

FUNCTIONALITY PROBLEM SOLVING INNOVATION
Reception - Subject planning overview: DT Structures & Materials

Year		Unit/key question	
Reception		Building a strong and stable bridge	
Enquiry question			
How can we make a strong and stable bridge for the Gingerbread Man to safely cross the river?			
Prior learning		Future learning	
		Learn the importance of a clear design criteria show individual preferences and requirements in a design Make stable structures from card, tape, and glue Follow instructions to cut and assemble the supporting structure of a windmill Make functioning turbines and axles which are assembled into a main supporting structure. Suggest points for improvement	
What children need to know or do to be secure			
<u>ESSENTIAL KNOWLEDGE</u> Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function Share their creations, explaining the process they have used Make use of props and materials when role playing characters in narratives and stories		<u>CORE KNOWLEDGE</u> - I will: Select appropriate building materials from a range of both large (crates, blocks, tyres, planks) and small (lollipop sticks, match sticks, lego, stickle bricks, pipe cleaners) construction. <u>SKILL</u> - I can: Look at pictures of different bridges - discuss design & features Deconstruct pre-made bridges Talk about ideas and criteria for bridge building – oral discussion / exploration Test the strength and suitability of a range of large and small construction materials and developing building and joining techniques	
Key vocabulary			
Plan, Draw. Ideas, Design, Complete, Product, Final	Make, Build, Combine, Join, Shape, Tools	Change, Like, Dislike, Next Time, Better, Worse, Different, Instead	
Common misconceptions			