Alumwell Infant School D and T whole school curriculum progression map

Level Expected at the End of EYFS

We have selected the Early Learning Goals that link most closely to the D and T National Curriculum.

Personal, Social and Emotional Development – Building Relationships.
Communication and Language - Listening, Attention and Understanding.
Speaking

Physical Development – Fine Motor Skills
Expressive Arts and Design- Creating with materials
Being imaginative and Expressive.

Key Stage 1 National Curriculum Expectations

Key Stage 1

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing.

They should work in a range of relevant contexts [for example, the home and school, gardens and playgrounds, the local community, industry and the wider environment].

Design

♣ design purposeful, functional, appealing products for themselves and other users based on design criteria

♣ generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology

Make

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of making.

♣ select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]

♣ select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics

Evaluate

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making.

♣ explore and evaluate a range of existing products
♣ evaluate their ideas and products against design criteria

Technical knowledge

♣ build structures, exploring how they can be made stronger, stiffer and more stable
♣ explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.

Cooking and nutrition

As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life.

Pupils should be taught to:

♣ use the basic principles of a healthy and varied diet to prepare dishes
♣ understand where food comes from.

Key Stage 2 National Curriculum Expectations

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment]. When designing and making, pupils should be taught to:

Design

♣ use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups

♣ generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design

Make

♣ select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately
♣ select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities

Technical knowledge

♣ apply their understanding of how to strengthen, stiffen and reinforce more complex structures

♣ understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]

♣ understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]

♣ apply their understanding of computing to program, monitor and control their products.

Evaluate

♣ investigate and analyse a range of existing products

♣ evaluate their ideas and products against their own design criteria and consider the views of others to improve their work

♣ understand how key events and individuals in design and technology have helped shape the world

Cooking and nutrition

♣ understand and apply the principles of a healthy and varied diet

♣ prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques

♣ understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.

Intent

At Alumwell Infant School we intend to provide a Design Technology curriculum which is inspiring, rigorous, and practical. We want our children to use creativity and imagination, to design and make products both as individuals and as members of a team, that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. We intend for all children to acquire appropriate subject knowledge, skills and understanding as set out in the National Curriculum. It is our aim to create strong cross curricular links with other subjects, such as Mathematics, Science, Computing, and Art. We want Design and Technology to prepare our children, to give them the opportunities, responsibilities, resilience and experiences they need to be successful in later life.

The children are given opportunities to reflect upon and evaluate past and present design technology, its uses and its effectiveness and are encouraged to become innovators.

Implementation

Design and Technology is a crucial part of school life and learning and it is for this reason that as a school we are dedicated to the teaching and delivery of a high-quality Design and Technology curriculum. This is implemented through:

- A well thought out, whole school, overview of the DT curriculum which allows for progression across year groups in all areas of DT (textiles, mechanisms, structures and food)
- Well planned and resourced projects providing children with a hands-on and enriching experience
- A range of skills being taught ensuring that children are aware of health and safety issues related to the tasks undertaken
- Each project addressing the principles of designing, making, and evaluating and incorporating relevant technical knowledge and understanding in relevant contexts.
- Developing children's understanding of the ways in which people have designed products in the past and present to meet their needs,

Impact

Children will have clear enjoyment and confidence in Design and Technology that they will then apply to other areas of the curriculum. Through carefully planned and implemented learning activities the pupils develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world. They gain a firm foundation of knowledge and skills to see them equipped to take on further learning.

Pupil's skills and knowledge are continually assessed by the class teacher, throughout lessons. This informs the Design and Technology coordinator of any further areas for curriculum development, pupil support and/or training requirements for staff.

EYFS pupils' progress and attainment tells us whether each individual child is below expected, at expected or above expected attainment for their age.

	EYFS	KS1 **Statutory Curriculum Guidance** Non-Statutory Curriculum Guidance **Teacher Assessment Framework**		KS2 **Statutory Curriculum Guidance** Non-Statutory Curriculum Guidance
	EYFS	**Year 1**	**Year 2**	**Year3/KS2**
Vocabulary	Draw • ideas Build • make Like • Don't like • Better • worse Textiles • Bead • Button • Fabric • Felt • Scissors • Sew • Materials • Cello tape • Glue stick • Masking tape • Paper clip • Plasticine • Ruler • straw Apron • Chop • Cut • Equipment • Fork • Knife • Mix • spoon	planning, investigating design, evaluate, make, user, purpose, ideas, product, fruit and vegetable names, names of equipment and utensils sensory vocabulary e.g. soft, juicy, crunchy, sweet, sticky, smooth, sharp, crisp, sour, hard flesh, skin, seed, pip, core, slicing, peeling, cutting, squeezing, healthy diet, choosing, ingredients, cut, fold, join, fix structure, wall, tower, framework, weak, strong, base, top, underneath, side, edge, surface, thinner, thicker, corner, point, straight, curved, metal, wood, plastic circle, triangle, square, rectangle, cuboid, cube, cylinder joining and finishing techniques, tools, fabrics and components, template, pattern pieces, mark out, join, decorate, finish card, masking tape, paper fastener, join, pull, push, up, down, straight, curve, forwards, backwards	investigating, planning, design, make, evaluate, user, purpose, ideas, design criteria, product, function fruit and vegetable names, names of equipment and utensils sensory vocabulary e.g. soft, juicy, crunchy, sweet, sticky, smooth, sharp, crisp, sour, hard flesh, skin, seed, pip, core, slicing, peeling, cutting, squeezing, healthy diet, choosing, ingredien cut, fold, join, fix structure, wall, tower, framework, weak, strong, base, top, underneath, side, edge, surface, thinner, thicker, corner, point, straight, curved, metal, wood, plastic circle, triangle, square, rectangle, cuboid, cube, cylinder vehicle, wheel, axle, axle holder, chassis, body, cab assembling, cutting, joining, shaping, finishing, fixed, free, moving, mechanism names of tools, equipment and materials used	user, purpose, design, model, evaluate, prototype, annotated sketch, functional, innovative, investigate, label, drawing, function, planning, design criteria, annotated sketch, appealing name of products, names of equipment, utensils, techniques and ingredients texture, taste, sweet, sour, hot, spicy, appearance, smell, preference, greasy, moist, cook, fresh, savoury, hygienic, edible, grown, reared, caught, frozen, tinned, processed, seasonal, harvested healthy/varied diet shell structure, three-dimensional (3-D) shape, net, cube, cuboid, prism, vertex, edge, face, length, width, breadth, capacity, marking out, scoring, shaping, tabs, adhesives, joining, assemble, accuracy, material, stiff, strong, reduce, reuse, recycle, corrugating, ribbing, laminating, font, lettering, text, graphics, decision, mechanism, lever, linkage, pivot, slot, bridge, guide system, input, process, output linear, rotary, oscillating, reciprocating

				series circuit, fault, connection, toggle switch, push-to-make switch, push-to-break switch, battery, battery holder, bulb, bulb holder, wire, insulator, conductor, crocodile clip, control, program, system, input device, output device

Design	Explain what they are making and which materials they are using. Select materials from a limited range that will meet a simple design criteria e.g. shiny. Select and name the tools needed to work the materials e.g. scissors for paper. Explore ideas by rearranging materials. Describe simple models or drawings of ideas and intentions. Discuss their work as it progresses	Begin to draw on their own experience to help generate ideas and research conducted on criteria. Begin to understand the development of existing products: What they are for, how they work, materials used. Start to suggest ideas and explain what they are going to do. Understand how to identify a target group for what they intend to design and make based on a design criteria. a Begin to develop their ideas through talk and drawings. Make templates and mock ups of their ideas in card and paper or using ICT	Start to generate ideas by drawing on their own and other people's experiences. Begin to develop their design ideas through discussion, observation, drawing and modelling. Identify a purpose for what they intend to design and make. Understand how to identify a target group for what they intend to design and make based on a design criteria. a Develop their ideas through talk and drawings and label parts. Make templates and mock ups of their ideas in card and paper or using ICT.	Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design

	EYFS	Year 1	Year 2	Year3/KS2
Technical Knowledge and Making	Begin to create their design using basic techniques. Start to build structures, joining components together. Look at simple hinges, wheels and axles. Use technical vocabulary when appropriate. Begin to use scissors to cut straight and curved edges and hole pinches to punch holes. Explore using/ holding basic tools such as a saw or hammer. Use adhesives to join materials	Begin to make their design using appropriate techniques. Begin to build structures, exploring how they can be made stronger, stiffer and more stable. Explore and use mechanisms[for example, levers, sliders, wheels and axles], in their products. With help measure, mark out, cut and shape a range of materials. Explore using tools e.g. scissors and a hole punch safely. Begin to assemble, join and combine materials and components together using a variety of temporary methods e.g. glues or masking tape. Begin to use simple finishing techniques to improve the appearance of their product.	Begin to select tools and materials; use correct vocabulary to name Begin to select tools and materials; use correct vocabulary to name and describe them. Build structures, exploring how they can be made stronger, stiffer and more stable. With help measure, cut and score with some accuracy. Learn to use hand tools safely and appropriately. Start to assemble, join and combine materials in order to make a product. Demonstrate how to cut, shape and join fabric to make a simple product. Use basic sewing techniques. Start to choose and use appropriate finishing techniques based on own ideas.	<u>Make</u> Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities. <u>Technical Knowledge</u> Apply their understanding of how to strengthen, stiffen and reinforce more complex structures Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] Apply their understanding of computing to program, monitor and control their products.

Evaluating	Say what they like and do not like about items they have made and attempt to say why. Begin to talk about their designs as they develop and identify good and bad points. Start to talk about changes made during the making process. Discuss how closely their finished products meet their design criteria.	Start to evaluate their product by discussing how well it works in relation to the purpose (design criteria). When looking at existing products explain what they like and dislike about Products and why. Begin to evaluate their products as they are developed, identifying strengths and possible changes they might make.	Evaluate their work against their design criteria. Look at a range of existing products explain what they like and dislike about Products and why. Start to evaluate their products as they are developed, identifying strengths and possible changes they might make. a With confidence talk about their ideas, saying what they like and dislike about them.	Investigate and analyse a range of existing products Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work Understand how key events and individuals in design and technology have helped shape the world

Cooking and Nutrition	Begin to develop a food vocabulary using taste, smell, texture and feel. Explore familiar food products e.g. fruit and vegetables. Stir, spread, knead and shape a range of food and ingredients. Begin to work safely and hygienically. Start to think about the need for a variety of foods in a diet. Measure and weigh food items, non statutory measures e.g. spoons, cup	Begin to understand that all food comes from plants or animals. Explore the understanding that food has to be farmed, grown elsewhere (e.g. home) or caught. Start to understand how to name and sort foods into the five groups in 'The Eat well plate'	Ev a Begin to understand that everyone should eat at least five portions of fruit and vegetables every day. Know how to prepare simple dishes safely and hygienically, without using a heat source. Know how to use techniques such as cutting, peeling and grating	Understand and apply the principles of a healthy and varied diet Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.