



Rocket Challenge

Four things to launch a rocket

Video transcript

Hey there, future space explorers. I'm Brittany, a Masters Student in Biomedical Research. Welcome to the Wonder Project Rocket Challenge!

Title card: Four things to launch a rocket

You're here because you're about to build and launch your very own rockets! And I'm here to tell you a little about how rockets work.

Guess what, it's not rocket science. See what I did there?

When you think about rockets you probably think about a bunch of scientists in white coats – like these guys.

But rockets are actually really simple. And launching them can be as simple as letting the air out of a balloon. Okay, maybe it's not that easy, it's not as hard as it seems either. You really only need 4 things to launch a rocket.

First, you need a big workshop. This is your base, or headquarters, that has all the equipment and space you need for your crew to build a rocket. NASA builds its rockets at the Michoud Assembly Facility in Louisiana in the United States. It's a huge complex – 337 hectares which is close to 332 rugby fields! But, you can use your classroom as your base.

The second thing you need is a rocket. A rocket has 4 main parts: a nose cone, fins, a rocket body or frame, and an engine. A rocket's body is like a plane's and is made from lightweight material like titanium or aluminium. Our rocket base is going to be a 1.5 litre soda bottle.

The third thing you need is a launch pad. A good launch pad is vital to a successful blast off. Launch pads are complex engineering structures with elevators, fuel and water tanks, and systems for a precise launch. At the moment of lift-off there's a lot of noise, force and heat so a launch pad has to be

solid. They cost billions of dollars to build. Luckily your school has the perfect launch pad for your rocket – the school field!

The last thing you need just so happens to be the most important – a strong crew. Crews work together to solve problems, like “I wonder how we can make a rocket fly?”

Building a crew that knows how to work well together is a big part of the Rocket Challenge. Have you got your crew together?