

Knowledge Organiser Design & Technology Year 1 Spring

Structures - Constructing a windmill



St Elizabeth's Catholic Primary School
 "Love one another as I have loved you"

Client	The person who you are designing something for.
Design	To make, draw or write plans for something.
Design criteria	A set of rules to help you with your ideas and test the success of them.
Evaluation	When you look at the good and bad points about something, then think about how you could improve it.
Net	A flat 2D shape, that can become a 3D shape once assembled.
Stable	Object does not easily topple over.
Strong	It doesn't break easily.
Structure	Something that has been made and put together. For example, a building, bridge, chair, table.
Test	To find out whether something works as it should.
Weak	It breaks easily.
Windmill	A structure with sails that are moved by wind.
Windmill axle	The point from which the turbine or sails move.
Windmill structure	The part that makes the windmill stand up.
Windmill turbine	The parts that move in the wind.

Design → **Make** → **Evaluate**

- Knowledge and skills covered in this topic**
- Children will be able to describe the purpose of structures.
 - Children will know what a windmill is.
 - Children will understand the importance of clear design criteria.
 - Children will know what a net is.
 - Children will know how to make a stable structure.
 - Children will be able to follow instructions to cut and assemble the supporting structure of a windmill.
 - Children will know that the shape of materials can be changed to improve strength and stiffness of structures.
 - Children will be able to define stable.
 - Children will assemble a turbine.
 - Children will understand that a turbine uses wind to turn and make the machine inside work.
 - Children will test their turbine in the wind and decide if the structure is stable.

There are lots of different types of windmill around Britain.

Have you seen any of these before?

