

• Tinker Camp Day 1 •

Pop-Top Rockets

You'll need

printable rocket templates

construction paper

pop-top lid container

fizzy tablets

water

pencil

tape

scissors

Step 1

Watch the Pop-Top Rockets video at kiwico.com/camp/tinker/day1.

Step 2

Cut out the printable rocket template shapes. Place them onto construction paper, trace around them, then cut out the shapes.

Step 3

Pop the lid off the container, then turn it so the opening is facing down.

Step 4

Tape the rocket pieces onto the container. Make sure the edge of the container isn't covered by the paper.

Step 5

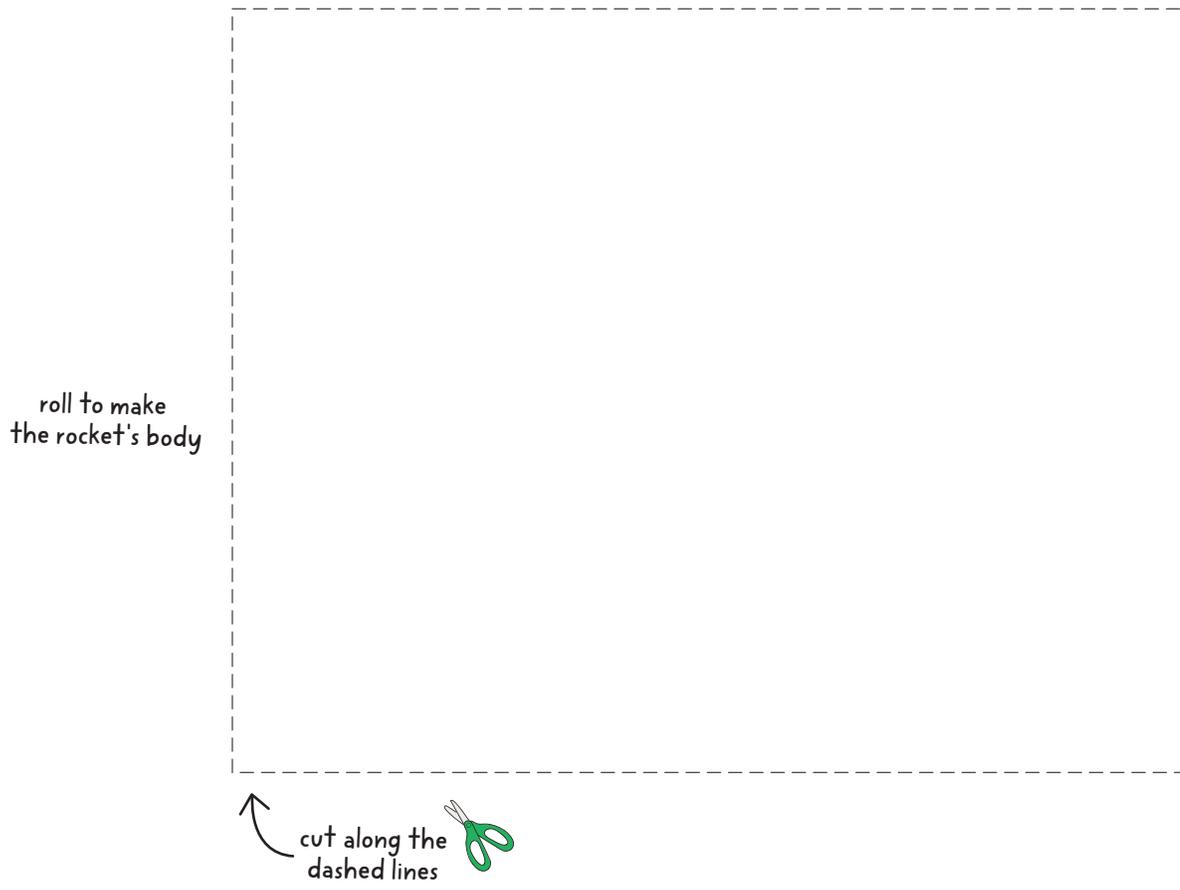
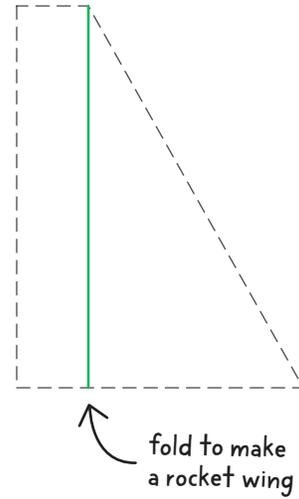
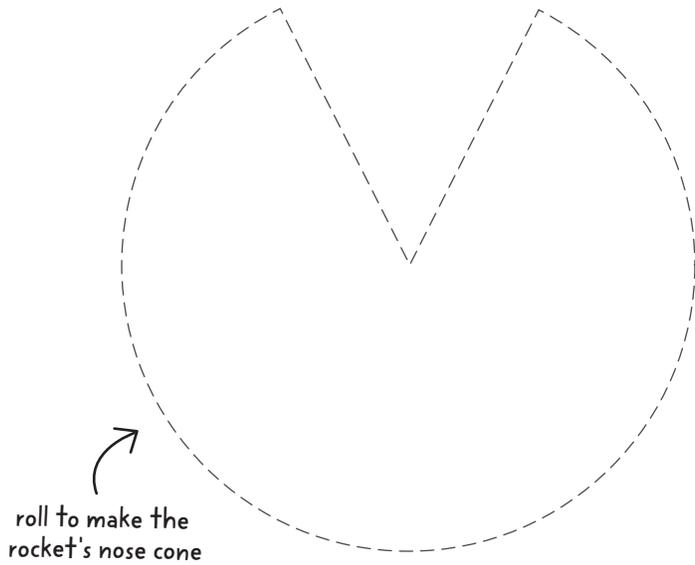
Break a fizzy tablet in half. Fill the container halfway with water.

Step 6

Drop half a tablet into the container. Quickly snap the lid back on and make sure the bottom of the rocket is away from your face. Place the rocket down, then take a step back for lift-off!

Experiment!

Try experimenting with adding different amounts of water to your rocket. How much water do you need to launch your rocket as far as it can go?



Fizzy chemistry

Who needs jet fuel to power a rocket when you've got **acid-base reactions**? See, fizzy tablets contain an acid (such as baking soda) and a base (such as citric acid). In their solid form, the acid and the base are stable and unreactive. But when the tablet starts to dissolve, the molecules are suddenly free to mix and mingle. And as they mingle, they react — forming carbon dioxide bubbles. (Yep, just like the ones in soda.)

When you add just enough water to dissolve the tablets and trigger the acid-base reaction — and not even a little bit more — you maximize the empty space inside the rocket. So the bubbles keep forming and the pressure keeps building for longer, until... POP! The rocket goes blasting off as far as it can go.

