

Cycle A Autumn Term

Long-term overview for Design Technology

Year 3/4

How can we prepare afternoon tea for a small group, which includes at least one adult?

Research and find out what afternoon tea normally includes

Decide who to invite and create a menu to send with the invitation

Design the afternoon tea contents making decisions on sandwiches and cakes

Gather the ingredients needed before making up the afternoon tea

Evaluate the afternoon tea including creating a questionnaire for guests

Designing	Making	Evaluating
<ul style="list-style-type: none">Research to find out what an afternoon tea contains.Ensure that ingredients for the sandwiches, savouries and cakes are available.Decide on the contents of the afternoon tea plate.	<ul style="list-style-type: none">Measure ingredients carefully when making the sandwiches, savouries and cakes.Ensure that you are using the correct utensil for each product.Ensure that you are working hygienically and safely.	<ul style="list-style-type: none">Evaluate and suggest improvements for the afternoon tea.Evaluate the afternoon tea, asking the guests their opinions.Evaluate the afternoon tea during and at the end of the assignment.Present the product in an interesting way.
Food Technology		
<ul style="list-style-type: none">Bring a creative element to the food product being designed.Know which season various foods are available for harvesting.Recognise safe practices in the kitchen and identify hazards, e.g. when using an oven.Know how to use a range of techniques, such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.Know that to be active and healthy, food and drink are needed to provide energy for the body.		

Cycle A Spring Term

Long-term overview for Design Technology

Year 3/4

How can we create a mechanism for loading objects onto a boat incorporating a pulley system (lifting 1 kg)?

Understand how pulleys work and look at how objects are loaded onto boats

Design a pulley structure capable of lifting a weight of 1 kg

Gather the resources needed to make the pulley

Ensure that the pulley is stable and can swing to move a weight from A to B

Evaluate the pulley structure and consider how it could be improved

Designing

- Consider the purpose of their product
- Prove that a design meets the specification.
- Design a product and make sure that it meets the design criteria.
- Draw annotated designs with labels that detail their material choices and the suitability of the given materials.
- Learn about inventors, designers, engineers, chefs and manufacturers who have developed groundbreaking products.
- When planning, explain their choices of materials and components, including function.

Making

- Select the most appropriate tools and techniques for the task.
- Work accurately to measure, mark out, make cuts, score, make holes and assemble components more accurately.
- Start to work safely and accurately with a range of simple tools.
- Start to understand that mechanical systems (e.g. pulleys) enable movement.
- Start to think about their ideas as they make their product and be willing to change things if they help them to improve their work.

Evaluating

- Know why a model has or has not been successful.
- Evaluate their product against their original design criteria (e.g. how well it meets its intended purpose).
- Begin to disassemble and evaluate familiar products and consider the views of others to improve them.

Technical Knowledge

- Create a product that incorporates a pulley mechanism.

Cycle A Summer Term

Long-term overview for Design Technology

Year 3/4

How can we create an A4 personal flag for the Ancient Greek Olympics opening ceremony, incorporating a running or blanket stitch?

Research what happened at the Ancient Greek Olympics

Design a flag that is made from different materials

Gather the resources needed to make the flag

Join different parts of the flag by sewing, showing appropriate sewing techniques

Evaluate the completed flag and consider how it could be improved

Designing

Making

Evaluating

- Research as a matter of course before considering designing a product.
- Produce a plan and explain the use of materials, equipment and processes.
- If the first attempt fails, identify strengths and future areas for development.
- Communicate ideas through annotated sketches that show different viewpoints of the product.

- Know which tools to use for a particular task and show knowledge of handling the tool accurately and safely.
- Know which material is likely to give the best outcome based on its properties.
- Mark, measure and cut accurately a range of materials using appropriate tools, equipment and techniques.
- Start to join and combine materials and components accurately in temporary and permanent ways.
- Sew, weave or knit using a range of stitches.
- Show high levels of perseverance when things do not go as they would wish in the first instance.

- Evaluate products for both their purpose and appearance.
- Evaluate their own and others' work.
- Evaluate their product, carrying out appropriate tests.
- Evaluate their product both during and at the end of the assignment.
- Present a product in an interesting way.

Technical Knowledge

- Use appropriate sewing techniques, such as a running or blanket stitch.

Cycle B Autumn Term

Long-term overview for Design Technology

Year 3/4

How can we create an electric torch which incorporates changing colours, e.g. kaleidoscope?

Understand how a torch works

Design a colour system that can be attached to a torch to create a kaleidoscope

Gather the resources needed to create the colour changes

Ensure the kaleidoscope is strong enough to withstand constant use

Evaluate the kaleidoscope against the original design

Designing

- Produce a plan and explain the use of materials, equipment and processes.
- Persevere and adapt work when original ideas do not work.
- If the first attempt fails, identify strengths and future areas for development.
- Communicate ideas through annotated sketches that show different viewpoints of the product.
- Begin to be familiar with different inventors, designers, engineers, chefs and manufacturers who have developed groundbreaking products.

Making

- Know which tools to use for a particular task and show knowledge of handling the tool accurately and safely.
- Know which material is likely to give the best outcome based on its properties.
- Mark, measure and cut accurately a range of materials using appropriate tools, equipment and techniques.
- Start to join and combine materials and components accurately in temporary and permanent ways.
- Show high levels of perseverance when things do not go as they would wish in the first instance.
- Know how simple electrical circuits and components can be used to create functional products.

Evaluating

- Evaluate and suggest improvements for designs.
- Evaluate their product, carrying out appropriate tests.
- Evaluate their product both during and at the end of the assignment.
- Present a product in an interesting way.

Technical Knowledge

- Link scientific knowledge by using lights, switches or buzzers.
- Use IT where appropriate to add to the quality of the product.

Cycle B Spring Term

Long-term overview for Design Technology

Year 3/4

How can we make scones or cup-cakes?

Research to find out what ingredients are needed to make scones or cupcakes

Design the cakes and decide which ingredients are needed

Gather the resources needed to make the cakes

Make the cakes, measuring carefully, and ensure you are working hygienically and safely

Evaluate the cakes and consider how they could be improved

Designing

- Design the cakes, making sure that they meet the design criteria.
- Draw annotated designs with labels that detail their choice of resources and the suitability of the given materials.
- When planning, explain their choices of ingredients and components.

Making

- Select the most appropriate utensils for the task.
- Work accurately to measure and make cuts accurately.
- Start to work safely and accurately with a range of simple utensils.
- Start to think about their ideas as they make their cakes and be willing to change things if it helps them to improve their work.

Evaluating

- Know why the cakes have or have not been successful.
- Evaluate their cakes against their original design criteria.

Food Technology

- Describe how the food ingredients come together.
- Weigh out ingredients and follow a given recipe to create a dish.
- Understand how to prepare and cook safely and hygienically including, where appropriate, using a heat source.
- Begin to understand how to use a range of techniques, such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.
- Begin to know that to be active and healthy, food and drink are needed to provide energy and hydration for the body.

Cycle A Summer Term

Long-term overview for Design Technology

Year 3/4

How can we create a weaving loom to produce an A4 floor mat incorporating a range of textiles and textures?

Research different ways of weaving

Design a floor mat that has different patterns and textures

Gather the resources needed to make the floor mat

Show the correct techniques when weaving, knowing how to join different materials

Evaluate the floor mat against their original idea and make suggestions for improvements

Designing

- Begin to develop design ideas using research and discussion with peers and adults.
- Understand the purpose of their product.
- Think of an idea and plan what to do next.
- Draw a simple design and label the parts of their product.
- Develop their ideas through drawings and, where appropriate, make templates or mock-ups of their initial ideas.

Making

- Follow a step-by-step plan, choosing the right equipment and materials.
- Select the most appropriate tools and techniques for a given task.
- Work accurately to measure, mark out, make cuts, score, make holes and assemble components more accurately.
- Start to work safely and accurately with a range of simple tools.
- Choose finishing techniques to improve the appearance of their products using a range of equipment.
- Start to think about their ideas as they make their product and be willing to change things if they help them to improve their work.

Evaluating

- Explain how to improve a finished model
- Know why a model has or has not been successful.
- Evaluate their product against their original design criteria (e.g. how well it meets its intended purpose).

Technical Knowledge

- If needed, use a simple IT program within the design.