

Year: 2 Program of Study: Mechanisms – Wheels and axles

N.C POS:

- *Design purposeful, functional, appealing products for themselves and other users based on design criteria.*
- *Generate, develop, model and communicate their ideas through drawing and mock-ups.*
- *Select from and use a range of tools and equipment to perform practical tasks [for example cutting, shaping, joining and finishing].*
- *Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.*
- *Explore and evaluate a range of existing products.*
- *Evaluate their ideas and products against design criteria.*
- *Explore and use mechanisms [for example levers, sliders, wheels and axles], in their products.*

Concept: technology, impact, legacy, change, inventions, innovation, application, cause and effect.

Key Vocabulary: vehicle, wheel, axle, axle holder, chassis, body, cab, assembling, cutting, joining, shaping, finishing, fixed, free, moving, mechanism, names of tools, equipment and materials used, design, make, evaluate, purpose, user, criteria, functional.

Prior Learning: Assembled vehicles with moving wheels using construction kits. Explore moving vehicles through play. Gained some experience of designing, making and evaluating products for a specified user and purpose. Developed some cutting, joining and finishing skills with card.

Core Knowledge- non-negotiable

Designing

- Generate initial ideas and simple design criteria through talking and using own experience.
- Develop and communicate ideas through drawings and mock-ups.

Making

- Select from and use a range of tools and equipment to perform practical tasks such as cutting and joining to allow movement and finishing.
- Select from and use a range of materials and components such as paper, card, plastic and wood according to their characteristics.

Evaluating

- Explore and evaluate a range of products with wheels and axles.
- Evaluate their ideas throughout and their products against original criteria.

Wider Influences

- People who can help us
- Helping others
- Our local community
- Food and farming
- Traditional stories
- Fairy tales
- Transport
- Nursery rhymes
- Toys

Enduring Understanding

- Explore and use wheels, axles and axle holders.
- Distinguish between fixed and freely moving axles.
- Know and use technical vocabulary relevant to the project