday items. Watch and record its flight.

Use as a basis to discuss space and launching rockets into space. Multiple variables can be investigated on launching the rocket through changing the angle and force of stomp or the rocket design weight, number of fins and length. Maths can be added measuring angle, mass and distance and time taken to give speed (speed = distance / time).

Make the Launcher:

1. Take the inner tube and connect it to the top of the plastic bottle. Secure tightly with duct tape and ensure it is airtight. No inner tube? Try hose pipe or plumbing pipe, cutting the right sized hole in the bottle top to insert the pipe and tape.
2. Connect the other end of the inner tube to the cardboard tube as found inside kitchen roll or similar. Again use duct tape to secure tightly and airtight. If you are using garden hose or plumbing pipe you don't need to do this step.

Make the Rocket:

1. Wrap a piece of card tightly around the cardboard tube and use tape to keep the cylindrical shape. If you are using garden hose or pipe wrap the card around this instead.
2. At the top of the taped card make a cone cutting and rolling a semi circle shape. Tape it in place so no air can escape from the top. Blue tack can add ballast.
3. Add fins to the bottom of the rocket.

To Launch:

Place the rocket over the cardboard tube / hose / pipe and hold the tube at the desired launch angle. Stomp on the plastic bottle and watch it fly!

Notes:

***Make sure the launcher is airtight and the rocket fits snug onto the end.
Build a holder for the tube / hose / pipe in place. Handle of a garden fork in the ground at an angle may work.***

Referenced from www.ltl.org.uk

Enjoyment and Appetite for Learning

*Motivated to participate and persevere
showing resilience with new
challenges*

Time:

20 min+

Space:

Any Outdoor Space

Equipment:

2l empty Plastic Bottle,
Duct Tape, Bike Inner Tube
& Cardboard Tube or
Garden Hose / Pipe

