

	Year group: Year 2	Area/topic: Structures- A lighthouse
	(objectives from NC/ELG/Development matters)	

Design

- design purposeful, functional, appealing products for themselves and other users based on design criteria
- generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology

Make

- select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]
- select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics

Evaluate

- explore and evaluate a range of existing products
- evaluate their ideas and products against design criteria

Technical knowledge

- build structures, exploring how they can be made stronger, stiffer and more stable

Prior learning	Future learning
<ul style="list-style-type: none"> ➤ Know how to use basic tools e.g. scissors or hole punches with construction materials e.g. plastic, card. ➤ Know different methods of joining card and paper - glue and tape. ➤ Know how to use various construction materials. ➤ Know how to construct, stacking blocks vertically and horizontally, making enclosures and creating spaces. ➤ Know how to join construction pieces together to build and balance. 	<ul style="list-style-type: none"> ➤ Children should begin to plan out what each stage of construction might look like. ➤ They will need to think about the steps of planning and what they think each stage might look like - this might be done through small sketches, notes etc. ➤ design purposeful, functional, appealing products for themselves and other users based on design criteria ➤ Explore and evaluate a range of existing products ➤ select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]

What pupils need to know or do to be secure	
Key knowledge and skills	Possible evidence
<ul style="list-style-type: none"> ➤ Know how to design a structure and can explain the user and purpose. 	

<ul style="list-style-type: none"> ➤ Know how to draw an annotated sketch of their free-standing structure and can label it with materials. ➤ Know how to select from PVA glue, glue sticks and scissors to cut and join materials (card and cardboard). ➤ Know how to name free-standing structures: Eiffel tower (European. More familiar example) and The Burj Khalifa in Dubai (tallest example) ➤ Know how to make a freestanding structure stronger, stiffer and more stable. ➤ Know if their structure is suitable for the intended user and purpose. ➤ Evaluate their ideas throughout and they can offer a way to improve their structure with some guidance. ➤ Know how to strengthen a structure using stronger materials, like card instead of paper or lollipop sticks instead of cardboard 	Photos in DT books and quotes from the children of them exploring different current structures. Design opportunities. Photos and quotes of them creating their own designs.
Key vocabulary	
Stable, strengthen, design, make, evaluate, tower, framework, tools, marking out, joining	
Common misconceptions	Books linking to this area
<ul style="list-style-type: none"> ➤ That any structure can be glued down to make it stable ➤ 	<ul style="list-style-type: none"> ➤ The lighthouse keepers lunch ➤ Iggy Peck Architect
Memorable first hand experiences	Opportunities for communication
<ul style="list-style-type: none"> ➤ Building their own lighthouse ➤ Exploring buildings in the local community or at the seaside 	<ul style="list-style-type: none"> ➤ Discussions throughout the sessions ➤ Exploring and evaluating existing structures

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Reasonable adjustments for pupils with SEND

Communication and Interaction <p>Visual aids Modelling - through the use of visualiser or 1:1 Simple instructions Use of WAGOLL Pre-teaching vocabulary Coloured paper</p>	Cognition and Learning <p>Repetition of skills Photo examples Check understanding regularly Verbal responses being scribed by adults Large scale if fine motor is a barrier</p>
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Social, Emotional and Mental health	Sensory and Physical
<p>Allow access to a quiet area Give them a special role to boost their self-esteem Seat pupil with more confident friend - talking partners Now and next board Sand timer Step by step guides with visuals/pictures/photos</p>	<p>Chunky pencils A range of tools/scissors Gloves for sensory issues Explore new materials Carpet space position Reduce background noise</p>