



ENGINEER A PLANE

What you will need:

- An A4 sheet of paper
- Measuring tape

Task:

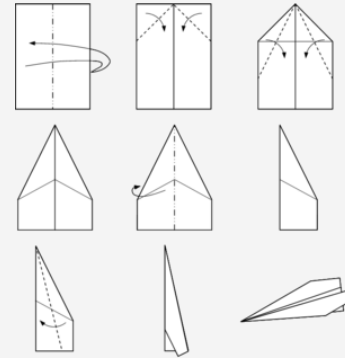
The Irish government have asked you, an engineer to design and prototype an airplane that will be used to fly/carry refugees to safety, these refugees have been stranded at sea for days and are very scared, they need your help!

Your plane should remain in the air for the furthest distance. How can your plane be improved to fly for longer, what features will your plane have?

How can you do this:

There can be planes of various shapes made by folding the paper in different ways. Try and design a few shapes and see which flies the furthest. If you are having trouble, there are plenty of videos and instruction on the internet to help you. How far does your plane fly, what tweaks can be made

It's a balancing act! As with real airplanes there are 4 main forces, called aerodynamic forces, that enable a paper plane to stay in the air:



Force	Description
Thrust	when you throw the plan forward
Lift	is a force that acts on the wings and helps the plane to move up. Big wings increase lift
Gravity	is the force that pulls the plane down. The right materials can create a lighter aircraft that stays up longer.
Drag (caused by the tail)	is the opposite of thrust and it makes the plane slow down

ENGINEERS WEEK ENGINEER A PLANE





STEPS

Engineers Week
Feb 29 - Mar 6 2020

WORKSHEET

Step 1: Plan and design

Today my problem is?

What problem do I have to solve?

What questions do I have about my problem?

What are some solutions?

What materials do I need?

Step 2: Draw a detailed diagram

Step 3 & 4: Build it! Test it!

Step 5: Reflect

What changes can be made to the idea?

How can I make it better?

Step 6: Present your solution