Design Technology - Medium term plan

Year group : Year 3	**Topic : Animals and their habitats**	**Focus : Levers and linkages**

Design

- use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups
- generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design

Make

- select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately
- select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities

Evaluate

- investigate and analyse a range of existing products
- evaluate their ideas and products against their own design criteria and consider the views of others to improve their work
- understand how key events and individuals in design and technology have helped shape the world

Technical Knowledge

- apply their understanding of how to strengthen, stiffen and reinforce more complex structures
- understand and use mechanical systems in their products (pneumatics)

Prior learning experiences From y2

- **Design** – create a design using design criteria (fire engine)
- **Make** – make a fire engine with wheels that move
- **Make –** find ways of making wheels and an axle
- **Evaluate –** Explain what they like and dislike, show how to improve fire engine
- **Evaluate –** identify key features of a fire engine
- **Technical knowledge** – make an axel and wheels so that the fire engine moves

Endpoints

- **Design** – create a design using design criteria
- **Make** – make a moving 2d animal within its habitat (as a background)
- **Make –** levers and linkages to move the animals
- **Evaluate –**own work and suggest improvements
- **Evaluate –** identify key features of a moving model
- **Technical knowledge** – explore levers and linkages, make a model with levers and linkages
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Sticky vocabulary

Design, design criteria, evaluate, levers, linkages

Design	Make	Evaluate	Technical knowledge

Can, with growing confidence generate ideas, considering its purpose and users. Can begin to understand how well products have been designed, made, what materials have been used and the construction technique. Can model ideas by making templates and mock ups of design Can make drawings with labels when designing.	Can begin to select a wider range of tools such as scissors, knives Can select the most appropriate tools and techniques to use. Can measure mark out, cut, score and assemble components with more accuracy. Can start to measure, tape or pin, cut and join fabric, including felt with some accuracy.	Can start to evaluate their product against original design criteria e.g. how well it meets its intended purpose. Begin to evaluate familiar products and consider the views of others to improve them	Can make a product move using simple mechanisms such as sliders, levers and linkages Begin to use finishing techniques to strengthen and improve the appearance of their product using a range of equipment. Safety of using equipment. Create a piece of work using Levers and linkages