

***These points are areas for development.**



DT Progression of skills KS1

KS1 National Curriculum objectives: In this phase, children will be taught to:
<u>Design</u> D1 To work confidently within a range of contexts, such as the home, school, gardens, playgrounds, local community, industry and the wider environment. D2 To understand who their product is for (either themselves or other users). D3 To follow simple design criteria to help develop their ideas. (My product must....) D4 To use knowledge of existing products to help come up with ideas. D5 To develop and communicate ideas by talking and drawing. D6 To model ideas by using construction kits and making mock-ups and templates. D7 To use information and communication technology, where appropriate to communicate ideas.
<u>Make</u> M1 To plan by suggesting what to do next. M2 To select from a range of tools and equipment, explaining their choices. M3 To select from a range of materials and components according to their characteristics. M4 To follow procedures for safety and hygiene. M5 To be mindful of the environment when choosing and using materials, producing the least amount of waste possible. M6 To use construction kits, textiles, food ingredients and moving mechanisms. M7 To cut, shape and join materials and use finishing techniques to enhance the appearance of the product. M8 To show resilience when things go wrong and learn from mistakes.
<u>Evaluate</u> E1 To explore and evaluate a range of existing products. E2 To evaluate their ideas and finished product against the design criteria. E3 To suggest how their product could be improved.
<u>Technical knowledge</u> T1 To explore and use mechanisms, such as spinners, sliders, wheels and axles in their products. T2 To build structures, exploring how they can join materials and make them stronger stiffer and more stable. T3 To use sewing techniques to join two identical fabric shapes. T4 To prepare a healthy dish, using cutting, peeling, rolling and mixing skills.
<u>Cooking and nutrition</u> C1 To understand that all food comes from plants or animals. C2 To understand that food has to be farmed, grown or caught. C3 To begin to recognise the five food groups in The Eatwell Plate. C4 To understand that everyone should eat at least five portions of fruit and vegetables every day. C5 To produce simple, healthy dishes safely and hygienically.



DT Progression of skills LKS2

KS2 National Curriculum objectives: In this phase, children will be taught to:
<u>Design</u> D1 To work confidently within a range of contexts, such as the home, school, gardens, playgrounds, local community, industry and the wider environment. D2 To identify the design features of their product that will appeal to the intended user. D3 To carryout research to find out the needs and wants of the user. D4 To develop their own design criteria (with support) and use these to inform their ideas. (My product must.... My product could...) D5 To share and clarify ideas through discussion. D6 To use annotated sketches to communicate their ideas. D7 To use prototypes and pattern pieces. D8 To make design decisions that take account of the availability of resources and focus on being environmentally friendly. D9 To use information and communication technology, where appropriate to communicate ideas.
<u>Make</u> M1 To order the main stages of making. M2 To select tools and equipment for the task and explain their choices. M3 To select materials suitable for the task and explain their choices according to functional properties and aesthetic qualities. M4 To follow procedures of safety and hygiene. M5 To be mindful of the environment when choosing and using materials, producing the least amount of waste possible. M6 To use construction kits, textiles, food ingredients and mechanical components and electrical components. M7 To measure, mark out, cut, shape and join materials with some accuracy and use finishing techniques to enhance the appearance of the product. M8 To demonstrate resourcefulness and resilience when tackling practical problems
<u>Evaluate</u> E1 To carryout research to investigate and analyse how other similar products have been made. E2 To explore how key events and individuals in design and technology have helped shape the world. <i>The origins of pneumatics can be traced back to the first century when ancient Greek mathematician Hero of Alexandria wrote about his inventions powered by steam or the wind.</i> E3 To evaluate their ideas and product against their own design criteria and consider the views of others to improve their work.
<u>Technical knowledge</u> T1 To understand and use a pneumatic system to create movement. T2 To understand and use electrical systems in their products, using series circuits incorporating switches, bulbs, buzzers and motors. T3 To apply their understanding of how to strengthen, stiffen and reinforce their structures and design their own stand, enabling the structure to stand independently. T4 To use a range of sewing techniques to produce a container from a chosen pattern. T5 To prepare healthy, predominantly savoury dishes using a range of techniques including: chopping, mixing, kneading and baking.
<u>Cooking and nutrition</u> C1 To understand food is grown, reared and caught in the UK, Europe and the wider world. C2 To understand a healthy diet is made up from a variety and balance of different food and drink, as depicted in The Eatwell Plate. C3 To understand that to be active and healthy, food and drink are needed to provide energy for the body. C4 To prepare healthy, predominantly savoury dishes using a range of techniques including: chopping, mixing, kneading and baking. C5 To produce healthy dishes safely and hygienically, where appropriate using a heat source.



DT Progression of skills UKS2

KS2 National Curriculum objectives: In this phase, children will be taught to:

Design

- D1 To work confidently within a range of contexts, such as the home, school, gardens, playgrounds, local community, industry and the wider environment.
- D2 To identify the design features of their product that will appeal to the intended user.
- D3 To carryout research, using surveys, interviews, questionnaires and web-based resources to find out the needs and wants of the user.
- D4 To develop their own design criteria and use these to inform their ideas.
- D5 To share and clarify ideas through discussion.
- D6 To use annotated sketches, cross-sectional drawings and exploded diagrams to communicate their ideas.
- D7 To use prototypes and pattern pieces.
- D8 To make design decisions that take account of the availability of resources and focus on being environmentally friendly.
- D9 To use computer-aided design to develop and communicate their ideas.

Make

- M1 To formulate step-by-step plans as a guide to making.
- M2 To select tools and equipment for the task and explain their choices.
- M3 To select materials suitable for the task and explain their choices according to functional properties and aesthetic qualities.
- M4 To follow procedures of safety and hygiene.
- M5 To be mindful of the environment when choosing and using materials, producing the least amount of waste possible.
- M6 To use construction kits, textiles, food ingredients and mechanical components and use computing to program, monitor and control their products.
- M7 To measure, mark out, cut, shape and join materials with some accuracy and use finishing techniques to enhance the appearance of the product.
- M8 To use techniques that involve a number of steps.
- M9 To demonstrate resourcefulness and resilience when tackling practical problems.

Evaluate

- E1 To carryout research to investigate and analyse how other similar products have been made.
- E2 To explore how key events and individuals in design and technology have helped shape the world. *The origin of the Faberge Egg, Archimedes of Syracuse invented the first compound pulleys 287 BC - 212 BC. Gears appear in works connected to Hero of Alexandria, in Roman Egypt circa AD 50, but can be traced back to the mechanics of the Alexandrian school in 3rd-century BC Ptolemaic Egypt, and were greatly developed by the Greek polymath Archimedes (287–212 BC).*
- E3 To evaluate their ideas and product against their own design criteria and consider the views of others to improve their work.
- E4 To work out how much products cost to make.

Technical knowledge

- T1 To understand how gears, pulleys, cams and levers work. Choose one of these to make a moving part.
- T3 To apply their understanding of how to strengthen, stiffen and reinforce a 3D structure, designing their own display case with lid.
- T4 To use a range of sewing techniques to produce a sock monster.
- T5 To prepare healthy, predominantly savoury dishes using a range of techniques including: chopping, peeling, slicing, mixing and grating.
- T6 To program a computer to monitor and control their product.

Cooking and nutrition

- C1 To understand food is grown, reared and caught in the UK, Europe and the wider world.
- C2 To understand that seasons may affect the food available.
- C3 To understand a healthy diet is made up from a variety and balance of different food and drink, as depicted in The Eatwell Plate.
- C3 To understand that to be active and healthy, food and drink are needed to provide energy for the body.
- C4 To prepare healthy, predominantly savoury dishes using a range of techniques including: chopping, peeling, slicing, mixing and grating.
- C5 To produce healthy dishes safely and hygienically, where appropriate using a heat source.

