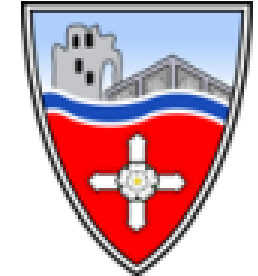




East Ayton Primary School



Design Technology Progression Map

Reception

Expressive Arts and Design (Exploring and Using Media and Materials)

Children safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.

Physical Development (Moving and Handling)

Children handle equipment and tools effectively, including pencils for writing.

Expressive Arts and Design (Being Imaginative)

Children use what they have learnt about media and materials in original ways, thinking about uses and purposes. They represent their own ideas, thoughts and feelings through design and technology, art, music, dance, role play and stories.

KS1 National Curriculum Expectations

Design

Pupils should be taught to:

- 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.

KS2 National Curriculum Expectations

Design

Pupils should be taught to:

- 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

Pupils should be taught to:

- 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.

Make

Pupils should be taught to:

- 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.

Evaluate

Pupils should be taught to:

- explore and evaluate a range of existing products;
- evaluate their ideas and products against design criteria.

Evaluate

Pupils should be taught to:

- 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.

Technical Knowledge

Pupils should be taught 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.

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.

Cooking and Nutrition

Pupils should be taught to:

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

Cooking and Nutrition

Pupils should be taught to:

- 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.

	KS1		Lower KS2		Upper KS2	
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Textiles	<p>Begin to identify different forms of textiles/fabric e.g. felt, velvet, cotton.</p> <p>Use different fabrics and materials in collages.</p> <p>Understand how to join fabrics using different techniques e.g. running stitch, glue.</p>	<p>Continue to develop understanding weaving techniques.</p> <p>To be shown how to thread a needle.</p> <p>To use a running stitch.</p>	<p>Apply decoration using beads, buttons, feathers, sequins etc.</p> <p>Gain experience in applying colour by printing and using fabric crayons/ paints.</p>	<p>Begin to modify threads and fabrics, knotting, fraying, fringing, pulling threads, twisting, plaiting.</p> <p>Begin to thread a needle independently.</p> <p>Continue to use a running stitch and introduce a back stitch.</p>	<p>Introduce a cross stitch in embroidery.</p> <p>Use a variety of techniques, e.g. printing, dyeing, weaving and stitching to create different textural effects.</p> <p>Demonstrate experience in combining techniques to produce an end piece: embroidery over tie dye.</p> <p>Design, plan and decorate a fabric piece.</p>	<p>Experiment with a variety of techniques.</p>

Food	<p>Understand where a range of fruit and vegetables come from e.g. farmed or grown at home.</p> <p>Know how to use appropriate equipment and utensils to prepare and combine food.</p>	<p>Understand and use basic principles of a healthy and varied diet to prepare dishes, including how fruit and vegetables are part of The eatwell plate.</p> <p>Know and use technical and sensory vocabulary relevant to the project.</p>	<p>Know how to use appropriate equipment and utensils to prepare and combine food.</p>	<p>Know about a range of fresh and processed ingredients appropriate for their product, and whether they are grown, reared or caught.</p> <p>Know and use relevant technical and sensory vocabulary appropriately.</p>	<p>Understand about seasonality in relation to food products and the source of different food products.</p>	<p>Know how to use utensils and equipment including heat sources to prepare and cook food.</p> <p>Know and use relevant technical and sensory vocabulary.</p>
Structures	<p>Explore how to make freestanding structures stronger, stiffer and more stable.</p> <p>Know and use technical vocabulary relevant to the project.</p>	<p>Know how to make freestanding structures stronger, stiffer and more stable.</p> <p>Know and use technical vocabulary relevant to the project.</p>	<p>Develop and use knowledge of how to construct strong, stiff shell structures.</p> <p>Know and use technical vocabulary relevant to the project.</p>	<p>Develop and use knowledge of nets of cubes and cuboids and, where appropriate, more complex 3D shapes.</p> <p>Know and use technical vocabulary relevant to the project.</p>	<p>Understand how to strengthen, stiffen and reinforce 3-D frameworks.</p> <p>Know and use technical vocabulary relevant to the project.</p>	<p>Know and use technical vocabulary relevant to the project.</p>
Mechanism	<p>Explore and use sliders and levers.</p> <p>Understand that different mechanisms produce different types of movement.</p>	<p>Explore and use wheels, axles and axle holders.</p> <p>Distinguish between fixed and freely moving axles.</p>	<p>Begin to develop an understanding that mechanical systems such as levers and linkages or pneumatic systems can create movement.</p>	<p>Begin to incorporate levers and linkages into their products.</p>	<p>Understand that mechanical and electrical systems have an input, process and an output.</p>	<p>Understand how cams, gears and pulleys can be used to speed up, slow down or change the direction of movement.</p>

Electrical systems				<p>Understand and use electrical systems in their products linked to science coverage (basic circuit).</p> <p>Apply their understanding of computing to program and control their products.</p>		<p>Understand and use electrical systems in their products linked to science coverage (bulbs, switches and motors).</p> <p>Apply their understanding of computing to program, monitor and control their products.</p>
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