STEAM Festival

For Young Learners

An **UNTAME** Event

Little Movers

Organised by

Kids Stop

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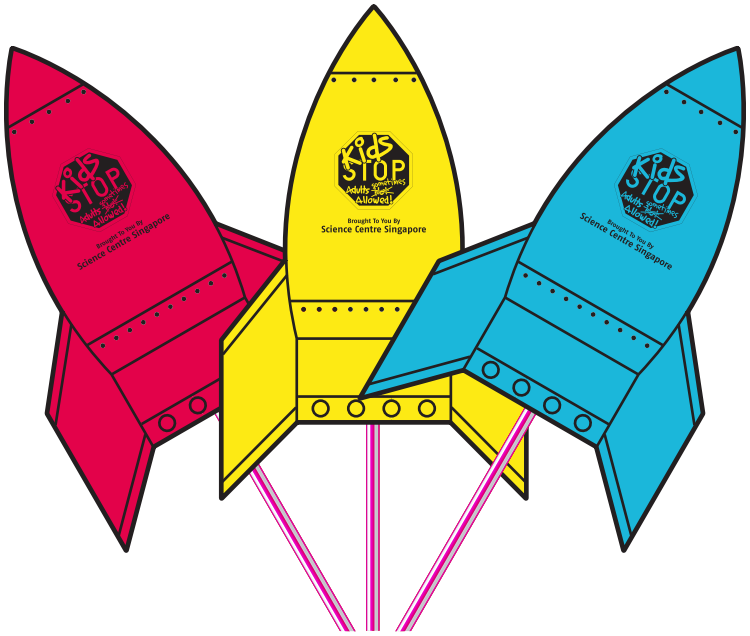
Science Centre Singapore

STRAW ROCKETS

Synopsis

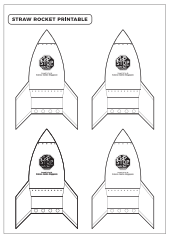
Do you know that you can launch a rocket with a straw? Let's learn more about the science of flight and make a straw rocket in just a few steps!



Learning Objectives

1. Learn about the forces involved in flight (thrust and drag)
2. Understand how a rocket's weight affects the distance it travels

Materials Needed



'Straw Rocket' printable

Tape

Thick straw

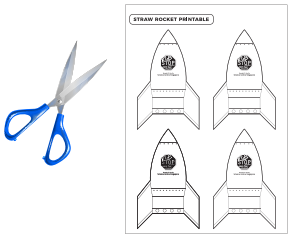
Thin straw

Scissors

Crayons/ Coloured markers

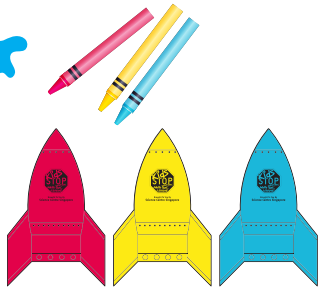
Instructions

1



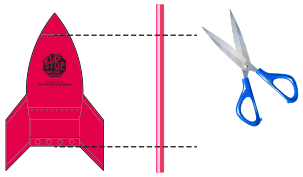
Print the 'Straw Rocket' printable (page 6) and cut it out.

2



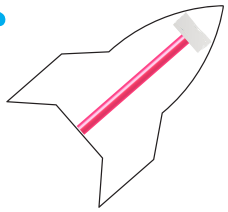
Colour the rocket.

3



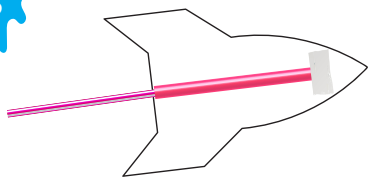
Cut the thick straw to a length shorter than the rocket as illustrated.

4



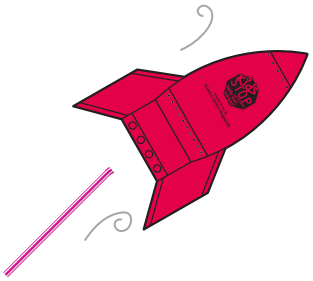
Seal one end of the thick straw with tape and paste it at the back of the rocket.

5



Slip the thin straw through the thick straw.

6



Blow into the thin straw and watch your rocket take off!

Science Facts

When we blow into the straw rocket, there is an increase in air pressure within the straw rocket.

Air pushes against the straw and causes the rocket to fly.

Guiding Questions

1. What will happen if we change the angle of launching the rocket?
2. What can we do to make the rocket fly farther?
3. What happens if we do not seal the thick straw properly?

SMALL GROUP LEARNING

Conduct a Straw Rocket competition!

Mark a starting line for children to stand before blowing their straw rockets.

To make it a fair comparison, the educator may consider standardising the angle that the straw rocket is launched.

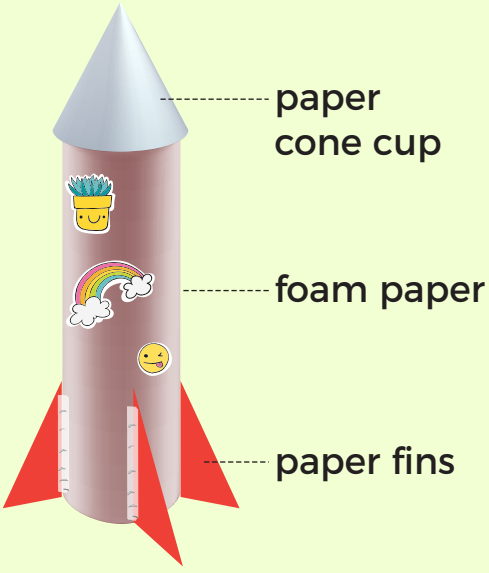
Explore how different factors (e.g. how hard they blow, material which 'straw rocket' printable is printed on) affect the distance travelled.

SCIENCE AT HOME

Let's make a 3-D foam rocket!

Work together with your child to create and design a 3-D rocket based on their wild imagination.

Explore the factors that affect the distance travelled by the 3-D rocket. What are the ways to increase the distance travelled? *(e.g. adding fins, adding a sharper nose cone)*



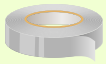
Materials needed:

Paper cone cup

A4 foam sheets

Paper

Scissors

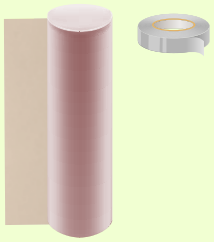


Double-sided tape

Decorative stickers (if any)

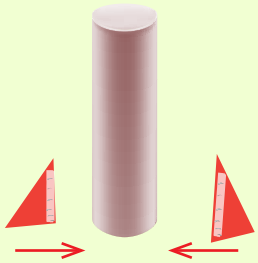
Steps:

1



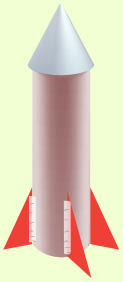
Roll an A4 foam sheet to make the body of the rocket and tape it.

2



Cut paper into fins of different shapes and attach them to the rocket using double-sided tape.

3



Attach the cone cup at the top of the rocket using double-sided tape.

4

Add on decorative stickers as desired.

5

Get ready to fly your rocket by throwing them in a forward direction!

‘STRAW ROCKET’ PRINTABLE

Cut along dotted line