Design Technology - Medium term plan		
Year group : Year 6	**Topic : Fairground rides**	**Focus : controlling devices**

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

- a apply their understanding of how to strengthen, stiffen and reinforce more complex structures
- understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]
- understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]
- apply their understanding of computing to program, monitor and control their products.

Prior learning experiences From y5	Endpoints for y6
Design – create a design using design criteria **Make** – make a bridge bearing in mind what has been learnt, make prototype of a bridge **Evaluate –** use the design criteria to evaluate the product, identify areas for improvement and how to improve, peer asses yours and others work **Evaluate –** identify key features a range of bridges **Technical knowledge** – make structures suitable for the product, use ICT to aid design	**Design** – create a design using design criteria **Make** – make a fairground ride controlled by a computer **Evaluate –** use the design criteria to evaluate the product, identify areas for improvement and how to improve, peer asses yours and others work **Evaluate –** identify key features a range of fairground rides **Technical knowledge** – use computers to control a device

Sticky vocabulary

Design, design criteria, evaluate, control technology,

Design	Make	Evaluate	Technical knowledge

Can generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes or pattern pieces. Can use research (including ICT) to develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose.	Can confidently select and use appropriate materials e.g. paper, card, straws, wood, wires, batteries, buzzers and tools e.g. scissors, rulers to measure accurately, according to their functional properties and aesthetic qualities. Can select use a wider range of techniques, e.g. cutting, shaping, joining and finishing.	Can evaluate their products, identifying strengths and areas for development, and carrying out appropriate tests. Can suggest ways that their product could be improved and consider the views of others to improve their work. Can evaluate the designs of individuals in design and how technology has helped shape the world. Can evaluate their own and peers work.	Can use more complex electrical systems in their product Know how to program a computer to control their product. To understand safety of using equipment and safe use of electricity.