



Rocket Challenge

Launching your rocket

Video transcript

Hi! It's me again, Athul. It's time to launch your rocket! Get your rocket launcher, rocket, some water and a bike pump ready.

Title card: Launching your rocket

Step 1: Safety first

Choose a safe area like the school field or a park away from people, trees, and houses to launch your rocket.

Remember you can only use a 1.5 litre bottle as your rocket base, and water and air for fuel. Anything else could be dangerous.

Your launcher needs to be safely secured at the base with 2 tent pegs during all launches to avoid any accidents when you're using it.

Step 2: Prepare your launcher

Begin by attaching your bike bump to the Schrader valve on the launcher.

Check all connections are tight and the brake mechanism works correctly.

Stretch both the bike pump and brake cable out and lay flat on the ground.

Step 3: Fill your bottle

Inspect your bottle for any damage. If you're not sure it's in good shape for the launch, use a different bottle.

Next, we need to add some water to help propel the rocket upward. Use about 1 cup of water – which is about 250ml – this is a good amount to test a rocket launch.

Now screw the nozzle onto the bottle. Don't lose this as you can't launch your rocket without it!

Step 4: Mount your rocket

To fly, our rocket needs to be connected to the launcher. The easiest way to do this is to tip the launcher on its side and push the bottle over the tube and into the hose connector – you will hear a loud click when it locks.

Make sure the launcher angle is going straight up for the first flight.

Remember our rocket can't fly until you add the last thing needed – air pressure.

Step 5: Blast off!

Before you blast off make sure your crew knows everyone's roles:

- The Chief Scientist will measure and record flights as well as help pump the air.
- The Chief Engineer will mount the rocket on the launcher and when ready, fire the rocket.
- The Chief Health & Safety Officer needs to ensure all spectators and crew are at least 3 metres away from the launch site.

Make sure you've got cameras ready for photos and videos of your launch!

When your Health and Safety Officer says it safe, start pumping to 60 psi. This is a great exercise but take turns as it can be hard work!

The rocket won't launch until you squeeze the brake lever from a safe distance and out of the splash zone.

When you're ready, get your crew to count down to launch. Watch your rocket fly!

3...2...1!