

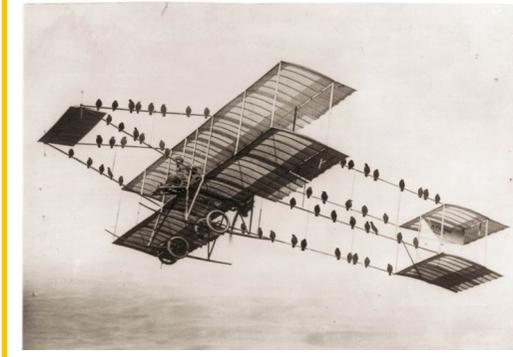
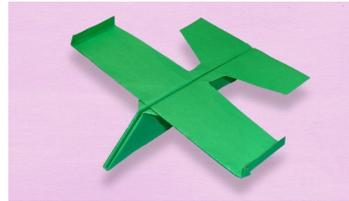
Design Technology– Structures

Build structures, exploring how they can be made stronger, stiffer and more stable

Design – Know that a plan/design can be created and adapted. Know that some ways of developing, modelling and communicating ideas are more appropriate than others in the design process.

Making– Know that some tools and materials are more useful than others when creating a product.

Evaluation – Know that in order to evaluate ideas and products a set of design criteria is needed.



Wonder
Enjoyment
Love of Language
Belonging
Empathy
Courage
Kindness

Previous learning

- History- Wright brothers
- Maths- Measuring (cm)
- Making comparisons:**
- Gliders
- Modern day aircraft
- Paper planes

Key information

Key information

Structural frames are 3D structures, often made of beams and columns. When designing and making simple structures, a triangle is often the strongest shape. Triangulation is so strong that this is why triangles are often used to build structures such as bridges and many other buildings.



When designing with art straws, lollypop sticks, sellotape, glue, string and card it is important to keep materials simple and use as little as possible. The more materials used the heavy it will become. For it to glide properly the card and straws must not be bent or creased as this can affect the rigidity of the glider as it sails through the air.

Useful links

Understanding of simplicity– [How to make a glider paper airplane](#) || [glider plane using straw](#) || [how to make a plane with straw - YouTube](#)

A look at the first gliders- [Pilot](#) | [History – Proud To Be - YouTube](#)



Key Vocabulary

Frame	A structure made of simple, thin materials to give a basic shape. E.g. tent frame
Stiff	To make the structure stronger.
Stable	The structure is not likely to overturn, it is firmly fixed
Weak	The structure is likely to collapse.
Rigid	Unable to bend or be forced out of shape, it is not flexible.
Join	To connect materials together using various resources
Evaluate	To talk about your ideas, identify strengths and possible changes you would make.

