

Curriculum Map

Subject: DT

Year Group: Year 9

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Content- WHAT will be learned? What previous learning can be linked? Why this order/ sequence ?	<p>Bedroom: Graphics This term we build on the students drawing skills from their KS3 projects. In KS3 students used orthographic drawing but this is now developed into 2 point and isometric drawing to give a 3D representation of objects. They also research different design styles building on from KS3. Design styles are chosen by the students with the teacher on hand to give advice and guidance. This is purely a drawing project to cover the graphics element of the course and to reiterate that drawing plays a big part in this subject.</p> <p>Theory is completed in a workbook that compliments the project. NB: Year 9 students do not use the textbook and theory is on a need-to-know basis attached to the workbook.</p>	<p>Jewellery: This builds on KS3 metal work. Students make a ring and a pendant out of copper, and they learn the technique of enamelling. They design their own piece having completed multi-cultural research, they choose their own country and complete design work from their findings. From here they design and make the jewellery along with making the packaging which is made from sustainable card. Students are therefore designing and touching on environmental issues at the same time.</p>	<p>Electronics: Students make a light sensor which comprises of a circuit board, a vacuum formed plastic casing and an MDF back board. This is new to Year 9 as they have not done anything like this before and is a precursor for Year 10 where they can develop these skills further. Students only need to know the very basics of electronics for the final GCSE exam so in view of this they learn about electronics and a method of shaping plastic: vacuum forming to fulfil the requirements for the GCSE exam and to give them the knowledge to answer any questions should they arise.</p>	<p>Bottle Opener: This term students make a bottle opener which comprises of a metal opener and a wooden handle. Again, they learn marking out skills and accuracy so that the opener will open a crown top bottle. The handle is designed ergonomically, this gives students a further insight into meeting the requirements of a design brief and anthropometrics which are required to answer exam questions in the GCSE final exam. There is little theory in this project as it is geared towards designing and meeting a brief.</p>	<p>Production: This project is in 2 halves, the first half the students make coat hooks out of plastic, metal, and wood but as a group. The second half the students design and make a coat hook for themselves to their own design and specification which is now user requirements. This project teaches students about levels of production such as bespoke, batch, mass and continuous production. The room is set up in 6 stations, 2 metal, 2 wood and 2 plastics. Students become production engineers and the aim is that the students rotate around the room and make as many coat hooks as possible, this not only teaches the students about production, but it reiterates teamwork and in small terms factory production.</p>	<p>Automata: The students design and make an automata which is a moving toy. Students build on the skills learnt in Year 8 where they made lever toys. This time they use cams and cam followers to enable the toy to move smoothly. The understanding of the different mechanisms and how they work is required in the final GCSE exam.</p>
Skills- What will be developed?	Drawing skills are the main objective here with accuracy and creativity being focused on.	Design and research skills are incorporated with metal work skills including wasting metal (filing and shaping metal), bonding glass to metal which is enamelling as well as soldering theory.	This has now been moved from KS3 to KS4. Students learn about electronic components and their function; they vacuum form plastic and learn about soldering.	The skills learnt involve accurately marking out, wasting metal, and joining metal to wood.	Teamwork, building on metal, plastic, and wood skills.	Accuracy of marking out wood, joining wood with temporary fixings and accuracy of assembly to ensure moving parts work together to make the toy move smoothly.
Key 'How'/'Why' Questions- What powerful knowledge will be gained? What areas/themes/concepts will be explored?	Year 9 is treated as a skills year with students concentrating heavily on skills in the workshops. Student are questioned on 2 point and isometric drawing to give a 3D representation of objects.	Students are questioned on the design and making of the jewellery along with making the packaging which is made from sustainable card. Students are therefore designing and touching on environmental issues at the same time.	Students are questioned on electronic components and their function, vacuum forming plastic and learning about soldering.	Questions are asked about how to accurately mark out, about wasting metal and joining metal to wood.	Students are questioned on production, metals, wood and plastics.	

<p>SEND- how will support be seen? Seating plans? Simplified questions?</p>	<p>Seating Plans</p> <p>Questions tailored to suit ability.</p> <p>Workbook is read through and answers to questions found, in conjunction with PowerPoints.</p> <p>Students given individual assistance to complete theory.</p> <p>Computers are used to aid students' progress with theory.</p> <p>Some SEND students do not have to complete every question in the workbook, depending on ability.</p> <p>Practical: The task is explained, demonstrated and PowerPoint displayed.</p> <p>Students are teamed with more able students. Power Points to assist with instructions.</p>	<p>Seating Plans</p> <p>Questions tailored to suit ability.</p> <p>Workbook is read through and answers to questions found, in conjunction with PowerPoints.</p> <p>Students given individual assistance to complete theory.</p> <p>Computers are used to aid students' progress with theory.</p> <p>Some SEND students do not have to complete every question in the workbook, depending on ability.</p> <p>Practical: The task is explained, demonstrated and PowerPoint displayed.</p> <p>Students are teamed with more able students. Power Points to assist with instructions.</p>	<p>Seating Plans</p> <p>Questions tailored to suit ability.</p> <p>Workbook is read through and answers to questions found, in conjunction with PowerPoints.</p> <p>Students given individual assistance to complete theory.</p> <p>Computers are used to aid students' progress with theory.</p> <p>Some SEND students do not have to complete every question in the workbook, depending on ability.</p> <p>Practical: The task is explained, demonstrated and PowerPoint displayed.</p> <p>Students are teamed with more able students. Power Points to assist with instructions.</p>	<p>Seating Plans</p> <p>Questions tailored to suit ability.</p> <p>Workbook is read through and answers to questions found, in conjunction with PowerPoints.</p> <p>Students given individual assistance to complete theory.</p> <p>Computers are used to aid students' progress with theory.</p> <p>Some SEND students do not have to complete every question in the workbook, depending on ability.</p> <p>Practical: The task is explained, demonstrated and PowerPoint displayed.</p> <p>Students are teamed with more able students. Power Points to assist with instructions.</p>	<p>Seating Plans</p> <p>Questions tailored to suit ability.</p> <p>Workbook is read through and answers to questions found, in conjunction with PowerPoints.</p> <p>Students given individual assistance to complete theory.</p> <p>Computers are used to aid students' progress with theory.</p> <p>Some SEND students do not have to complete every question in the workbook, depending on ability.</p> <p>Practical: The task is explained, demonstrated and PowerPoint displayed.</p> <p>Students are teamed with more able students. Power Points to assist with instructions.</p>	<p>Seating Plans</p> <p>Questions tailored to suit ability.</p> <p>Workbook is read through and answers to questions found, in conjunction with PowerPoints.</p> <p>Students given individual assistance to complete theory.</p> <p>Computers are used to aid students' progress with theory.</p> <p>Some SEND students do not have to complete every question in the workbook, depending on ability.</p> <p>Practical: The task is explained, demonstrated and PowerPoint displayed.</p> <p>Students are teamed with more able students. Power Points to assist with instructions.</p>
<p>Assessment- What? Why?</p>	<p>Students are assessed on their design ability, workbooks, and their made product.</p>	<p>Students are assessed on their design ability, workbooks, and their made product.</p>	<p>Students are assessed on their design ability, workbooks, and their made product.</p>			
<p>What memory for learning skills will be required- modelling? Concrete answers? Retrieval?</p>	<p>Retrieval/Concrete answers: Testing Modelling products Independent learning: Creating products.</p>	<p>Retrieval/Concrete answers: Testing Modelling products Independent learning: Creating products.</p>	<p>Retrieval/Concrete answers: Testing Modelling products Independent learning: Creating products.</p>	<p>Retrieval/Concrete answers: Testing Modelling products Independent learning: Creating products.</p>	<p>Retrieval/Concrete answers: Testing Modelling products Independent learning: Creating products.</p>	<p>Retrieval/Concrete answers: Testing Modelling products Independent learning: Creating products.</p>
<p>Literacy- reading, extended accurate writing and oracy opportunities</p>	<p>Technical terms Key Words Reading text Evaluating products</p>	<p>Technical terms Key Words Reading text Evaluating products</p>	<p>Technical terms Key Words Reading text Evaluating products</p>	<p>Technical terms Key Words Reading text Evaluating products</p>	<p>Technical terms Key Words Reading text Evaluating products</p>	<p>Technical terms Key Words Reading text Evaluating products</p>
<p>Numeracy/computing skills</p>	<p>Measuring accurately to cut metal and wood.</p>	<p>Measuring accurately in order to cut metal.</p>	<p>Measuring accurately to cut wood.</p>	<p>Measuring accurately to cut metal and wood.</p>	<p>Measuring accurately to cut metal and wood.</p>	<p>Measuring accurately to cut wood.</p>

Character development	Students work in mixed groupings every lesson to share equipment and take turns on machinery whilst working independently. Working with tools repeatedly over time builds on improving their confidence.	Students work in mixed groupings every lesson to share equipment and take turns on machinery whilst working independently. Working with tools repeatedly over time builds on improving their confidence.	Students work in mixed groupings every lesson to share equipment and take turns on machinery whilst working independently. Working with tools repeatedly over time builds on improving their confidence.	Students work in mixed groupings every lesson to share equipment and take turns on machinery whilst working independently. Working with tools repeatedly over time builds on improving their confidence.	Students work in mixed groupings every lesson to share equipment and take turns on machinery whilst working independently. Working with tools repeatedly over time builds on improving their confidence.	Students work in mixed groupings every lesson to share equipment and take turns on machinery whilst working independently. Working with tools repeatedly over time builds on improving their confidence.
Equality/Diversity opportunities	Global majority and minority are supported in terms of curriculum and students who choose to make products that support this. It is also supported within the textbook. Support is provided to all students and all students have equal access to enable participation and opportunities. Students are provided with materials but are welcome to bring their own if they like. The department actively encourages the team to avoid using stereo types within the classroom in resources and examples.	Global majority and minority are supported in terms of curriculum and students who choose to make products that support this. It is also supported within the textbook. Support is provided to all students and all students have equal access to enable participation and opportunities. Students are provided with materials but are welcome to bring their own if they like. The department actively encourages the team to avoid using stereo types within the classroom in resources and examples.	Global majority and minority are supported in terms of curriculum and students who choose to make products that support this. It is also supported within the textbook. Support is provided to all students and all students have equal access to enable participation and opportunities. Students are provided with materials but are welcome to bring their own if they like. The department actively encourages the team to avoid using stereo types within the classroom in resources and examples.	Global majority and minority are supported in terms of curriculum and students who choose to make products that support this. It is also supported within the textbook. Support is provided to all students and all students have equal access to enable participation and opportunities. Students are provided with materials but are welcome to bring their own if they like. The department actively encourages the team to avoid using stereo types within the classroom in resources and examples.	Global majority and minority are supported in terms of curriculum and students who choose to make products that support this. It is also supported within the textbook. Support is provided to all students and all students have equal access to enable participation and opportunities. Students are provided with materials but are welcome to bring their own if they like. The department actively encourages the team to avoid using stereo types within the classroom in resources and examples.	Global majority and minority are supported in terms of curriculum and students who choose to make products that support this. It is also supported within the textbook. Support is provided to all students and all students have equal access to enable participation and opportunities. Students are provided with materials but are welcome to bring their own if they like. The department actively encourages the team to avoid using stereo types within the classroom in resources and examples.
Homework/Independent learning	Revision for tests Quizzes	Revision for tests Quizzes	Revision for tests Quizzes	Revision for tests Quizzes	Revision for tests Quizzes	Revision for tests Quizzes
CIAG coverage/links	Careers in all types of engineering where drawing skills are required. This also will include interior design.	Careers in mechanical engineering, metallurgist, jewellery design and fashion accessories.	Careers in any engineering field. Apprenticeships leading to electrical engineers, large plant/machinery, and self-employed electricians. Conservationist/reclamation due to in the investigations into polymers.	Careers in mechanical engineering, metallurgist, and product design I relation to ergonomics.	Careers in all types of engineering and project planning.	Careers in mechanical engineering, automotive engineering and toy design,.