

Structures

In Year 1 we designed and made a windmill.



In Year 1 we:

- 1) Used a clear design criteria.
- 2) Included our own ideas and preferences.
- 3) Made stable structures from card.
- 4) Followed instructions to cut and assemble .
- 5) Made turbines and axles that work.
- 6) Evaluated our windmill and tested if it was strong and stable.
- 7) Suggested how we could improve our windmill.
- 8) Knew that cylinders are a strong type of structure
- 9) Knew that axles are used in structures and mechanisms to make parts turn in a circle.

Key Vocabulary from Year 1:

Design criteria = a set of rules to help you with your ideas and test the success of them.

Structure = something that has been made and put together.

Stable = object does not easily topple over.

Strong = it doesn't break easily.

Windmill = a structure with sails that are moved by wind.

Windmill axle = the point from which the turbine or sails move.

Windmill turbine = the parts that move in the wind.

Evaluation = when you look at the good and bad points about something, then think how you could improve it.

Structures

In Year 2 we will make a chair for Baby Bear.



In Year 2 we will:

- 1) Generate and communicate ideas using sketching and modelling.
- 2) Make a structure according to design criteria.
- 3) Create joints and structures from paper/card and tape.
- 4) Build a strong and stiff structure by folding paper.
- 5) Test the strength of own structures.
- 6) Evaluate the strength, stiffness and stability of structure.
- 7) Know that shapes and structures with wide, flat bases or legs are the most stable.
- 8) Understand that the shape of a structure affects its strength.
- 9) Know that materials can be manipulated to improve strength and stiffness.

Vocabulary which will use in Year 2

Design criteria = a set of rules to help designers focus their ideas and test the success of them.

Structure = something which has been formed or made from parts.

Stable structure = is a structure which does not easily topple over.

Strong structure = is a structure which does not break easily.

Stiff structure = is a structure or material which does not bend easily.

Weak structure = a structure which is easily broken.

Test = to find out whether something works as it should.