TEACHER NOTES

Firstly, a big THANK YOU for purchasing this product. Please checkout my store for more products and follow me for updates.

This unit contains two enjoyable activities and worksheets.

Activities: Two hands on activities with worksheets. These activities will engage your students - they are easier done with smaller classes or in larger spaces such as a gym. Activities; **Paper helicopter investigation.**
Paper plane investigation.

Instructions for making a variety of planes can be found here:
http://www.paperaeroplanes.com/

Extra Ideas: Just get students to make the plane and calculate the flight distances mean, median and mode from multiple throws (or use whole class data).
*Class competition, who can design the best plane.

You may also want to show these short videos to further enhance your students understanding of man-made flight. Short videos are a great way to enhance your students learning.

Option 1

This is a short video which explains how planes fly. (1.12 min)
https://www.youtube.com/watch?v=gk6rNFVc1Gs

Option 2

How is a aircraft built (for slightly older kids) 5.14mins.
https://www.youtube.com/watch?v=7rMgpExA4kM

MAKE A HELICOPTER

Instructions: On the next page are some helicopter templates. Choose a helicopter from the template sheet that you think will take the longest to fall to the ground.

What type of helicopter do you think will take the longest to fall to the ground ?

Why?

Compare two helicopters and record which one fell to the ground the quickest. You may need a friend to help you compare or drop one of the helicopters for you. Drop the helicopters from shoulder height (if your teacher allows you from standing on a chair). Record your observations in the box below.

Helicopters compared: _____ _____

Result: _____

What do you notice about how fast each helicopter spins?

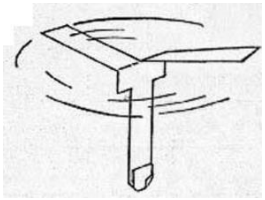
What do you think will happen if you add weight (paperclips) to your helicopter?

Add paper clips and drop your helicopter again – what happened?

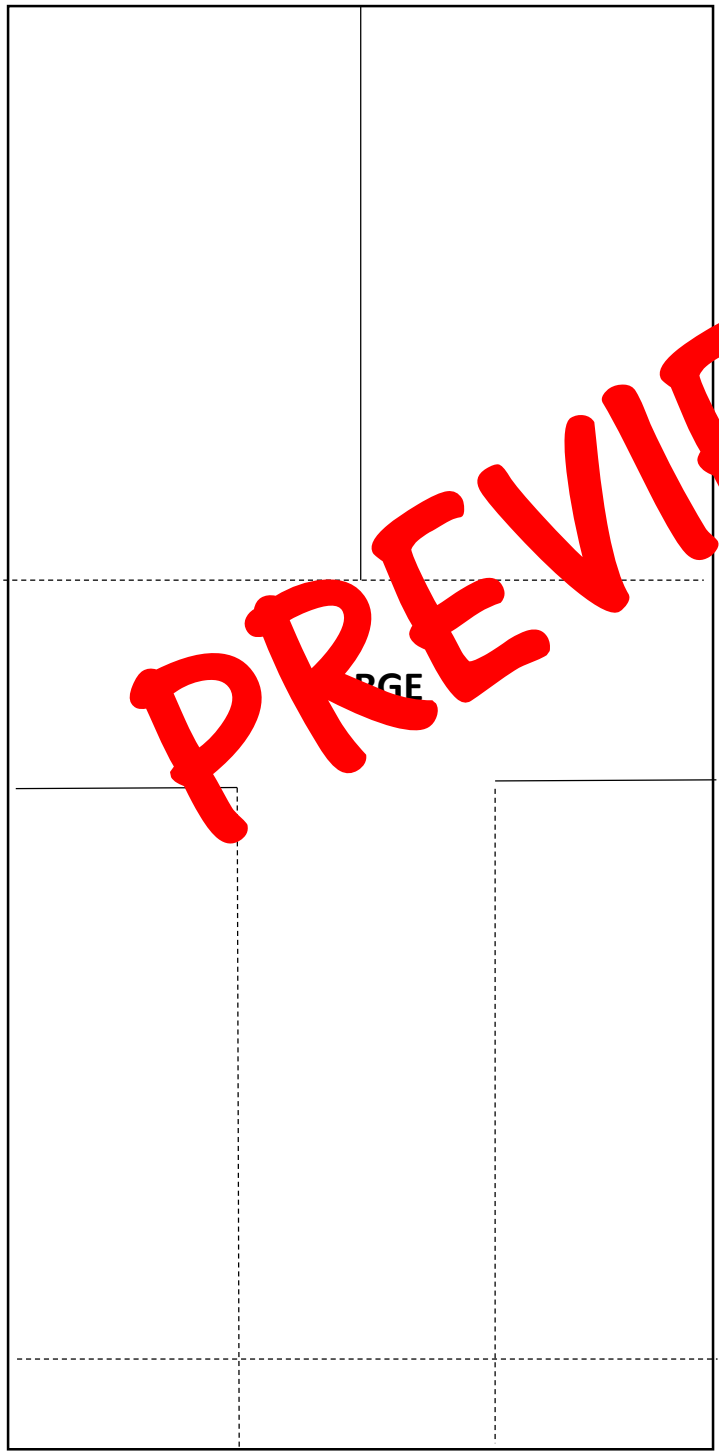
If you could design your own helicopter what would you change to improve it?

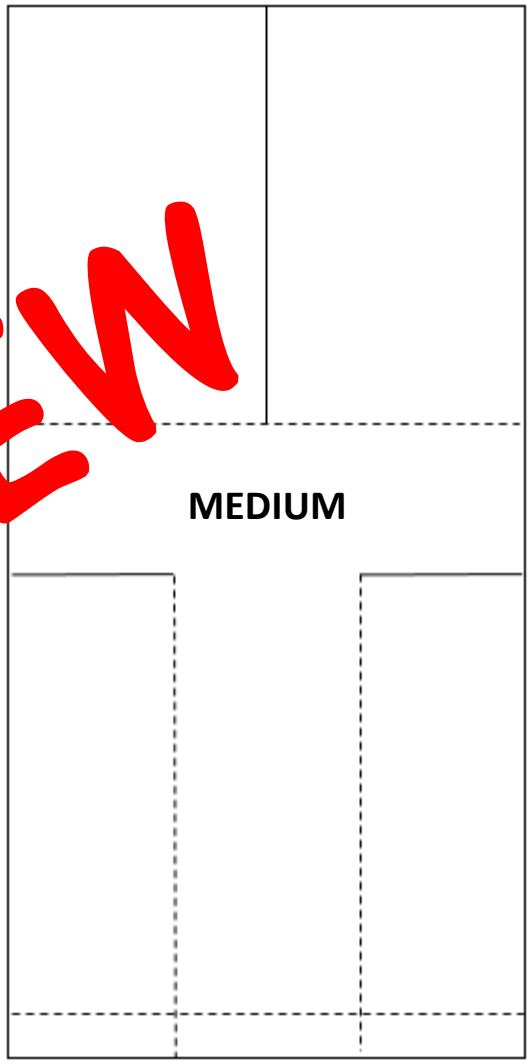
If there is time and your teacher allows create your new helicopter with your own design and record the results. What happened?

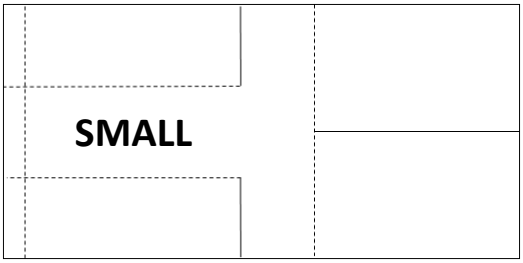
MAKE A HELICOPTER



Cut out the helicopter template of your choice. Cut along the solid lines and fold along the dotted lines so your helicopter looks like this →







PAPER PLANE STUDY

Think of all the things that could be changed in a paper plane:

Choose **one** thing to change (e.g. paper size) and what you are going to measuring (e.g. flight time or flight distance. Fill in the boxes below.

Thing I am changing	Thing I am keeping constant	Thing I am keeping constant
Thing I am measuring?	Thing I am keeping constant	Thing I am keeping constant

I think when I change _____ then the _____ will _____

Method

Throw your planes 3 times and record the results

Results:

Plane type (eg, big, medium, small)	**Throw 1**	**Throw 2**	**Throw 3**	**Average**

PAPER PLANE MATH

Graph Results

Conclusion

Science explanation?