Unit 16 & 17 Bridges **Year 6** **Term1 & 2**

Purpose of Unit

Pupils will understand structures and how to use mechanisms to make a moving bridge. They will learn how to shape of materials to improve their strength; use frameworks to create a bridge; use appropriate mechanisms to move the bridge; and use a computer to control its movement. The unit focuses on the child producing a more comprehensive list of design factors and using the list to create a specific design brief and on challenging the attributes and features of existing bridges.

Key Skills

Literacy
Children will use reference skills; the language of evaluation; discuss their ideas, qualifying or justifying what they think; listen to others, questioning them to clarify what they mean.

Numeracy
Children will measure, produce 3D shapes, and calculate ratios (in gears),

ICT
use logic in writing computer procedures;
use a PC and buffer box to control inputs and outputs

Pupils will

- understand the construction, features and purpose of bridges;
- create a design specification by writing a comprehensive list of design factors
- shape paper and card to produce different cross sections of varying strengths that can be used in their bridges;
- make a bridge with moving parts;
- write procedures on the computer that allow outputs to be activated by inputs.

Common Requirements

The following common requirements are particularly relevant to this unit: Curriculum Cymreig (visits to local bridges, use of Millennium Stadium CD Rom).

Health and safety

No additional specific advice given for this topic over and above general advice on tools previously used.