Hill View Primary School – Year 4
Project Overview

Fun at the Fair


6 Weeks

Rationale

Year 4 students will visit a theme park in order to research effective and existing rides in order to design a new ride for the park. The children will spend the day exploring the theme park to research the rides the park already has and how they work. They will record their findings and agree on criteria for their designs. After exploring mechanisms and circuits, they will create innovative models and develop explanations to display in an exhibition for an expert panel who will judge which rides fulfil the design brief most successfully. This integrates our ASCENT values through developing aspirations to apply the skills taught in school to vocational skills that may form part of future skills. Pupils will also be building on their sense of community through working together to consider the views and needs of others. This project will allow students to research collaboratively to build a trusting environment and strive for success. Pupils will test and develop their fairground rides, adapting to improve their design where necessary; this encourages the children to strive for excellence and experience the success of having ownership over a project from start to finish.

Hook

At a visit to a theme park, the manager of theme park explains to children that they need to attract more visitors and therefore wish to build a new and innovative ride attraction for his theme park. Can they help?

Outcome

A model theme park exhibition to present their inventions and advert to a panel who will complete a judging sheet when travelling around the exhibition.

English **Link text; Mr Nobody's Eyes**

Linked texts and extracts are used as 'What a good one looks like' to teach from and are used to enable children in the writing process, using **Talk for Writing**, to successfully achieve the main writing outcomes for the project.

Main writing outcomes

Narrative-

Write a fictional story based at a funfair which creates a specific atmosphere and mood through detailed description.

Non- narrative-explanation-

Plan and write an explanation of how their model works using precise vocabulary and sentences.

Poetry-

Read and write poems about electricity.

Writing skills to cover

Formal language headings/ subheadings
Effective note taking – paragraphing
Edit and improve
Persuasive language

Punctuation and Grammar

Paragraphing
Fronted adverbials
Conjunctions
Expanded noun phrases
Preposition

Talk 4 Writing strategies

Boxing up
Text mapping
Tool Kit

Focus Subject - DT

Create a research page from information gathered during their visit to evaluate existing rides and develop design criteria. (NC- 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).

Draw and annotate an exploded diagram to communicate their design of a funfair ride that fulfils the design criteria (NC-generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design).

Experiment with creating mechanisms using construction materials and write evaluations of the functionality and suitability for purpose. (NC- Use a wide range of tools to cut, shape and join materials accurately). (NC- understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]).

Explore the use of an electrical system for their product that can be used to meet the design criteria. (NC- identify common appliances that run on electricity).

Build a model of their ride that fulfils the design criteria and is aesthetically pleasing to present in the exhibition. Develop and model their ideas by making a prototype of a funfair ride selecting the materials and components needed. (NC- Select materials based on their aesthetic and functional qualities) (NC- Measure materials with great accuracy).

Write an evaluation of their prototype against the design criteria to identify where changes need to be made (NC- 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).

Focus Subject - Science

Construct a simple series electrical circuit to light a bulb or work a motor operated with a switch that will be incorporated in their invention. (NC- To construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers). (NC- recognise some common conductors and insulators, and associate metals with being good conductors).

Draw a circuit diagram using recognised symbols to clarify how their design works. (NC- recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit). (NC-identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery).

(NC- Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions).

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Visits and visitors- Paulton's Park

Cultural capital; History. Consider the history of the environment of Paulton's Park. How have rides changed over time? Why?

Art

Consider the colours used in theme parks. What are the effects of colours on the customers? Using research to create appealing-looking designs.

Home Learning-

Research the history of the funfair and produce a poster or booklet to present the information you have gathered for display at the exhibition.