Year 2 Knowledge Organiser
Structures – Designing Baby Bear's Chair

Key Knowledge - Structures

Freestanding Structures

Structures are things that are built for a purpose. Free standing structures are structures that can stand up without being attached to something.



They need to able to support their own weight and the weight of anything on it. They need to be strong, stable and rigid.

Strength and shapes of different structures

Cuboid and triangular prism structures are weaker because they have corners. Corners work really hard trying to support the weight.

Key Knowledge – Designing & Making

Strong, Stable and Stiff

A structure that is strong and rigid is able to support more weight.

Some materials are stronger and stiffer than others. Card is stronger and stiffer than paper.

Layering and folding materials can be used to make the structure stronger.


Layering Folding

Using glue and tape to join the structure together will also make the structure more secure.

Vocabulary

Stability	When something is firmly fixed or not likely to move.
Structure v	a building or other object constructed (made) from several parts.
Natural	Natural materials are those that can be found in nature. People can not make them. E.g. stone and wood.
Man-made	Man-made materials are made by humans using natural materials. E.g. glass is a man-made material made from sand (natural material).
Diagram	A drawing to explain how something works or looks.
Strength	Something that is strong or something that is strong and not easily broken.
Stiffness	Something that does not bend easily.
Layering	Adding extra layers to make the structure stronger.
Evaluating	Deciding what went well and what didn't go well. Deciding if you would change anything and what you would change.

I Can…	
I can identifying man-made/natural structures. Identifying stable and unstable structural shapes.	
I can identifying stable and unstable structural shapes.	
I can recognise features that make a chair stable.	
I can explain what is meant by 'Strength' in a structure. I can recognise the strongest and weakest parts of a structure.	
I can make and testing a structure.	
I can work independently to use the materials as I've been shown to begin to make a stable structure.	
I can explain how my ideas would work for the task I've been given.	
I can make a model that meets the task I have been given	
I can use the appropriate materials and construction techniques.	
I can explain how I made it strong, stiff and stable.	