

Appendix: Making the Matchstick Rockets

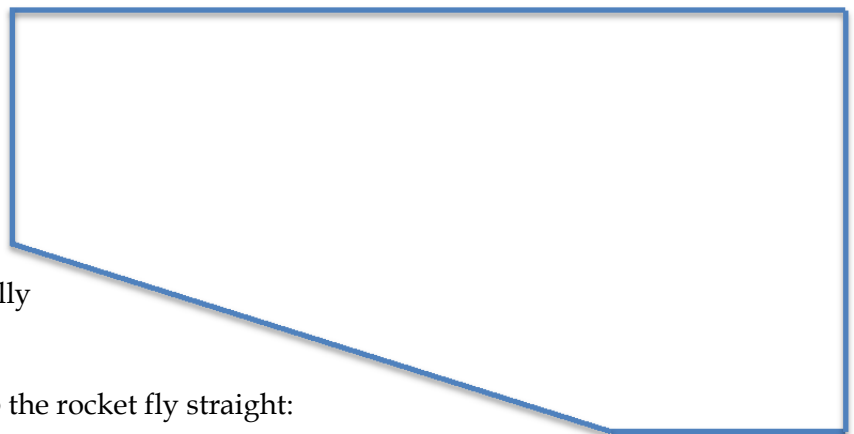
Caution, caution, caution! Matchheads burn and fire is dangerous! BE CAREFUL!

You'll need

- Aluminium foil, and lots of it for failed rockets and improved designs.
 - A box of matches – be careful and safe!
 - A wooden skewer.
 - A Launchpad – a wad of blutack might do it, or a hole cut into a box. Use your imagination.
 - A source of fire, other matches will do, but gas lighters are often better especially outdoors.
- You'll also need:
- Scissors to cut the foil
 - Pliers to squeeze the nose of the rocket closed
 - Superglue or similar to hold the fins onto the rocket so it can fly straight (-er)

Matchstick rocket instructions

- Cut the end off a skewer just at the tip, leaving a taper.
- Cut out the aluminium foil using the template below
- Cut the head off a match
- Place the head of the match and the skewer onto the foil at the long end as show
- Wrap them up TIGHT.
- Pinch the end nearest the match head closed carefully and thoroughly with plyers.



OPTIONAL: Making the fins to help the rocket fly straight:

- Cut out a 2cm square of foil
- Fold it diagonally in half, twice.
- Snip off a tiny piece at the end to fit onto your rocket
- Fold into shape
- Glue carefully to the end of your rocket using superglue or similar – be careful!



Experiment

Answer one of the following or make up your own – do more matchheads work better? Using maths, can you figure out how many matchheads you'd need to make your rocket leave the atmosphere?

Caution! Rockets are burning hot after launch – DO NOT TOUCH!