

Curriculum Intent, Implementation and Impact

Subject: Design and Technology KS3.

Year group:9

Periods per fortnight: 3

Intent:

Vision

Engagement, Resilience, Success.

Mission Statement

In the Buckingham School Design and Technology Department, our vision is to give Year 9 students a broad range of design and practical skills. We have created a varied range of current Design and Technology threads for the students to take part in.

This engaging curriculum is underpinned with exciting and engaging lessons that will really help students engage with their learning, through the various new learning experiences, that they will cover in Design and Technology.

We will encourage the students to develop and demonstrate their resilience, as they progress through a carousel of various Design and Technology Threads in KS3. They will develop an understanding of the design process, then finish with the creation of their ideas into practical working pieces.

The students will also be praised and rewarded as they progress through their learning, with positive and constructive feedback, on each coursework element they complete on their journey to success.

These successful students will then be well prepared for their options choices at the end of Year 9, with sufficiently acquired skills needed to help them access any Design and Technology courses in KS4 that they wish to.

In Year 9 our students will cover the following Design and Technology threads:

- BTEC Construction taster.
- Food Technology. GCSE Taster.
- Carpentry, Bird box design.
- CAD design and 3-D Printing.

Each Year 9 student will complete the following threads throughout the academic year. These Schemes of learning will be taught using a range of different techniques, including practical and written elements.

The Design & Technology Department will ensure that the School Virtues will be embedded into our schemes of learning.

- Resilience – This will be a cornerstone of our teaching, as we will encourage our Year 9 students to research and discover exciting and new developments and practices within each of the threads. Students will be encouraged to create their own research models and product design with guidance from the

teacher, to make mistakes and adapt from them as they then put their ideas into the manufacturing of their final piece.

- Curiosity – Students will be asked to develop a range of research methods and use a variety of new Design and Technology skills. Some students will have no previous or limited experience of Design and Technology from KS2. Their curiosity will be expanded as we will ensure that they have a wide range of questions to ask and perspectives to think about over various Threads.
- Ambition - To strive to develop their design Process skills in each of the Design and Technology Threads. They will be guided throughout with exemplary work; the students will be given constructive feedback throughout as they put these ideas into practise of making their final pieces. Students will also be shown and encouraged to study exemplar pieces in the real world, enabling the students to attain the skillsets to access the KS4 curriculum.
- Confidence - Students will develop confidence, through Peer formative feedback sessions within the class. They will also have to present their final designs to the fellow classmates at the end of the course work unit.
- Respect – Students will be taught to be respectful of each other and of their practical environment. They will learn about the safety rules and regulations associated with a Working Kitchen and Workshop. They will learn to value other opinions and designs through formative Peer feedback.
- Empathy – Students will be asked to develop Empathy when exploring the design process and manufacturing of their final pieces. From sustainable resources to manufacturing practices in LEDC's, they will develop a more Empathetic approach to how and why products are made.
- Integrity – Students will be taught the importance of Health and Safety standards within a Working Kitchen and Workshop. They will be encouraged to develop their understanding of rules and principles throughout the design and manufacturing process.

IMPLEMENTATION:

Term	Topics studied	Extended learning opportunities.	How parents could support students
Each Year 9 group will study one of the various threads over a termly carousel.	<p><u>CAD design and 3-D Printing.</u> <u>Time: 9-12 weeks.</u></p> <ul style="list-style-type: none"> ● Design brief and ideas development. ● Design drawing and game research factors impacting design. ● CAD and 3-D printing. ● Final design and manufacture of product. ● Evaluation of final design and 3-D software/slicing research. ● Summative assessment of their final piece. 	Homework and research tasks will be issued regularly via Google Classroom.	<ul style="list-style-type: none"> ● Parents will be able to support your child, by ensuring all homework tasks are completed on time. ● Ensuring all students have access to Google Homework. ● Encourage and incentivise their children to complete the other websites used, linked through the Google Homework.

	<p><u>BTEC Construction Taster, Technical drawing.</u> <u>Time: 9-12 weeks.</u></p> <ul style="list-style-type: none"> • Students will have to design a house from a client brief. • Students will complete a full set of drawings of their planned building meeting the specifications laid out. • Complete detailed drawing techniques. • Research sustainability and carbon footprint in the building industry. 	<p>Homework and research tasks will be issued regularly via Google Classroom.</p>	<ul style="list-style-type: none"> • Parents will be able to support your child, by ensuring all homework tasks are completed on time. • Ensuring all students have access to Google Homework. • Encourage and incentivise their children to complete the other websites used, linked through the Google Homework.
	<p><u>Carpentry, Bird box design.</u> <u>Time: 9-12 weeks.</u></p> <ul style="list-style-type: none"> • Design brief and ideas development. • Design drawing and box research factors impacting design. • Basic woodwork and carpentry skills. • Final design and manufacture of product. • Evaluation of final design and sustainability research. • Summative assessment of their final piece 	<p>Homework and research tasks will be issued regularly via Google Classroom.</p>	<ul style="list-style-type: none"> • Parents will be able to support your child, by ensuring all homework tasks are completed on time. • Ensuring all students have access to Google Homework. • Encourage and incentivise their children to complete the other websites used, linked through the Google Homework.
	<p><u>Food Technology GCSE taster.</u> <u>Time: 9-12 weeks.</u></p> <p>Year 9 students will take part in understanding where food comes from, how to cook a range of dishes safely and hygienically and to apply their knowledge of healthy eating.</p> <p>Students will have the opportunity to work through the following contexts: Domestic and local (home and health); Industrial (food and agriculture).</p> <ul style="list-style-type: none"> • Students will develop their knowledge and understanding of 	<p>Homework and ingredient lists will be issued regularly via Google Classroom.</p> <p>Homework will take the form of research and analysis tasks, that will support the various skill sets within the Threads and will be set on Google classroom.</p> <p>Students will be asked to complete worksheets and additional revision tasks for any end of thread written assessments.</p> <p>The students will complete a taster NEA 2 practical recipe trials and evaluation. This is a good example of the GCSE course in KS4.</p>	<ul style="list-style-type: none"> • Parents will be able to support your child, by ensuring all homework tasks are completed on time. • Ensuring all students have access to Google Homework. • Encourage and incentivise their children to complete the other websites used, linked through the Google Homework. • Parents will be asked to support their

	<p>ingredients and healthy eating;</p> <ul style="list-style-type: none"> ● Students will develop food preparation and cooking techniques; ● Students will develop their knowledge of consumer food and drink choice; ● Students will be able to apply their knowledge to make informed choices; ● Students will develop the creative, technical and practical expertise needed to perform everyday tasks confidently; ● Students will build an apply a repertoire of knowledge, understanding and skills in order to design and make high quality products for a wide range of users; ● Students will evaluate and test their ideas and products and the work of others. <p>There will be a summative assessment at the end of this topic to gauge student attainment and progress.</p>		<p>children by ensuring they have all of their ingredients ready for practical lessons.</p>
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IMPACT:

By the end of the Year 9, students will have developed their knowledge of various Threads of Design and Technology. This will be evident in the classroom folders, classroom booklets and also any practical pieces that they will make.

This highly engaging and varied curriculum will teach them life skills, also it will provide them with a more in-depth learning experience, needed to continue on a pathway in KS4 Design and Technology.

The Seven School Virtues will be evident within the engaging Schemes of Learning and in each of their lessons. The student's will have developed and built up resilience throughout the year, by regularly challenging themselves both in and out of the classroom, to further their enquiry about the subject content. They will also have shown a passion for their subject and have demonstrated their success in the summative assessments throughout the year.