

**Key Stage 2 Curriculum Overview – Design
Technology**

Curriculum Intent

Vision / Intent:

To provide a fun, stimulating, inspiring and enthusiastic environment for students to thrive in.

To ensure students reach their full Technology potential: to stimulate originality and enterprise, develop practical capability in designing and making and encourage the adaptability needed to cope with a rapidly changing society.

We aim to equip students with the creativity, practical skills, enthusiasm and determination to realise their ideas. We want to prepare them to be the designers of our future.

Approach / Philosophy / Implementation:

The students undertake 'real' design problems and skill projects using a range of materials including card, electronics, fabric, food, metal, plastic and wood. The individual problems set are generally relevant to the students' experience, e.g. items for the home.

Students are taught to develop their design and technological capability through combining their 'designing' and 'making skills' with 'knowledge and understanding' in order to complete a product.

Through engaging, stimulating lessons students will:

- Develop their creativity
- Develop their practical skills and application of them
 - Develop greater problem-solving skills
- Develop resilience and a positive mindset to enable them to overcome obstacles to ensure they complete all work
 - Take a real pride in their work and produce work to the best of their ability

Term	Year 5	Year 6
Students complete 4 units of learning throughout the year on rotation.		
Unit 1	<p>Introduction into workshop safety.</p> <p>Main focus: Develop knowledge and skills within the workshop to make a key fob.</p> <p>By the end of this unit students will be able to: Generate ideas and clearly explain them Select appropriate tools. Use hand tool accurately (coping saw and file) Use machines safely and accurately (pillar drill and polisher) Use finishing techniques (abrasive papers and mechanical polisher)</p>	<p>Recap & revision of workshop safety.</p> <p>Further develop the use of hand tools and machines to create a key holder</p> <p>By the end of this unit students will be able to: Communicate design idea Sequence order of work Use hand tool accurately (coping saw and file) Use machines safely and accurately (pillar drill and fret saw) Use finishing techniques (sand paper) Use paint and/or ICT images to strengthen and improve the appearance of their work</p>

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	<p>Recognise that the quality of a product depends on how well it has been made</p> <p>Evaluate their work, stating what is going well and what they need to improve on.</p>	<p>Recognise that the quality of a product depends on how well it has been made</p> <p>Evaluate their work, stating what is going well and what they need to improve on.</p>
Evidence of learning	<p>Both written and drawing work in their booklets.</p> <p>Exploration of design ideas that are developed into a final design.</p> <p>Ability to cut out work with a variety of both hand tools and machines.</p> <p>Shown in the production of their key fobs.</p> <p>Introduction of the use of CAD in the creation of their jigsaw.</p>	<p>Both written and drawing work in their booklets.</p> <p>Exploration of design ideas that are developed into a final design.</p> <p>Ability to cut out work with greater complexity and accuracy, using both hand tools and machines.</p> <p>Greater independence and confidence when using tools and machines.</p>
Links to prior learning	<p>KS2 National Curriculum</p>	<p>Develops use of drawing of design ideas in all 4 projects.</p> <p>Develops self-evaluation of their work, in all projects.</p> <p>Extends the use of coping saw, fret saw, pillar drill and file that they used in year 5 key fobs.</p>
Links to future learning	<p>All future projects evaluate their work.</p> <p>All future projects will use drawings to communicate their design ideas.</p> <p>Use of hand and machine saw will be used in year 6 key holder project.</p>	<p>All future projects evaluate their work.</p> <p>All future projects will use drawings to communicate their design ideas.</p> <p>Year 7 box lids and mobile phone holder will further develop the use of CAD/CAM</p> <p>Use of hand and machine saw will be used in year 7 box project.</p>
Unit 2	<p>Main focus: Develop an introduction of CAD/CAM to create a jigsaw</p> <p>By the end of this unit students will be able to:</p> <p>Develop an understanding and skills using CAD</p> <p>Use CAD/Cad to create a jigsaw</p> <p>How the use of different graphics will affect the appearance of packaging</p> <p>Evaluate their work, stating what is going well and what they need to improve on.</p> <p>Introduction to room safety</p>	<p>Main focus: Further develop understanding of CAD/CAM to create a notebook</p> <p>By the end of this unit students will be able to:</p> <p>Develop an understanding and skills using CAD</p> <p>Communicate design idea</p> <p>Use CAD/Cad to create a notebook</p> <p>Evaluate their work, stating what is going well and what they need to improve on.</p>
Evidence of learning	<p>Both written and drawing work in their booklets.</p> <p>Exploration of design ideas that are developed into a final design.</p> <p>Ability to cut out work with a variety of both hand tools and machines.</p> <p>Shown in the production of their key fobs.</p> <p>Introduction of the use of CAD in the creation of their jigsaw.</p>	<p>Both written and drawing work in their booklets.</p> <p>Exploration of design ideas that are developed into a final design.</p> <p>Greater independence and confidence when using tools and machines.</p> <p>Ability and designs of their notebooks, shows greater skills and more complexity of the use of 2D Design.</p>
Links to prior learning	<p>KS2 National Curriculum</p>	<p>Develops use of drawing of design ideas in all 4 projects.</p> <p>Develops self-evaluation of their work, in all projects.</p> <p>Extends the use of coping saw, fret saw, pillar drill and file that they used in year 5 key fobs.</p>

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		Extends their use of CAD, from the year 5 Jigsaw projects.
Links to future learning	All future projects evaluate their work. All future projects will use drawings to communicate their design ideas. Year 6 notebooks will further develop the use of CAD/CAM Use of hand and machine saw will be used in year 6 key holder project.	All future projects evaluate their work. All future projects will use drawings to communicate their design ideas. Year 7 box lids and mobile phone holder will further develop the use of CAD/CAM
Unit 3	Main focus: Develop use of hand stitching techniques to create patterns By the end of this unit students will be able to: How working materials affect the way they are used. Select appropriate tools and techniques Understand how fabrics are made Develop their skills at hand stitching (line, back, cross stitches) Evaluate their work, stating what is going well and what they need to improve on.	Main focus: Develop use of hand stitching techniques to create patterns By the end of this unit students will be able to: Develop use of hand stitching techniques to create patterns How working materials affect the way they are used. Select appropriate tools and techniques Understand how fabrics are made Develop their skills at hand stitching (running, back, cross, split, chain and fern stitches) Evaluate their work, stating what is going well and what they need to improve on.
Evidence of learning	Both written and drawing work in their booklets. Exploration of design ideas that are developed into a final design. Development of hand stitches in the stitching of the fabric work.	Both written and drawing work in their booklets. Exploration of design ideas that are developed into a final design. Greater accuracy, neater and greater variety of hand stitches. Book marks, show evidence of greater skills, accuracy and complexity with hand stitching, cutting and applique of materials.
Links to prior learning	KS2 National Curriculum	Develops use of drawing of design ideas in all 4 projects. Develops self-evaluation of their work, in all projects. Extends their use of hand stitching, from the textiles project in year 5.
Links to future learning	All future projects evaluate their work. All future projects will use drawings to communicate their design ideas. Hand stitching of materials will be used in the year 6 textiles project.	All future projects evaluate their work. All future projects will use drawings to communicate their design ideas. Hand stitching and applique of materials will be used in year 7 sunglasses case.
Unit 4	Main focus: Introduction to Food safety and hygiene By the end of this unit students will be able to: Develop use of cutting skills to produce a fruit salad (bridge and claw) Ability to follow a set of instructions and weight out and mix ingredients. Use of the ovens to cook cookies	Main focus: Recap & development of Food safety and hygiene By the end of this unit students will be able to: Develop use of cutting skills to (bridge and claw) Use the cooker hob to create a one pot pasta Understand how to combine ingredients by rubbing in. Ability to follow a set of instructions, weight and mix ingredients Shown by making apple crumble, cheese scones and carrot cup-cakes.

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Evidence of learning	Both written and drawing work in their booklets. Exploration of design ideas that are developed into a final design. Accurate cutting of their fruit salad using the claw and bridge method. Combining of ingredients and following a recipe in their cookies.	Both written and drawing work in their booklets. Exploration of design ideas that are developed into a final design. End food products have been cut up accurately and combined, showing the ability to follow a set of instructions. End food products demonstrate ability to use the rubbing in method to combine ingredients
Links to prior learning	KS2 National Curriculum	Extend the use of cutting foods as in the fruit salad in year 5.
Links to future learning	Year 6 will cut up food in projects like the fruit crumple. All food projects follow a recipe and most like the scones will combine ingredients.	Links with all year 7 food projects in that pupils will need to follow a recipe. Links to cutting up food in year 7. The rubbing in method will also be using in making pastry and cakes in year 7.
Reading in the curriculum (Literacy & Vocabulary) Students are introduced to appropriate and subject specific language throughout the course and the development of the student language is constantly developing. Different meanings for words are emphasised e.g. the different meaning for Square in DT and Maths.		
Careers in the curriculum Architect, designers of any product, engineer, food scientist, any career that involves the making of any product, chief, and work in the food industry, any working trade in the construction industry or maintenance, involvement in the design or making of any items involving fabrics, product researcher, product buyers.		
Protected Characteristics in the curriculum Holywell's DT curriculum and extra-curricular provision is designed to ensure there are opportunities for all our students, regardless of race; gender; where they live; their previous experience; parental income; whether they have special educational needs or disabilities; and whether they are looked after children. All pupils receive the same lessons and are able to develop to their potential and have access to all the design projects. There are no restrictions. The curriculum covers a diverse range of designers and influences from a wide range of cultures.		
Safeguarding including safety in the curriculum The provision for health and safety for students and teachers in the school is essential. All DT staff undergo regular training required for the processes and equipment that they use. Risk Assessments have been adopted from BS4163 to cover all aspects of DT, all processes and equipment used. Specific PPE is required for certain activities, (apron, goggles etc). All students are taught about general workshop and workroom safety and all are given specific training on all pieces of equipment that they will use. Students are briefed before all lessons on aspects of safety and are checked to ensure they are not only wearing the correct/appropriate		
Values across the curriculum The DT curriculum promotes and develops many of our Holywell values regularly - Equality, Courage, Responsibility, Resilience, Self- worth and Self-Regulation, Respect, Joy and Peace		
Spirituality in the curriculum Though DT pupils are able to experience and develop their spirituality that the flowing;		

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Celebrate the success of their work and that of others. See their work enjoyed by others.
Peer on peer feedback, allows pupils to enjoy success and take critical feedback with grace.
Develop a personal pride and own in the end products they design and make.
Develop their ability to allow them to push their creative talents.
Develop an open-minded approach to their work and willingness to explore ideas.
Celebrate their successes, but also allow them to try and fail with grace, developing their perseverance to try again.
Use materials in a sustainable way, making sure we use materials in an economic way, and not waste precious materials.
Teaches them to look after their physical wellbeing through a healthy diet.

How we track your progress

Progress is tracked as pupils move through the projects with verbal feedback on their design work and ongoing feedback as pupils move through the making side of their work. All projects are evaluated and marked at the end of the project.

Parents/Carers can support their child by:

Encouraging your child to explore designers and design and make items at home. Show your child how to cook and encourage them and give them opportunities to cook at home.

<https://www.bbc.co.uk/bitesize/subjects/zbtvxyc>

<https://www.bbc.co.uk/bitesize/subjects/zdn9jihv>

<https://www.bbc.co.uk/bitesize/subjects/zvg4d2p>

<https://www.bbc.co.uk/bitesize/subjects/z9qy6yc>

<https://www.technologystudent.com/>

Sustainability within the subject

Pupils are shown how to mark out and cut out materials using as little waste as possible.
We use off cuts where possible for small pieces of work to be used E.G. the key fob and fabric work