



WELCOME TO SCIENCE!



Introductory video

Please Watch the
Introduction Video



3...2...1... BLAST OFF!

Learning Outcomes:

- To explain the function of different parts of a rocket.
- To design a rocket that will fly as far as possible
- To evaluate the paper rocket as a model for a real space rocket.



rockets

Parts of a rocket

Labels:

Fins

Nose Cone

Engines

Body

Name _____

What does it do?

Name _____

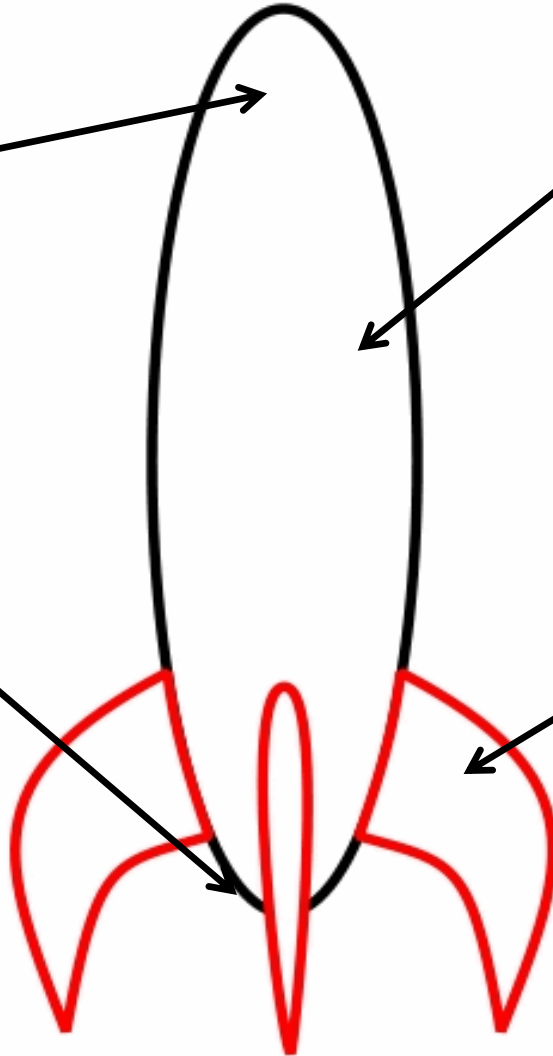
What does it do?

Name _____

What does it do?

Name _____

What does it do?

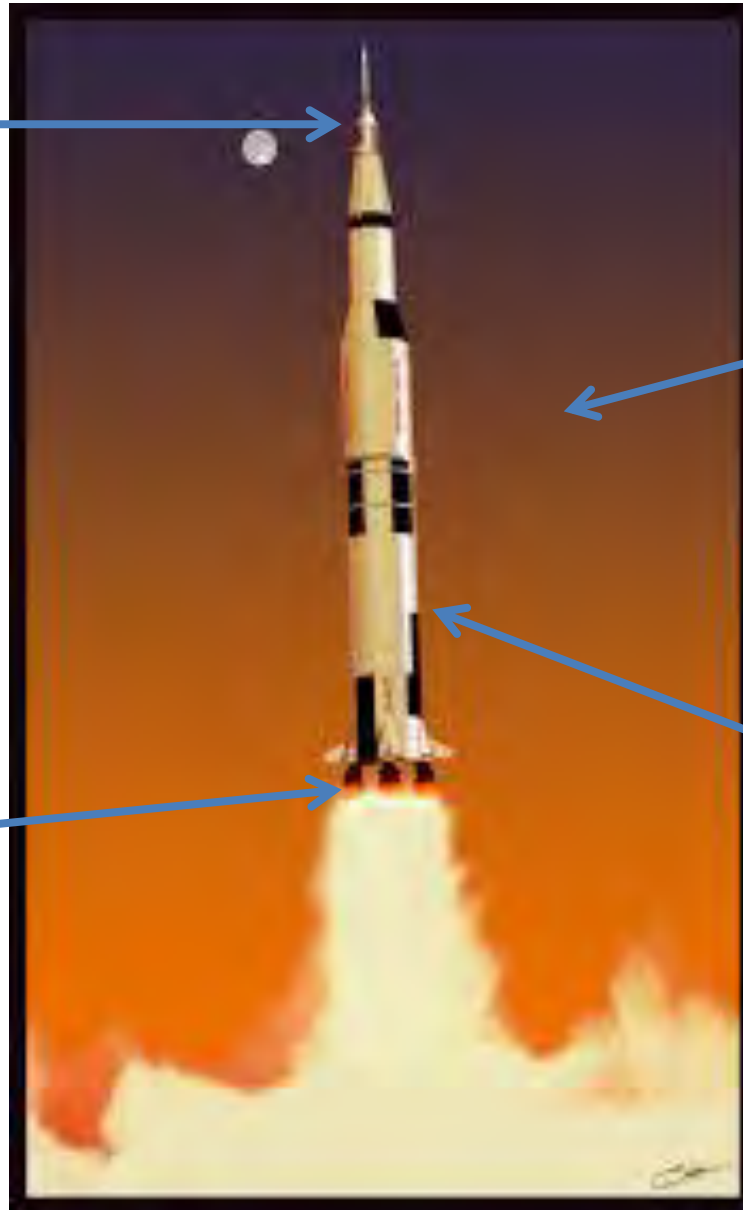


Nose Cone

It helps the rocket spread apart the air as the rocket flies. The nose cone can be compared to the pointed bow of a boat that spreads water apart as it sails forward.

Engines

Where the rocket fuel is burned. These are found at the lower end of the rocket body. The engines push the rocket into space.



Body

The tube-shaped (triangular-shaped in this activity) part of the rocket that holds the rocket fuel.

Fins

The tiny wings at the lower end of the rocket body. They help the rocket fly straight.

Designing your own rocket!

You are going to design your own rocket and then launch it.

There will be a prize for the person with the rocket that:

- Flies the furthest
- Looks the most creative

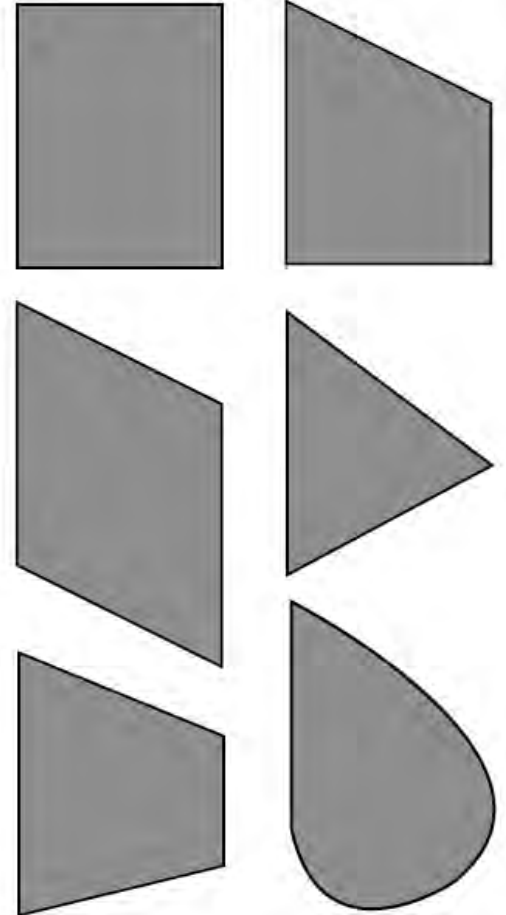
Plan how you will make your rocket and share your ideas with your group.

You will need to consider:

- What angle you will launch it at.
- What shape fin will make your rocket the most aerodynamic

Good luck!

Ideas for Different Fin Shapes



Why must a rocket be stable?

Stability means making sure the rocket follows a smooth path in flight.

If it wobbles, the ride will be rough and extra fuel will be burned to get back on course.

If it tumbles, it's time to push the destruct button! An unstable rocket is dangerous.



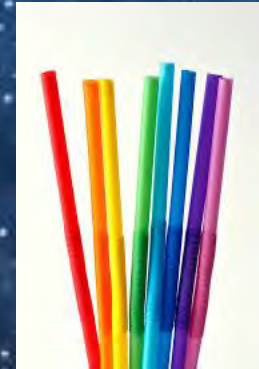
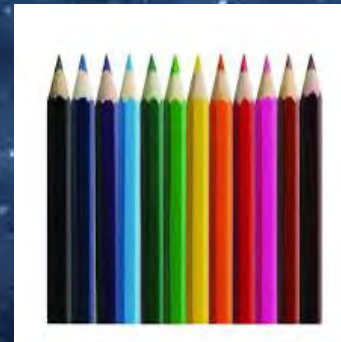
Please watch the
How to make a rocket
video



Step 1

Gather your equipment:

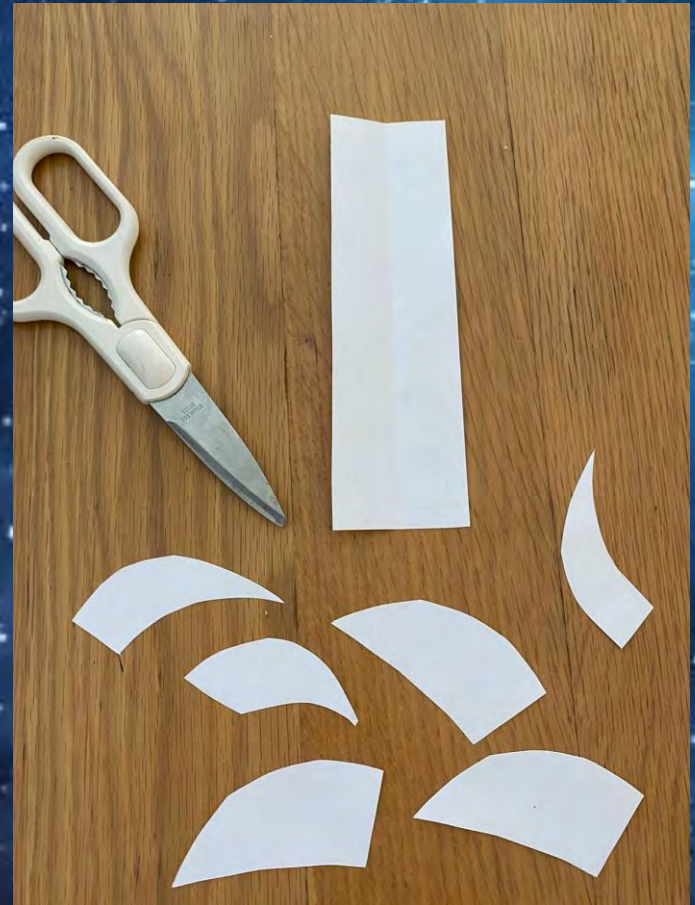
- Paper
- Scissors
- Decorations
- Tape
- Pencils
- Straw



Step 1

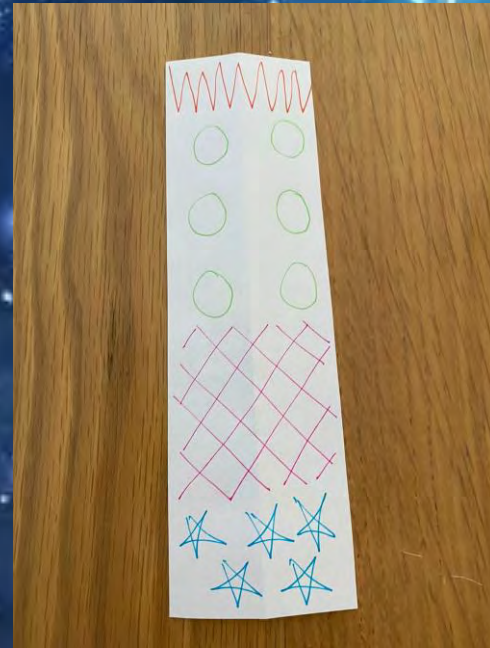
Cut a strip of paper for the rocket body (about 4 cm wide by 28 cm long).

You can also cut out some decorations.



Step 2

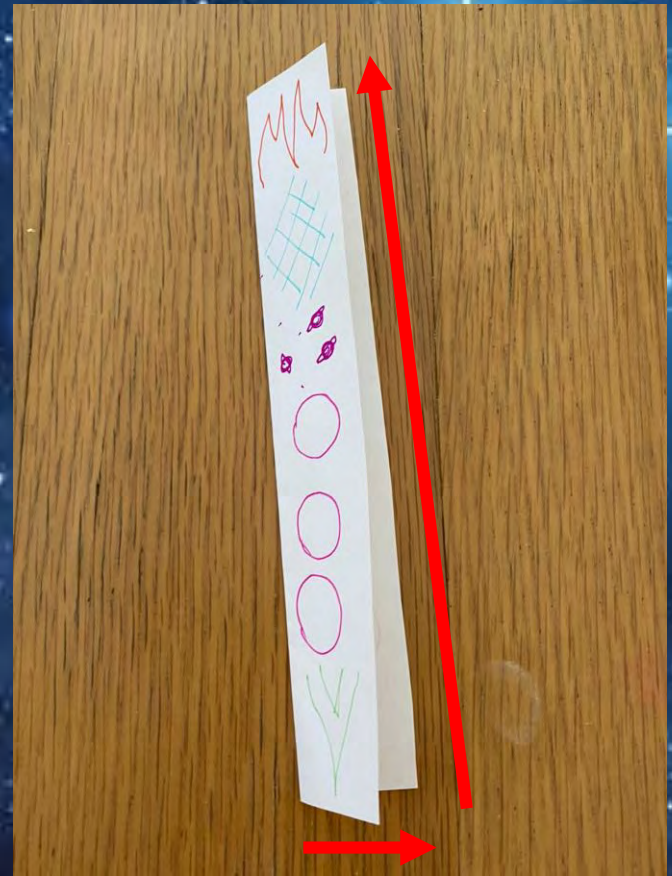
Now the fun part .. Decorating your rocket!



Step 3

Fold your rocket in half and tape along 2 of the open edges.

Make sure you leave a hole at one end for your straw!

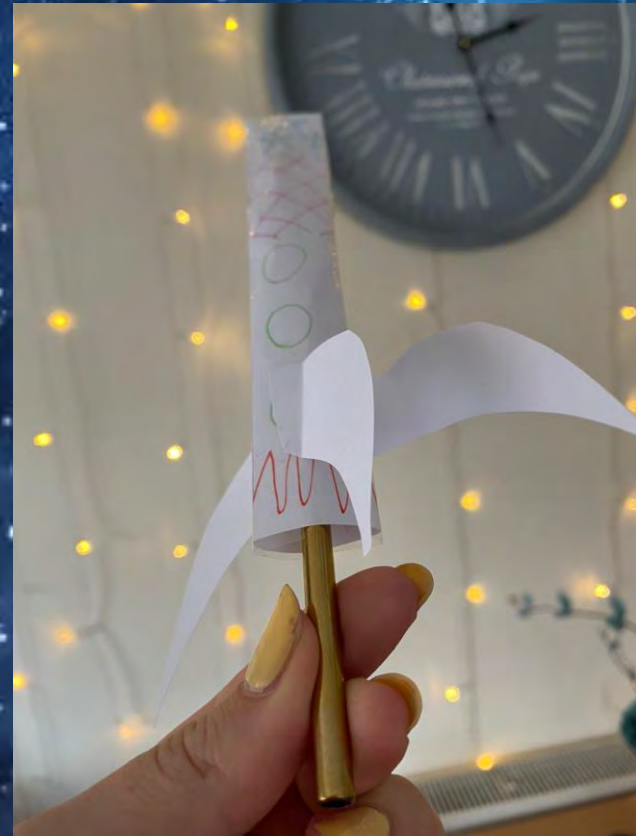


Step 4

Now its time to race!!

Add on any extra decorations and pop your straw into the hole at the bottom of the rocket.

Blow into the straw and watch your rocket fly!



Evaluating the designs

Questions to discuss in groups:

1. What **angle** was the most successful for launching the rocket the furthest?
2. What **shape fin** was best to make the rocket travel furthest?
3. What **designs** were the most eye catching?
4. What **similarities** do your models have to real rockets?
5. What **differences** do your models have to real rockets?






And the winners are:

For the rocket that flew the
furthest: _____

For the rocket that
looked the most
creative: _____



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