Explore → Design → Make → Evaluate (cyclical process diagram)

Structures

In Year 2 you made a chair for Baby Bear.

In Year 2 we:

1) Generated and communicated ideas using sketching and modelling.

2) Made a structure according to design criteria.

3) Created joints and structures from paper/card and tape.

4) Built a strong and stiff structure by folding paper.

5) Tested the strength of own structures.

6) Evaluated the strength, stiffness and stability of structure.

7) Learnt that shapes and structures with wide, flat bases or legs are the most stable.

8) Understood that the shape of a structure affects its strength.

9) Learnt that materials can be manipulated to improve strength and stiffness.

Vocabulary which we used 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.

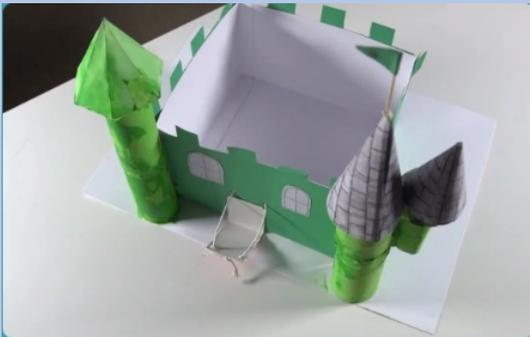**Strong structure** = is a structure which does not break easily.

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.

Structures

In Year 3 we will design and make castles

In Year 3 we will:

1) Understand that wide and flat based objects are more stable and that strength and stiffness in structures is important.

2) Draw a design using 2D shapes and label the 3D shapes that will create the features.

3) Construct a range of 3D geometric shapes using nets.

4) Evaluate our own and others work based on the presentation / look of the finished product.

Vocabulary which will be new in Year 3:

Structure = something which stands, usually on its own.

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

Feature =. A specific part of something.

Net = a 2D flat shape that can become a 3D shape when assembled.

Strong = it doesn't break easily.

Weak = it does break easily.

Stable = object does not topple over easily.