



DT Whole School Curriculum – Ellel St. John’s C of E Primary School

EYFS

Subject specific focus from statutory framework for Early Years Foundation Stage

Providers must support children in the specific area of:

- expressive arts and design

Educational programmes must involve activities and experiences for children, as follows:

Expressive arts and design involve enabling children to explore and play with a wide range of media and materials, as well as providing opportunities and encouragement for sharing their thoughts, ideas and feelings through a variety of activities in Design Technology.

Other developmental strands involved with art and design:

Physical development involves providing opportunities for young children to develop their co-ordination, control, and movement. Opportunities are given for using a range of tools to develop fine motor skills through exploring and using media.

Guidance from Development

Matters (2013) Early Years

Outcomes- 40-60+ months

- **Understands that different media can be combined to create new effects.**
- **Manipulates materials to achieve a planned effect.**
- **Constructs with a purpose in mind, using a variety of resources.**
- **Uses simple tools and techniques competently and appropriately.**
- **Selects appropriate resources and adapts work where necessary.**
- **Selects tools and techniques needed to shape, assemble and join materials they are using.**

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2

KS1

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 and school, gardens and playgrounds, the local community, industry and the wider environment].

When designing and making, pupils should be taught to:

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

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

including construction

materials, textiles and ingredients, according to their characteristics

Evaluate

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

Technical knowledge

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.

YEAR 1

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
		<p>Food Technology Unit – Dips and Dippers</p> <ul style="list-style-type: none"> • Develop a vocab using taste, smell, texture, feel • Group familiar food products • Explain where food comes from • Cut, peel, grate, chop a range of ingredients • Measure and weigh food items using non-statutory measures • Understand the need for a balanced diet • Talk about what makes a healthy meal 	<p>Mechanisms Unit – sliders and levers – where?</p> <ul style="list-style-type: none"> • Look at examples of sliders • Investigate sliders • Experiment with sliders to make things move • Cut out sliders accurately • Experiment with different joining techniques • Plan and design slider linked to theme 	<p>Construction Unit – Recycled card Flowers for Outdoor Area</p> <ul style="list-style-type: none"> • 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 • select from and use a range of tools and equipment to perform practical tasks • select from and use a wide range of materials and components, including construction materials 	

YEAR 2

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<p>Food technology – healthy sandwich or wrap – savoury</p> <ul style="list-style-type: none"> • Evaluate flavours e.g. taste different wraps • Identify a user for my product. • Create design criteria with my class to match the purpose of the product • Chop, peel grate, safely e.g. using bridge / claw technique • Make my wrap look appealing • Evaluate my product against the design criteria by tasting 		<p>Mechanisms Unit – wheels and axles – link to a royal carriage</p> <p>Construction Unit</p> <ul style="list-style-type: none"> • Explore different structures • Join materials using glue/tape • Cut along different types of lines • Cut out shapes accurately including using templates • Investigate and explore how to make structures stronger • Test structures for stability 		<p>Textiles unit – link to African art – use of running stitch and pre-cut felt – stuffed animal</p> <ul style="list-style-type: none"> • Join fabrics using glue and tape • Colour fabrics using a range of techniques e.g., fabric paints, printing, painting. • Decorate fabrics by attaching items • Cut out shapes using a template/drawing 	

KS2

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

Make 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

- 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

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] computing to program, monitor and control 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:

- 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.

YEAR 3					
Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	<p>Food technology – link to science and PHSE Eatwell Plate Savoury omelette</p> <ul style="list-style-type: none"> Understand seasonality of food products and where they are produced Use knowledge of the Eatwell plate Identify a user for my product. Create design criteria with my class to match the purpose of the product Follow a recipe for a basic omelette Chop, peel grate, safely e.g. using bridge / claw technique Evaluate my product against the design criteria by tasting 		<p>Mechanisms Unit – moving posters</p> <ul style="list-style-type: none"> Look at examples of levers or linkages Investigate how levers or linkages work Use cutting and joining skills Investigate fixed and loose pivots Plan and design product Create product connected to theme 		<p>Construction - Structures – shell structures – create packaging for a slice of birthday cake for a friend</p> <ul style="list-style-type: none"> Explore structures related to the theme. Explore and recreate ways to join and fasten Measure and mark accurately to 1cm (1mm) Cut accurately to 1cm (1mm) Strengthen frames with diagonal struts Make structures more stable with a wide base Build shell or frame structures

YEAR 4					
Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
		<p>Electrical Systems – games</p> <ul style="list-style-type: none"> Evaluate different electrical games e.g. Operation Identify a user for my product Create design criteria to match the purpose of the product Create a circuit using electrical components Make a prototype to test the design Identify any aspects of my design that need to change Make the product – finish it in a way that is attractive to the user Evaluate my product against the design criteria and suggest any further improvements. 	<p>Textiles – link to art. Create a money bag – Anglo Saxons</p> <ul style="list-style-type: none"> Join fabrics using blanket stitch Colour fabrics using a range of techniques e.g. fabric paints, printing, painting Decorate fabrics by attaching items Cut out shapes using a template / drawing 	<p>Food technology unit – make a stew</p> <ul style="list-style-type: none"> innovate a recipe for a stew Evaluate Spanish flavours and give feedback Identify a user for my product. Create design criteria with others to match the purpose of the product Record a basic stew recipe and add in innovations Chop grate, fry, peel, fry, stew Weigh and measure accurately using g, kgs, ml, l and spoon measurements Taste my product as I cook to check for flavour e.g. seasoning Evaluate my product against the design criteria by tasting Gather feedback from the user and suggest improvements 	

YEAR 5					
Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	Mechanisms Unit – link to science			Construction Unit – frame	Food technology – bread making

	<p>unit – gears and pulleys – vehicle / moving toys</p> <ul style="list-style-type: none"> • Look at examples of pulleys or gears • Investigate how pulleys or gears work • Work outside on a group pulley/gears test • Experiment with pulleys and gears • Plan and design product • Create product connected to theme 			<p>structures</p> <ul style="list-style-type: none"> • Explore structures related to the theme • Join materials appropriately • Cut strip wood accurately to 1mm • Use bradawl to mark holes • Use hand drill to drill tight and loose fit holes • Experiment with frameworks to support • Stiffen and reinforce complex structures 	<ul style="list-style-type: none"> • Evaluate different bread rolls for taste, texture, attractiveness, smell • Identify a user for my product • Create design criteria to match the purpose of the product using added ingredients, toppings such as seeds • Follow a recipe • Innovate a recipe for the user • Use key skills for bread making e.g. mixing, kneading, proving, scoring • Weigh and measure accurately using g, kgs, ml, l and spoon measurements • Evaluate my product against the design criteria • Make any necessary amendments to my product after an evaluation by the user.
--	--	--	--	---	---

YEAR 6					
Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	<p>Textiles – phone case as a gift for Christmas</p> <ul style="list-style-type: none"> • Evaluate different phone cases including fabric ones • Identify a user for my product • Create design criteria to match the purpose of the product • Draw and label a design, showing front and back views, including information about parts of the case, materials, colour, fasteners • Make a prototype to check it is the correct dimensions • Draw and cut out a template accurately using cm and mm • Use basic skills when using a sewing machine • Select appropriate stitch on sewing machine. To join the fabric and turn the case inside out • Create a fasten using a fastener e.g. popper • Decorate using a range of stitches from Art Skills • Evaluate my product against the design criteria and suggest any further improvements. • Use feedback from the user to adapt my design 		<p>Food Technology – make bread for a pizza and write their own recipe using their previous skills learnt</p> <ul style="list-style-type: none"> • Prepare products looking at properties of ingredients/ sensory characteristics • Weigh and measure using scales • Select and prepare foods for a purpose • Use a range of cooking techniques • Know where and how ingredients are grown and processed • Consider influence of chefs • Apply the principles of a healthy and varied diet 		<p>Electrical Systems</p> <ul style="list-style-type: none"> • Look at all DT skills learned so far • Discuss how programming could be used in own product • Create product using skills • Program, monitor and control using ICT