Abbey Village Primary

Progression in Design Technology

At Abbey Village, our definition of progress is the widening and deepening of essential knowledge, skills, understanding and learning behaviours. We design, organise and sequence our mixed age curriculum to ensure that children are not merely covering content but achieving a depth to their learning which enables them to use their skills and understanding in all areas of the curriculum.

This careful curriculum sequencing means that we build in opportunities to revisit previous learning, which allows them to build on their prior knowledge and gradually develop a deeper understanding of the skills and processes within subjects at their own pace and in the best possible way for each individual child.

DT progression	Foundation Sequence towards KS1	Year 1,2 Sequence towards Lower KS2		Year 3,4 Sequence towards Upper KS2		Year 5,6	
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Design	**Explore:** • Experiment and build with a range of construction resources, find out about the properties and functions of different construction materials. **Design:** • Talk about ideas, choose resources, tools and techniques with a purpose in mind.	• Use pictures and words to convey what they want to design/ make • Explore ideas by rearranging materials • Select pictures to help develop ideas • Use mock-ups e.g. recycled material trial models to try out their ideas	• Propose more than one idea for their product • Use ICT to communicate ideas • Use drawings to record ideas as they are developed • Add notes to drawings to help explanations	• Develop more than one design or adaptation of an initial design • Plan a sequence of actions to make a product • Think ahead about the order of their work and decide upon tools and materials • Propose realistic suggestions to how they can achieve their ideas	• Record the plan by drawing annotated sketches • Use prototypes to develop and share ideas • Consider aesthetic qualities of materials chosen • Use CAD where appropriate	• Record ideas using annotated diagrams • Use models, kits, and drawings to help formulate design ideas • Sketch and model alternative ideas • Decide which design idea to develop	• Plan the sequence of work • Devise step by step plans which can be read/ followed by someone else • Use exploded diagrams and cross-sectional diagrams to communicate ideas

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Make	• Make models using different construction materials e.g . construction kits, reclaimed materials, experiment with different ways to build, construct and join resources. • Use equipment and tools to build, construct and make simple models and constructions.	• Select materials from a limited range • Explain what they are making • Name the tools used	• Discuss their work as it progresses • Select and name tools needed to work materials • Explain which materials they are using and why •	• Select from arrange of tools for cutting, shaping, joining and finishing • Use tools with accuracy • Select from materials according to their functional properties • Use appropriate finishing techniques	• Prepare pattern pieces as templates for their design • Select from techniques for different parts of the process •	• Develop one idea in depth • Select and use a wide range of tools • Cut accurately and safely to a marked line • Select from and use a wide range of materials.	• Make prototypes • Use researched information to inform decisions • Produce detailed lists of ingredients/components/materials and tools • Refine their products – review-rework and improve

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Evaluate	• Talk about what they like/dislike about their models/constructions, say why and how they would change them. •	• Explore existing products and investigate how they have been made (including teacher made examples) • Talk about their design as they develop and identify good and bad points • Say what they like and do not like about items they have made.	• Decide how existing products do/do not achieve their purpose • Discuss how closely their finished product meets their own design criteria	• Investigate similar products to the one to be made to give starting points for a design • Research the needs of the user • Decide which design idea to develop • Consider and explain how the finished product could be improved • Discuss how well the finished product meets their design criteria • Investigate key individuals in design technology	• Draw /sketch existing products in order to analyse and understand how products are made • Identify the strengths and weaknesses of their design ideas in relation to purpose • Consider and explain how the finished product could be improved • Investigate key events and individuals in design technology •	Research and evaluate existing products Consider user and purpose Explain how the finished product could be improved Related to the design criteria • Investigate key events and individuals in design technology	• Identify the strength and weaknesses of their design ideas • Report using correct technical vocabulary • Discuss how well the finished product meets the design criteria having tested outcomes with the user • Understand how key people have influenced design in a variety of contexts

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Technical knowledge. ***(select as appropriate to the design and technology focuses in the year group)***	• Name some of the tools they use • Describe using vocabulary they have learned	• Start to use technical vocabulary • Cut out shapes which have been drawn using a template • Join materials in a variety of ways • Decorate using a variety of techniques • Know some ways of making structures stronger • Show how to stiffen some materials • Know how to make a simple structure more stable • Attach wheels to a chassis using an axle • Know some different ways of making things move in a 2D plane	• Use an increasingly appropriate technical vocabulary for tools • Materials and their properties • Understand seam allowance • Prototype and product • Sew on buttons and make loops • Strengthen frames and diagonal struts • Measure and mark square sections • Strip and dowel accurately to 1cm • Incorporate a circuit into a model • Use electrical systems such as switches, bulbs and buzzers • Use ICT to control products • Use linkages to make movements larger and more varied	• Use the correct vocabulary appropriate to the product • Join materials using appropriate methods • Create 3D textile products using pattern pieces • Understand pattern layout with textiles • Cut, strip wood, dowel square section accurately to 1mm • Build frameworks to support mechanisms • Stiffen and reinforce complex structures • Use mechanical systems such as cams, pulleys, and gears • Use electrical systems such as switches and motors • Program, monitor and control using ICT

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Cooking and nutrition	• Name a variety of fruit and vegetables • Prepare fruit and vegetables for snack time Washing, peeling, chopping • Select and name a variety of tools, knife, peeler, chopping board • Know the importance of hygiene when preparing food including washing hands and surfaces • Choose fruits and other foods for snack	• Group familiar food products e.g. fruit and vegetables • Cut and chop a range of ingredients • Work safely and hygienically • Know about the needs of a variety of food in a diet • that everyone should eat at least five portions of fruit and vegetables every day	• Cut, peel grate, chop a range of ingredients • Work safely and hygienically • Know about the eatwell plate • how to name and sort foods into the five groups in The • eatwell plate • Understand where food comes from • that everyone should eat at • least five portions of fruit and • vegetables every day • • how to prepare simple dishes • safely and hygienically, without • using a heat source • Measure or weigh using cups or electronic scales. •	• Follow instructions, recipes • Join and combine a range of ingredients • Begin to understand the food groups on the eatwell plate • Understand where food comes from • that everyone should eat at • least five portions of fruit and • vegetables every day • • how to prepare simple dishes • safely and hygienically, without • using a heat source • Measure or weigh using cups or electronic scales. •	• Make heathy eating choices • Use the eatwelll plate • Know that to be active and healthy, food and drink are needed to provide energy for the body • Understand seasonality • Know where and how ingredients are reared and caught • Prepare and cook food using different cooking techniques • Measure and weigh ingredients appropriately. • Follow a recipe. • Measure ingredients using scales. • Prepare ingredients hygienically and using the appropriate utensils following a recipe.	• Join and combine a widening range of ingredients • Select and prepare food for a particular purpose • Know where and how ingredients are grown and processed • Measure ingredients to the nearest gram and millilitre and calculate ratios of ingredients to scale up or down from a recipe. • Understand the importance of correct storage and handling of ingredients. • Combine ingredients appropriately e.g. beating or rubbing	• Understand and apply the principles of a varied and healthy diet • Know that different food and drink contain different substances – nutrients, water and fibre – that • are needed for health • Choose ingredients to support healthy eating choices when designing their food products • Prepare and cook a variety of mostly savoury dishes using a range of cooking techniques • Create and refine recipes, including ingredients, methods, cooking times and temperatures. •

Don't give up	**Try new things**	**Respect others**	**Concentrate**	**Be motivated**	**Improve**	**Imagine**	**Push yourself**

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Impact (end points for each year group)						
EYFS	**Key Stage 1**		**Key Stage 2**			
Reception	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Children safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. Children junk model confidently, evaluating and changing their models. Children handle equipment and tools effectively.	Children should be confident using different types of media to create joints and moving parts. They should be able to design their ideas and think about the materials used before making them. They are able to use different tools safely and competently.	Children will be able to use a range of cutting and joining techniques. Children will be able to make simple plans, and design according to a criteria.	Children should know how shapes and structures can be used to make effective products. They should be able to select appropriate materials for their final pieces of work. Children should have a clear understanding of characteristics and properties of food ingredients. Children can evaluate their final product and suggest improvement to their designs.	Children will know a variety techniques to join different materials. They will be able to select appropriate material fit for the purpose. Children will be able to investigate and evaluate a range of existing products. They can evaluate their final product and suggest improvements to their designs.	Children will have consolidated their knowledge of different materials and how to strengthen where appropriate. They will have learnt how to create simple circuits to power motors and solve problems when they arrive. Children can plan then evaluate, identifying areas for improvement.	Children have a very good understanding of the purpose and target market of a product. They will able to use refined skills to create a range of projects that link to their foundation topics and wider world issues.