

# Design & Technology Knowledge Organiser

## Year Four —Frame Structures

### Design

Carry out research into a variety of Hull-based bridges

Develop a simple design specification to guide the development of their ideas and product.

Generate, develop and model innovative ideas, through discussion, prototypes and annotated sketches.

### Make

Formulate a clear plan, including a step-by-step list of what needs to be done and lists of resources to be used.

Select from and use appropriate tools to accurately measure, mark out, cut, shape and join construction materials to make frameworks.

Use finishing and decorative techniques suitable for the product they are designing and making

### Evaluate

Critically evaluate their products against their design specification, intended user and purpose, identifying strengths and areas for development.

#### Links to prior learning

*Experience of using measuring, marking out, cutting, joining, shaping and finishing techniques with construction materials.*

*Experience of using tools such as saw, bench hook and glue gun.*

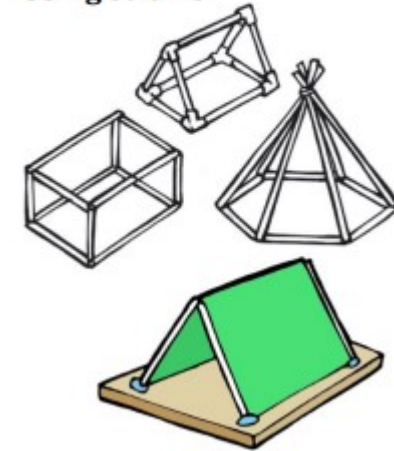
#### **Key words**

frame structure, stiffen, strengthen, reinforce, triangulation, stability, shape, join, temporary, permanent design brief, design specification, prototype, annotated sketch, purpose, user, innovation, research, functional

card, paper straws, newspaper, square sectioned wood, masking tape, PVA glue pencils, rulers, right/left handed scissors, bench hooks, G-clamp, junior hack-saws, glass paper

### Making small-scale frame structures

#### Using straws



#### Using square section wood

