

Medium Term Plan: Supporting Implementation of LTP/Progression Grid

Subject: DT – Structures Baby Bear’s Chair

Year: 2

NC/PoS:

- Design purposeful, functional, appealing products for themselves & other users based on design criteria.
- Generate, develop, model & communicate their ideas through talking, drawing, templates, mock- ups &, where appropriate, information & communication technology.
- Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining & finishing].
- Select from and use a wide range of materials & components, including construction materials, textiles & ingredients, according to their characteristics.
- Explore & evaluate a range of existing products.
- Evaluate their ideas & products against design criteria.
- Build structures, exploring how they can be made stronger, stiffer & more stable.
- Explore & use mechanisms [for example, levers, sliders, wheels & axles], in their products.

Prior Learning (what pupils already know and can do)

- Explain that wheels move because they are attached to an axle.
- Recognise that wheels and axles are used in everyday life, not just in cars.
- Identify and explain vehicle design flaws using the correct vocabulary.
- Design a vehicle that includes functioning wheels, axles and axle holders.
- Make a moving vehicle with working wheels and axles.
- Explain what must be changed if there are any operational issues.

End points (what pupils MUST know and remember)

- Identify man-made and natural structures.
- Identify stable and unstable structural shapes.
- Contribute to discussions.
- Identify features that make a chair stable.
- Work independently to make a stable structure, following a demonstration.
- Explain how their ideas would be suitable for Baby Bear.
- Produce a model that supports a teddy, using the appropriate materials and construction techniques.
- Explain how they made their model strong, stiff and stable.

Key Vocabulary

design criteria, man-made, natural, properties, structure, stable, shape, model, test.

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Session 1: Exploring stability.

To explore the concept and features of structures and the stability of different shapes.

Vocab: axle, axle holder, design, design brief, design criteria, Ferris wheel, frame, pod, wheel.

Session 2: Strengthening materials.

To understand that the shape of the structure affects its strength.

Vocab:

Session 3: Making baby bear's chair.

To make a structure according to design criteria.

Vocab:

Session 4: Fixing & testing baby bear's chair.

To produce a finished structure and evaluate its strength, stiffness and stability.

Vocab:

Session 5: Adding pods & decoration.

To finish and evaluate a structure with a rotating wheel.

Vocab:

Future learning this content supports:

KS2 (Y3) – Structures Constructing a castle.