National Curriculum subject content:

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

National Curriculum theme:

- ✓ Design
- ✓ Make
- ✓ Evaluate
- ✓ Technical Knowledge (structures)

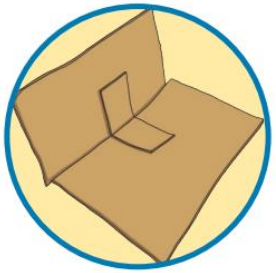
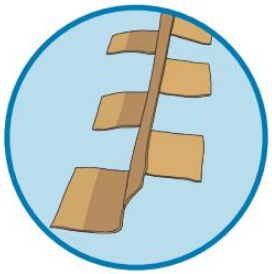
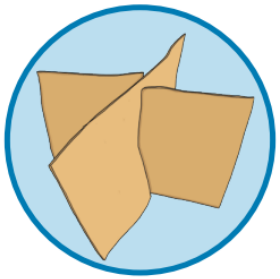
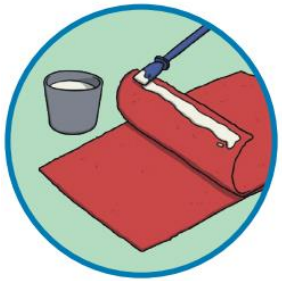
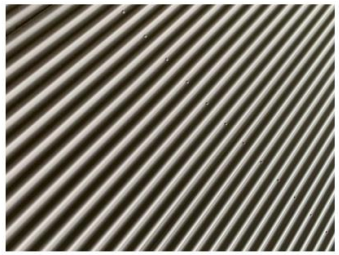
Design and Technology: Yr2 summer term: materials and structures: Make a Tudor house

Key Vocabulary:	
Structure	A building or other object constructed from several parts.
Strengthen	To make or become stronger.
Stiffen	To support or strengthen a material.
Join	To link or connect things together.
Joint	A point at which parts of an artificial structure are joined.
Materials	The matter from which a thing is or can be made.
Research	The process of retrieving information.
Design	process
Make	Combining materials and techniques to create a product.
Evaluate	To consider the effectiveness of a product.
Sketch	A rough or unfinished drawing or painting.
Design criteria	The specific goals that a project must achieve in order to be successful.
Prototype	A prototype is an early sample, model, or release of a product built to test a concept or process.

Design and Technology:
Yr2 summer term:
materials and structures:
Make a Tudor house

Sequence of Learning:						
Objectives (key knowledge):						
Use knowledge of materials and structures to make a Tudor house.						
Lesson 1: Create structures To join materials to make a structure.	Lesson 2: Strengthen structures To learn how to strengthen a structure.	Lesson 3: Design criteria To develop a design criteria and annotated sketch.	Lesson 4: Prototype To create a prototype considering the materials and techniques I will use.	Lesson 5: Make To make a strong structure for my Tudor house, using appropriate materials and techniques.	Lesson 6: Make To complete my Tudor house, ensuring that is meets the design criteria.	Lesson 7: Evaluate To evaluate my Tudor house against design criteria.
Experiment with creating structures. Biscuit challenge: make the tallest structure to hold the biscuits using tape, paper, card, art straws scissors Evaluate: What went well? What did not?	Discuss and model strengthening techniques: cylindrical tubes, triangles, folding/ corrugating. Test how can we make structures stronger, stiffer and more stable? Challenge: Can paper hold a tin of beans?	Research Tudor houses and identify key features. Develop design criteria. Annotated sketch, focussing on features and appearance of a Tudor house.	Create a prototype. Explore materials, joining techniques, and ways of strengthening. Evaluate prototype. What went well? What will you change?	Make a Tudor house. Use strengthening and joining techniques to make a strong structure.	Decorate. Considering research, appearance.	Evaluate effectiveness. Refer to design criteria.

Design and Technology:
Yr2 summer term:
materials and structures:
Make a Tudor house

<table>
<tr><th colspan="7">Key technical knowledge:</th></tr>
<tr><td>Joining</td><td colspan="6"> 
brace
 
tape
 
tabs
 
slot
 
fold
 
stick</td></tr>
<tr><td>Strengthening</td><td colspan="2"> 
Tubing
When a material is shaped into a square, triangle, u-shape or round tube, the strength of the material is increased. This tubing is often used to support large weights, such as roofs.
  </td><td colspan="2">Folding
Folding is another way of strengthening a material. Things like corrugated cardboard and corrugated iron are examples of strength from folding.
  </td><td colspan="2">Strong shapes
Triangles are stronger than squares.
  </td></tr>
</table>