Beaconsfield Primary School Curriculum Overview

Subject:	Design and Technology	Year Group:	Year 4

Autumn	Spring	Summer
Unit: Bridges	Unit: Light it Up	Unit: Battering Rams
Key Skills: • Reflecting on the progression of Bridges over time and how available materials have helped shape the world. • Creating design criteria based on knowledge of bridges, forces, shapes and structures. • Using scientific knowledge of forces to support the design process. • Following a budget using mathematical knowledge. • Communicating ideas through class discussions, sketches and diagrams. • Understanding mechanical systems such as pulleys and levers. • Using a range of tools and materials to construct a model bridge. • Testing and evaluating the model bridge against the design criteria created earlier in the unit.	Key Skills: • Using taught knowledge of electrical systems and light to design a lightbox. • Designing a functional and appealing lightbox for a specific user and purpose. • Exploring and evaluating a range of available products, looking at design, shape and materials used. • Developing ideas through discussion, sketches, diagrams and computer aided design. • Selecting a range of materials, tools and equipment to assemble a working lightbox. • Test and evaluate the lightbox against the design criteria given.	Key Skills: • Researching different types of battering rams. • Writing an information text about different battering rams and how they have been used. • Creating a set of design criteria with the support of a teacher. • Designing a battering ram, using sketches, diagrams and knowledge of existing or historical products as support. • Selecting appropriate materials for the design. • Using a variety of techniques to construct a battering ram including gluing, nailing and drilling. • Creating and attaching mechanisms such as gears, pullets, levers and linkages. • Evaluating the final product against the design criteria created earlier in the unit.