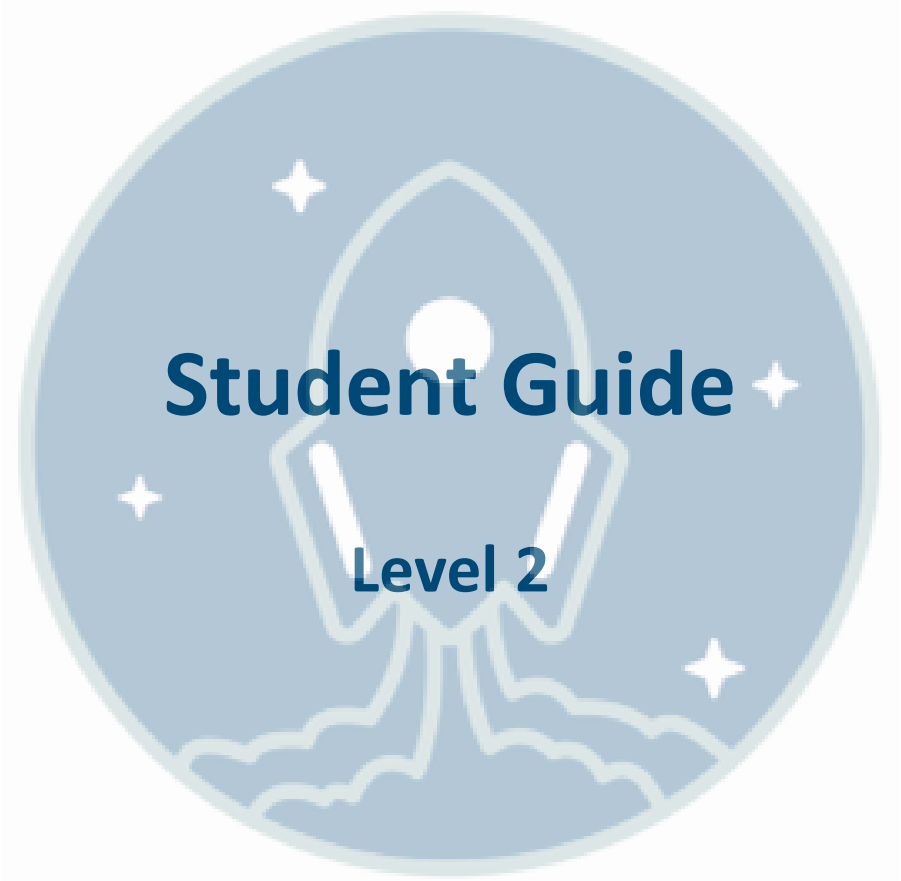
S.C.R.A.P CHALLENGE



Student Guide

Level 2

Recommended for students in years 5 and 6.

Mission

Design and build an air-powered paper rocket that will:

- **launch successfully,**
- **fly high,**
- **travel straight.**

Questioning and predicting

In the space below, sketch a design for your rocket.

Think about:

Nose cone shape	Fuselage length	Fin shape
Fin position	Fin size	Number of fins

Make sure you label all the parts.

Choose **one** part of your rocket that you will change and test:

Nose cone shape	Fuselage length	Fin shape
Fin position	Fin size	Number of fins

I am going to change _____

Hypothesis

What do you think will happen when you change that part of your rocket?

Think about how the **speed**, **launch distance**, or **flight path** may change.

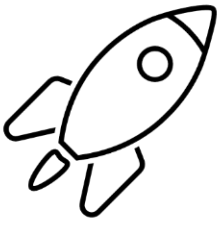
_____

_____

_____

_____

Time to build and test your rocket.



Testing and refining

In the table below, collect data about your launch trials, including any notes that might be helpful when evaluating your design, and preparing a redesign.

This is Quantitative and Qualitative data collection!

**To calculate the mean for each rocket test, add the distances for test 1, test 2, and test 3 together, and then divide the answer by three (3).*

Rocket description	Launch distance Test 1	Launch distance Test 2	Launch distance Test 3	Launch distance Mean*	Notes/changes

Evaluating

Which rocket design travelled the furthest, **and why**?

_____

_____

_____

_____

Was your hypothesis *supported*? Why/why not?

_____

_____

_____

_____

Do you think this was a *fair test*? Why/why not?

_____

_____

_____

_____