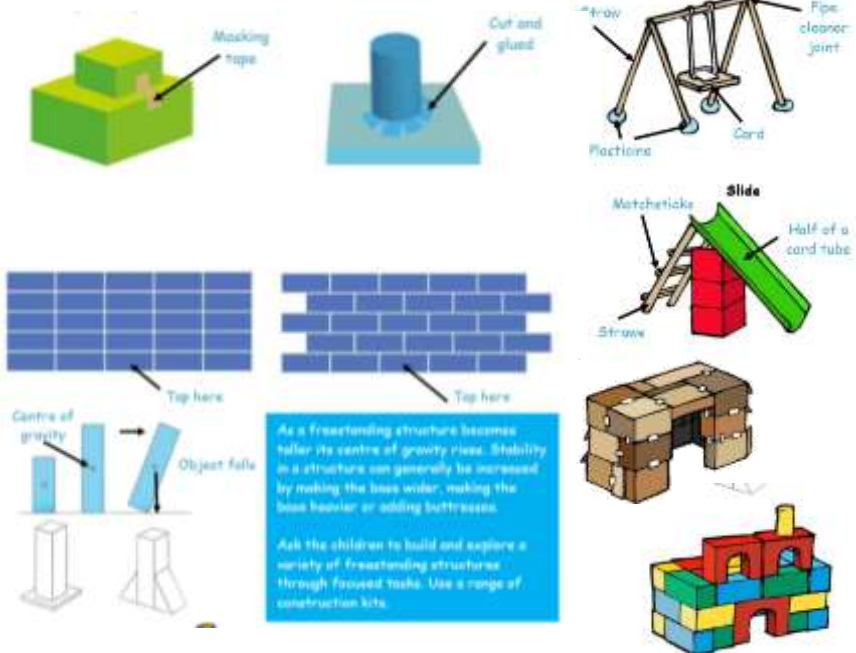




Design and Technology Year 1 - Bright Lights Big City

Structures – Tudor house

Project title		Key Skills		Technical Knowledge and understanding.	
Design, make and evaluate a Tudor house for yourself to recreate The Great Fire of London.		 <p>As a freestanding structure becomes taller its centre of gravity rises. Stability in a structure can generally be increased by making the base wider, making the base heavier or adding buttresses.</p> <p>Ask the children to build and explore a variety of freestanding structures through focused tasks. Use a range of construction kits.</p>		<ul style="list-style-type: none">Know how to make freestanding structures strong, stiffer and more stable.Know and use technical vocabulary relevant to the project.	
				Focused skills <ul style="list-style-type: none">Demonstrate measuring, marking out, cutting, shaping, joining and finishing techniques with a range of tools and new and reclaimed materials that children are likely to use to make their structures. Discuss the suitability of materials for their products according to their characteristics.To build and explore a variety of freestanding structures using construction kits, such as wooden blocks, interconnecting, plastic bricks and those that make frameworks e.g. how can you stop the structure from falling over? How they can be made stronger and stiffer in order to carry a load? Children could make models of the structures they have seen in school and the local area.To fold paper or card in different ways to make freestanding structures, using masking tape where necessary to make joins. Encourage them to think about how folding materials can make them stronger, stiffer, stand up and be more stable e.g. can they support an object on top of their structures without it falling over or breaking?	
Vocabulary			Key Learning		
Design To generate, develop and communicate ideas for a product.	Freestanding structure A structure that stands on its own foundation or base without attachment to anything else.	Mock up A 3-D representation of a product.	Prior Learning. <ul style="list-style-type: none">Experience of using construction kits to build walls, towers and frameworks e.g. lego, building blocks.Experience of using basic tools e.g. Scissors or hole punches with construction materials e.g. card, plastic.Experience of different methods of joining card and paper.Look at difference models and structures of houses (pictures).	Design <ul style="list-style-type: none">Generate ideas based on simple design criteria and their own experiences, explaining what they could make.Develop, model and communicate their ideas through taking, mock ups and drawings.	
Frame structure A structure made from thin components e.g. tent frame.	Shell structure A hollow structure with a thin outer covering.	Stability In relation to a freestanding structure, the extent to which it is likely to fall over if a force is applied.			
Buttress A structure added to a wall, tower or framework to make it more stable/ reinforce it.	Brick bonding Arranging bricks in a wall to improve the performance of the structure or improve its appearance.	Structure A building or other object constructed from lots of parts.	Make <ul style="list-style-type: none">Plan by suggesting what to do next.Select and use tools, skills and techniques, explaining their choices.Select new and reclaimed materials and construction kits to build their structures.Use simple finishing techniques suitable for the structure they are creating.	Evaluating <ul style="list-style-type: none">Explore a range of existing freestanding structures on the school and local environment e.g. everyday products and buildings.Evaluate their products by discussing how well it works in relation to the purpose, the user and whether it meets the original design criteria.	