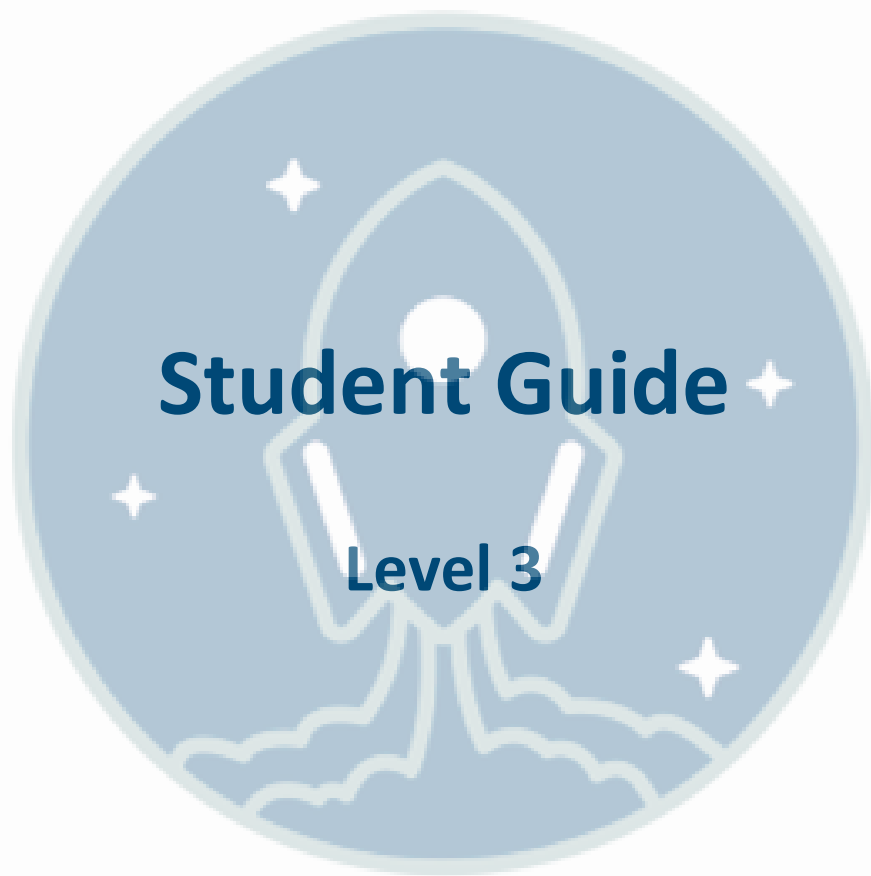


S.C.R.A.P CHALLENGE



Recommended for students in years 7 and 8.

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

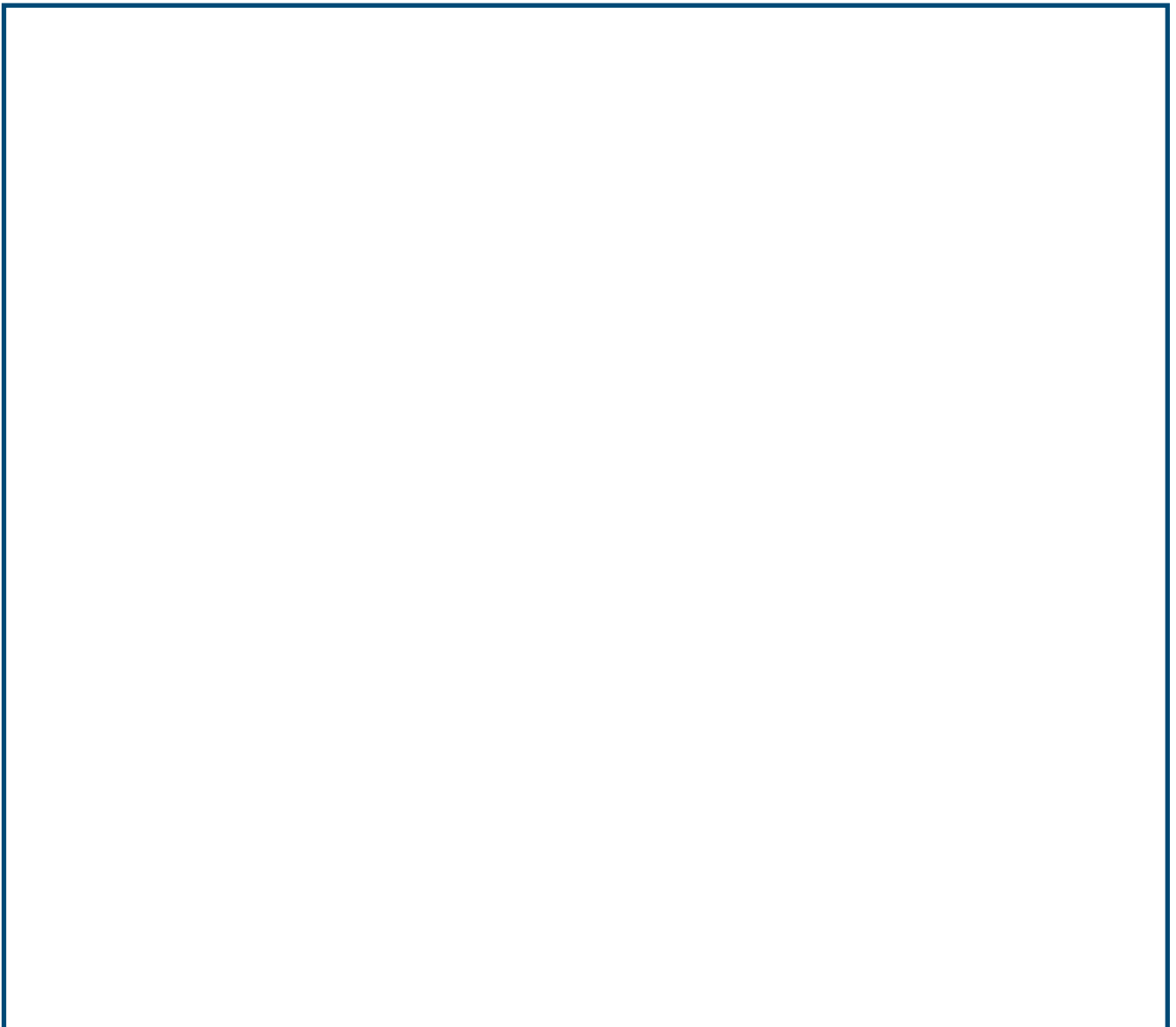
Fin shape

Fin position

Fin size

Number of fins

Make sure you label all the parts **and** include some measurements.



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

Nose cone shape

Fuselage length

Fin shape

Fin position

Fin size

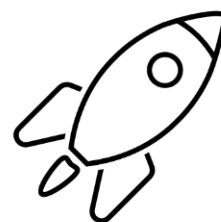
Number of fins

I am going to change _____

Hypothesis

What do you think will happen to the launch distance when you change that part of your rocket?

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?

What improvements would you make if you did this investigation again?
