Bishop Stopford School

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Design & Technology

Curriculum – Key Stage 3

Key Stage 3 Curriculum Overview 2025-26

	Nightlights	Biology Bags	Food Hygiene	Afternoon Tea
	8 weeks *"Intent – This project is designed to build skills and confidence in a subject most students have little to no experience in. It encourages them to develop independence as well as allowing for the learning of key technical terms and material sources. The skills learned in this project will allow for further development throughout KS3".*	**8 weeks** *"Intent – This project is designed to build skills and confidence in a subject most students have little to no experience in. It encourages them to develop independence as well as allowing for the learning of key technical terms and material sources. The skills learned in this project will allow for further development throughout KS3".*	**8 weeks** *"Intent – This project is designed to build skills and confidence in a subject most students have little to no experience in. It encourages them to develop independence as well as allowing for the learning of key technical terms and techniques. The skills learned in this project will allow for further development throughout KS3".*	**8 weeks** *"Intent – This project builds on the skills learned in the food hygiene unit and encourages students to review existing food products, generating their own concepts based on the information gathered"*
Year 7 – Unit description	**Knowledge** Maths – Circles (radius, diameter and circumference) Health and Safety in the workshop Correct selection of tools (mitre saw) Research Pros and Cons Product Analysis (ACCESSFM) Electronics (LEDs) Evaluating **Skills** Setting up of tools to cut precise angles Measuring and marking out with accuracy Finishing (sanding, both belt and by hand) Assembly techniques CAD (2D Design) Laser cutting Soldering (where possible) **Reading Activity** The history of Ikea and self-assembly furniture.	**Knowledge** Maths - Area of materials and costing Health and Safety in the Textiles room Properties of synthetic fabrics How felt is made Flowcharts Evaluating **Skills** Basic embroidery skills Advanced embroidery skills Designing Heat Press How to thread the sewing machine Basic machine skills **Reading Activity** What Are Synthetic Fibres?	**Knowledge** Food hygiene and safety rules Correct use of tools and equipment The 4 C's Planning Evaluating **Skills** Weighing and measuring Knife skills Presenting products attractively Sensory analysis Designing **Reading Activity** Causes of Food Poisoning	**Knowledge** Food hygiene and safety rules The science of bread making The development of culinary traditions Factors that influence product choice Costing a product Calculating nutrition Packaging Information **Skills** Weighing and measuring Kneading, shaping, proving Knife skills Presenting products attractively Sensory analysis **Reading Activity** The history of Afternoon Tea
Assessment	Summative Assessment– Final Teacher Assessment (marked using criteria at the back of booklets) Formative Assessment – H&S, Secondary Research, Designing, Evaluation Homework - Secondary Research	Summative Assessment– Final Teacher Assessment (marked using criteria at the back of booklets) Formative Assessment – H&S, Designing, Evaluating Homework - Cell Research	Summative Assessment– Final Teacher Assessment (marked using criteria at the back of booklets) Formative Assessment – Hygiene & Safety, Designing, Evaluation Homework – Weighing & Measuring (Preparing ingredients)	Summative Assessment– Final Teacher Assessment (marked using criteria at the back of booklets) Formative Assessment – Idea Generation, Designing, Sensory Analysis Homework – Weighing & Measuring (Preparing ingredients)
Adaptive	Students will be encouraged to select from a range of increasingly difficult main shapes made from wood and to produce more/less complex CAD designs. Standardised homework allows for a range of approaches and encourage a wide range of high-quality outcomes. Open ended tasks allow for a range of abilities and outcomes.	Students will be challenged to include more complex decoration for their bag. Standardised homework allows for a range of approaches and encourage a wide range of high-quality outcomes. Open ended tasks allow for a range of abilities and outcomes.	Students will choose a product to make in a fixed time to meet a brief. A free practical allows students to showcase their skills. All recipes are stored on Firefly with some practical videos to support student organisation.	Students will choose a product to make in a fixed time to meet a brief. Plans can be provided or written individually. All recipes are stored on Firefly to support student organisation.

Assessment types

Formative Assessment– Final Teacher Assessment (marked using criteria at the back of booklets)

Summative Assessment – Written feedback provided using STAR boxes

Homework – Teacher assessed

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		Device Stand	Pyjama Bottoms	Staple Foods	Healthy Eating
		8 weeks *"Intent – This project is designed to build on the skills learned in Y7. Now students are more confident they can use more advanced tools and machinery. This project is designed to show students that you do not have to capable of producing complex electronics to be a product designer. One of the largest markets for products is accessories and in a world run by mobile phones, this is an area that they could all produce accessories for."*	8 weeks *"Intent – This project is designed to build on the skills learned in Y7. Now students are more confident they can move away from simple flat pieces of fabric and onto using patterns to create garments. This is more real world view on how textile products are designed and manufactured".*	8 weeks *"Intent - Students learn to plan their own practical work to ensure that the products they make are consistent, safe and of good quality. They learn to recognise areas for improvement and become more time conscious, allowing them to make decisions on timings and amendments".*	8 weeks *"Intent - Students learn to recognise the importance of a healthy diet and the function of individual nutrients. They also learn how to adapt recipes to make them healthier and in line with government recommendations".*
Year 8	Unit description	**Knowledge** Health & Safety in the workshop Maths – Tolerance Metals – Categories & Sources Generating creative ideas based on themes and inspiration Accurate recording of practical processes Evaluating – Comparisons against a specification, testing and views of others **Skills** Creating a template Engineering drawings (orthographic) Using the scroll saw Punching & Drilling metal safely Using the line bender Bending metal CAD Assembling like and unlike materials with a variety of methods **Reading Activity** Issues associated with prolonged mobile phone use	**Knowledge** Health and Safety in the Textiles room Origins and uses for natural fibres Graphs and Charts in DT Washing Symbols **Skills** Basic sewing machine skills Using a sewing machine to construct a garment Finishing a garment Cutting out and following a pattern Design drawing and annotation **Reading Activity** Micro-plastics	**Knowledge** Food hygiene & safety rules What is a staple food and why do they differ from country to country? How to plan a practical with hygiene/safety/quality considerations Finishing techniques. Moral issues affecting food production (fair trade, food miles and food waste) **Skills** Knife skills Finishing techniques Practical skills using starches (pasta, rice, potato, couscous, pastry). **Reading Activity** Who Invented Pizza?	**Knowledge** Food hygiene & safety rules Eatwell Guide Government Guidelines to Healthy Eating Macronutrients Factors that influence food choice Sensory properties of foods Research questions on fat, fibre & salt **Skills** Making of shortcrust pastry using the rubbing-in method, rolling, shaping and lining Knife skills, vegetable preparation Whisking method Frying method Evaluative skills **Reading Activity** How diet is changing: the good and the bad
	Assessment	Summative Assessment– Final Teacher Assessment (marked using criteria at the back of booklets) Formative Assessment – Templates/Orthographic, Diary of Making, Design Ideas, Evaluation Homework – Engineering Drawings	Summative Assessment– Final Teacher Assessment (marked using criteria at the back of booklets) Formative Assessment – Plan of Making, Design Ideas, Evaluation Homework – Material Selection	Formative Summative – Final Teacher Assessment (marked using criteria at the back of booklets) Formative Assessment – Planning (x2), Environmental Issues Homework – Weighing & Measuring (Preparing ingredients) Homework – Different Pastas	Summative Assessment– Final Teacher Assessment (marked using criteria at the back of booklets) Formative Assessment – Evaluating, Sensory Analysis, Homework – Weighing & Measuring (Preparing ingredients)
	Adaptive	This project is split into two sections. The first requires students to work with a high level of accuracy. Ensuring that their mobile device will fit into the aluminium holder is essential. The second part allows them to think more creatively, however, this requires students to envisage their product as separate components and generate appropriate CAD drawings. Open ended tasks allow for a range of abilities and outcomes.	Students will all construct a pair of PJ shorts from a pattern. This is a big jump from the Y7 project as it is no longer working with flat pieces that fit together. This should stretch, challenge and develop the students machine skills. Open ended tasks allow for a range of abilities and outcomes.	Students are encouraged to become more independent cooks, although support is available for those that need it. All recipes are stored on Firefly to support student organisation.	Students are encouraged to become more independent cooks, although support is available for those that need it. Recipes can be modified with a range of complex or straightforward adaptations. All recipes are stored on Firefly to support student organisation.

Assessment types

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Homework – Teacher assessed

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	Product Design	Fighting Fast Fashion	Food Science	Teenage Diets
	8 weeks *"Intent – Now students have spent two years working in a workshop, they have developed the practical skill necessary to be given much more freedom in their outcomes. Rather than a standardised approach, this project provides students with a GCSE style contextual starting point and encourages them to develop their own outcome. Students produce their own brief and specification and will decide upon the materials, dimensions and construction methods".*	**8 weeks** *"Intent – Now students have spent two years developing their skills they will combine all they have learned along with a new focus on the environmental impact of fashion. This project is designed to stretch their skills when working with a pattern (now circular) as well as develop a deeper understanding of the environment".*	**8 weeks** *"Intent - The project is designed to teach the students how raising agents work and how to measure the difference they make to a finished product. Students then have to research and conduct their own (cooked) experiment to justify a scientific theory of their choice. This approach is designed to demonstrate the interaction between ingredients and is in keeping with the KS4 subject structure".*	**8 weeks** *"Intent - The project is designed to teach the students how to cook and develops life skills that will stay with them long after they have left the school. In conjunction with the Y8 healthy eating unit, students should be able to select appropriate dishes to cook for themselves".*
Year 9 – Unit description	**Knowledge** Health & Safety in the Workshop Maths – Area, estimation and costing Contextual awareness Brief & Specification The work of other designers Idea Development Evaluating against success criteria (i.e. specification) **Skills** Designing for others Developing an idea Ordering materials Independent practical approaches using a wide range of practical processes **Reading Activity** Crowdfunding and its potential benefits and limitations.	**Knowledge** Health and Safety in the Textiles room How to write a basic risk assessment How fabrics are constructed Costing – Profit and Loss 6R's Flowcharts How to write a design brief and specification How to evaluate finished products **Skills** Advanced sewing machine skills Using a sewing machine to construct a garment Finishing a garment. Cutting out and following a pattern Lining a Garment **Reading Activity** Fast Fashion	**Knowledge** Methods of heat transfer. Reasons for cooking food. Recognising the functional properties of ingredients Fair testing (how to carry out) Writing up a food science experiment **Skills** Judging sensory characteristics Producing a scientific report Cooking skills demonstrating the use of raising agents **Reading Activity** Popcorn –the ultimate comfort food	**Knowledge** Specific dietary needs of teenagers Vegetarianism Alternative proteins Micronutrients Disassembly of existing products using alternative protein foods Plan and cook nutritious meals for a teenager Sensory analysis Factors that influence consumer choice Food Scares Labelling **Skills** White/cheese sauce – all-in-one method Rolling out of dough, shaping Simple reduction sauces Desserts Meat preparation Vegetable preparation Knife skills Testing for readiness Analysing nutritional value using Food for a PC Costing of recipe **Reading Activity** 5 ways the vegan diet has changed in a decade.
Assessment	Summative Assessment– Final Teacher Assessment (marked using criteria at the back of booklets) Formative Assessment – Brainstorm/Brief/Specification, Design Ideas, Idea Development, Evaluation Homework – Design Styles Research	Summative Assessment– Final Teacher Assessment (marked using criteria at the back of booklets) Formative Assessment – Health & Safety, Brief & Specification, Plan of Making, Design Ideas, Evaluation Homework – Fabric Construction Methods	Summative Assessment– Final Teacher Assessment (marked using criteria at the back of booklets) Formative Assessment – Experimentation, Predicting Outcomes, research Homework –Research Homework – Weighing & Measuring (Preparing ingredients)	Summative Assessment– Final Teacher Assessment (marked using criteria at the back of booklets) Formative Assessment – Planning, Evaluation (x2) Homework – Weighing & Measuring (Preparing ingredients)
Adaptive	The very nature of this project is challenging. For the first time, students have to identify a problem and solve it by designing and prototyping an outcome. Standardised homework allows for a range of approaches and encourage a wide range of high quality outcomes.	Students are learning about how the environment is affect by Fast Fashion. Students will construct a garment made of recycled materials developing the machine sewing skills they have already developed by lining their product and sewing more curved pieces.	Students are required to select their own scientific experiments which can vary from complex to straightforward depending on the students' needs. All recipes are stored on Firefly to support student organisation.	Students are encouraged to become more independent cooks, although support is available for those that need it. Students can choose from a range of recipes/ingredients. All recipes are stored on Firefly to support student organisation.

Assessment types

Formative Assessment– Final Teacher Assessment (marked using criteria at the back of booklets)

Summative Assessment – Written feedback provided using STAR boxes

Homework – Teacher assessed

>Something More?

Curriculums at BSS are designed to nurture not only intellectual and physical development but also the spiritual growth of students. This will be through:

Encouraging students to reflect on their experiences, beliefs and purpose and to contemplate the big Questions of Who am I? Why am I here? What is my purpose?

Highlighting extraordinary people, events, and discoveries that inspire awe or investigating how a sense of awe has led to breakthroughs and creativity.

Using art, music, literature, and nature to inspire awe, wonder, and spiritual insight.

Encouraging creative expression to connect with the inner self and the transcendent.

Fostering a sense of belonging and interconnectedness with others, nature, and the universe.

Encouraging self-awareness, emotional intelligence, and moral reasoning.

Promoting open-ended investigations rather than just seeking right answers.

Using hands-on activities, field trips and experiments to immerse students in learning and evoke wonder.

How does our curriculum do >Something More?

KS3 Design & Technology

- Highlighting extraordinary people, events, and discoveries that inspire awe or investigating how a sense of awe has led to **breakthroughs and creativity:**
  - ✓ **Y7 & Y8 Product Design, Product Analysis: In our KS3 D&T curriculum, we highlight extraordinary people, events, and discoveries by analysing a range of existing products. Pupils explore how these products are designed and made, uncovering the creativity, problem-solving, and ingenuity behind them, benefiting society and improving lives.**

- Encouraging creative expression to connect with the inner self and the transcendent:
  - ✓ **KS3 Product Design / Food, Design Ideas: Our KS3 D&T curriculum encourages creative expression by providing students with opportunities to develop their own individual design ideas. Through open-ended tasks and personal responses to design briefs, pupils are able to express their thoughts, values, and interests. This creative process allows them to connect with their inner selves, imagining how their designs can have an impact on individuals or society.**

- Fostering a sense of belonging and interconnectedness with others, nature, and the universe:
  - ✓ **KS3 Product Design / Food, Target Markets: In our KS3 D&T curriculum, we foster a sense of belonging and interconnectedness by encouraging students to consider the needs and perspectives of others through identifying and designing for specific target markets. Collaborative activities such as peer feedback sessions further support this by helping students understand how their work affects and is received by others.**
    KS3 Food, Ethical and Moral consumer choices: In our KS3 Food curriculum students recognise the impact their food choice have on others by looking at issues such as Fair Trade, Food Miles and Food Waste. This helps them to understand how simple changes in purchasing decisions can have far reaching consequences.

- Promoting open-ended investigations rather than just seeking right answers:
  - ✓ **KS3 Product Design Projects: Our KS3 D&T curriculum promotes open-ended investigation by giving students the freedom to explore a range of possible solutions within each design brief. Rather than working towards a single 'right' answer, pupils are encouraged to think creatively, justify their design choices, and develop unique responses that reflect their understanding and interpretation of the task.**

- Using hands-on activities, field trips and experiments to immerse students in learning and evoke wonder:
  - ✓ **KS3 Product Design / Food, Practical Work: In our KS3 D&T curriculum, hands-on learning is central to the student experience. Pupils are taught a wide range of practical skills and are encouraged to work independently with tools, equipment, and machinery. This active engagement not only builds confidence and competence but also sparks a sense of wonder as students bring their ideas to life through making.**