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| **Year 1** | |
| **Build a Castle** | |
| **Links made with other subjects** | English, maths (length and height), art (colour mixing)  Visit: Skipton castle |
| **The BIG Question** | Can you create a castle that will stand alone? |
| **The BIG Outcome** | To build a stable structure |
| **DT objectives**  (link to NC) | 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 * Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products. |
| **Prior knowledge**  What prior knowledge is needed for children to be successful in this unit? | * used basic tools safely and appropriately * discussed ideas * worked with paper and card – cutting, shaping and joining.   This unit builds on experience of play with construction kits and early opportunities for making with reclaimed materials. |
| **Future learning**  Consider the conceptual knowledge within a subject that pupils need for future learning not just the recall of facts but the importance of concepts | This unit gives prior knowledge to:  Year 2 – Design and make a car garage.  Year 3 – Design and make a greenhouse.  Year 4 – Design and make packaging.  Year 5 – Design and build a bridge.  Year 6 – Design and make a bird house. |
| **DT strands** | 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 * Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products. |
| **Vocabulary/ Glossary** | Choose, try discuss, drawing, label, join, fix, plan, scissors, hole punch, masking tape, structure, strong, weak, wall, roof, window, glass, brick. Shape: square, rectangle, triangle, cube, cuboid, side, edge, surface, on top of, underneath, smaller than, symmetrical, beside, next to. |
| **Knowledge**  (see italics for knowledge to remember) | The knowledge that children will learn and remember:   1. *Investigate and analyse a range of existing products.* (This can be done through pictures of existing castles and what the children have seen on their visit to Skipton Castle.) 2. *To identify and name different buildings and their main features* (roof, windows, doors)  – To identify features of a castle (moat, turrets, chambers) 3. *Generate, develop, model and communicate their ideas through discussion and annotated sketches*. (Who it is for? What will you need? What might it look like? Show the children a range of materials available and ask them to discuss their ideas, children to observe carefully and draw simple shapes and to be able to recognise and name basic mathematical shapes in Castles – squares, cuboid, rectangles …) 4. *Use a range of tools and equipment to perform practical tasks accurately.* (Investigate and develop techniques for joining materials and 3D containers with masking tape or glue, children to try different ways of making hinges.) 5. *Select and use tools suitable for the task, explaining their choices, to cut, shape and join paper and card.* (Children to use scissors to build a room of their choice from add appropriate furniture and fittings.) 6. Use simple finishing techniques suitable for the product they are creating. 7. *Know and explain how to create a stable structure* (children to think and talk through how their structure stands and what holds it together.) 8. *Evaluate their product by discussing how well it works in relation to the purpose and the user and whether it meets the design criteria.* |
| **SEND expectations** | 1. To decide on a product being designed. 2. To know how to make a structure stable. 3. To know which tools and equipment they will need to use. 4. To explain how they created their structure. |
| **Resources** | * Pictures/photographs/books showing different types of castle * Materials – cardboard, card, paper, plastic: *acetate, plastic bags, cellophane* * Joining materials *eg glue, masking tape* * Finishing materials *eg collage materials, paint, fabric pieces* * Scissors, snips, hole punch, stapler |