



## Make an air rocket

### What you need:

Rocket activity instructions and templates  
2 litre plastic bottle  
30cm hosepipe  
2 x 25cm plastic tubing  
Paper  
Glue or sticky-backed plastic  
Electrical tape or gaffer tape

Make sure the plastic pipe fits snugly over the hosepipe and that the hosepipe fits snugly in the bottle. Ask an adult for help cutting the hosepipe and plastic tubing.

### Make the rocket:

Roll a sheet of paper around one piece of plastic tubing and secure the paper together with glue or sticky-backed plastic. Make sure the paper is a good fit but can slide off easily.

Cut out the nose cone and fins from the template.

Fix the nose cone and fins to the rocket as shown in the diagrams.

### Make the launcher:

Make sure the design has no gaps except the bottom of the rocket. Gaps will allow air to escape and reduce the power.

Fit one end of the hosepipe into the bottle and secure with tape.

Fit the second piece of plastic tubing over the other end of the hosepipe and secure with tape.

### Launch your rocket!

Fill the launcher with air by blowing into the bottle through the pipe

Take the rocket off the first piece of plastic tubing.

Fit the rocket over the plastic tubing on the rocket launcher and slide down as far as possible.

Hold the hose to point the rocket up in the air or at a target. Stamp down hard on the bottle to launch your rocket.

**Remember - don't fire your rocket at people or animals!** It may be easier to get someone to hold the rocket for you to launch. You can decorate your rocket with drawings or stickers, or use coloured paper.

You can change parts of the rocket or launcher to see how it affects the rocket's performance. Try changing the number, size, or position of the fins. Or change the length of pipe or tube on the launcher. What happens if you use a bigger bottle?

### What's happening?

Your air-powered rocket is propelled upwards by a blast of air from the bottle.

When you stamp on the bottle, you increase the pressure inside the bottle. This forces the air along the hosepipe and plastic tubing, into the rocket. The air forces the rocket upwards.

