ALMOND HILL JUNIOR SCHOOL MEDIUM TERM PLAN

TOPIC TITLE: Bright Sparks. DT: Moving YEAR GROUP: 5 TERM: Autumn 2

Vocabulary

Innovation
Mechanism
Cog
Materials
Prototype
Surface area
Circular
Linear
Frame
Sail
Accuracy
Thrust
Tension
drag
Functionality
Adapt / modify
Reinforce
Strengthen

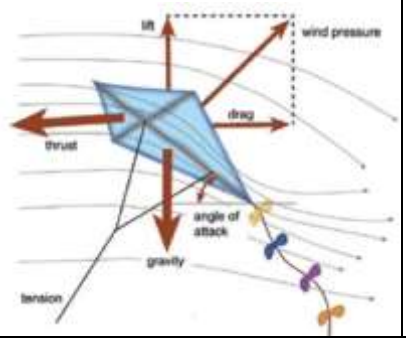
Skills

- Use research and develop design criteria to inform design for products that are fit for purpose
- Use results of investigations when developing designs
- Use a range of drawing skills, discussion, prototypes to plan and communicate ideas.
- Select suitable tools and materials and be able to explain these choices
- Make labelled drawing showing specific features
- Follow safety procedures and use tools accurately
- Begin to measure and mark out more accurately
- Cut and join to achieve a high-quality finish
- Demonstrate motivation/perseverance to refine and improve products
- Evaluate the product against design criteria and make suitable refinements
- Begin to seek evaluation from others

What we already know

- Conduct research to inform design
- Forces – gravity and air resistance
- How to work to simple design criteria
- How to draw a simple labelled diagram
- To make and test a prototype
- Chose material from a given choice
- Safety rules in class
- How to evaluate the success of a product
- The design, making of and evaluation of a moving poster in Year 3, using levers and linkages

Illustration



Application/ Outcomes

- Research history of Chinese inventions/kites
- Experiment with gears and moving mechanisms
- Make a prototype kite, test and evaluate
- Draw a detailed design with labels, select materials and tools
- Make, test and evaluate a kite
- Adapt and improve kite
- Evaluate own and others work

Concepts

- Innovation of moving mechanisms
- The forces which allow kites to stay in the air
- Investigating and that different materials are used for different purposes
- Designing a product for a specific purpose in mind
- Testing a product against a set of criteria
- Evaluating a product for functionality and making necessary adaptations / refinements to improve its function

Other/Cross Curricular Links

Maths – measurement/shape History – researching inventions (flight)
Science – forces/materials
Computing – micro bits - Apply their understanding of computing to program, monitor and control their products
SEND Adaptations – word-banks, image-mats, mixed ability pairings, varying outcomes, simplified resources for planning / evaluation