Hawley Primary School

Design & Technology Long Term Overview
Cycle A and B

EYFS Development Matters

Understanding the world: Technology

- Completes a simple program on a computer.
- Uses ICT hardware to interact with age-appropriate computer software.

Early Learning Goal

Children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes.

Expressive Arts: Exploring and using media and materials

- Begins to build a repertoire of songs and dances.
- Explores the different sounds of instruments.
- Explores what happens when they mix colours.
- Experiments to create different textures.
- 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.

Early Learning Goal

- Children sing songs, make music and dance, and experiment with ways of changing them. They safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.

Statutory Content Coverage

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 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

Statutory Content Coverage

Key Stage 2:

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

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• 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] • select from and use a wide range of materials and components, 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** • 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. **<u>Cooking and nutrition</u>** 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. **Key stage 1** **Pupils should be taught to:** • use the basic principles of a healthy and varied diet to prepare dishes • understand where food comes from	**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 **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 **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. **<u>Cooking and nutrition</u>** 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. **Key stage 2** **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

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Cycle A (2025-2027)						
	Autumn 1	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
EYFS	**Is There Room on a Broom for a Gruffalo?**	**In with a Bang** **Celebrating You**	**Once Upon a Time**	**Eggcellent!**	**Join our Journey**	**It's a Bug's Life**
Year 1/2 Topic	**Out of Africa**	**Fire! Fire!** **MECHANISMS: Make Fire Engines with wheels and axels**	**Rumble in the Jungle**	**Marvelous Medicine** **MOVING PICTURES & SLIDERS: recreate a scene from a specified Roald Dahl story with moving parts (sliders)**	**Under the Sea**	**Treasure Adventure** **MECHANICAL SYSTEMS (levers) - Make A Boat With A Lever**
DT objectives		DESIGN: Generate, develop, model and communicate their ideas through mock-ups MAKE Select from and use a range of tools and equipment to perform practical tasks [cutting, shaping, joining and finishing] EVALUATE Explore and evaluate a range of existing products TECH. KNOWLEDGE explore and use mechanisms [wheels and axles] in their products.		DESIGN: Design purposeful, functional, appealing products for themselves and other users based on design criteria MAKE Select from and use a range of tools and equipment to perform practical tasks [cutting, shaping, joining and finishing] TECH. KNOWLEDGE Explore and use mechanisms [levers, sliders] in their products.		DESIGN Generate, develop, model and communicate their ideas through discussion and cross-sectional / exploded diagrams MAKE Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately EVALUATE Consider the views of others to improve their work TECH. KNOWLEDGE Understand and use mechanical systems in their products [levers]

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Year 3/4 Topic	**The Rolling Stone Age** **TEXTILES - Sewing a button / darning a sock / decorating / upcycle for Christmas Fayre**	**Local Legacy (WWII)** **MECHANICAL SYSTEMS - Make Tanks**	**At Water's Edge**	**Natural Wonder** **STRUCTURE – Make a protective case to protect something fragile**	**The Land of Roar** **TEXTILES - Sewing Wall Hangings**	**Sporting Heroes** **FOOD & NUTRITION – cook an omelette**
D.T. objectives	DESIGN Generate, develop, model and communicate their ideas through annotated sketches MAKE Select from and use a wider range of materials and components (textiles) according to their functional properties and aesthetic qualities EVALUATE Evaluate their ideas and products against their own design criteria	DESIGN Generate, develop, model and communicate their ideas through discussion, annotated sketches, diagrams MAKE Select from and use a wider range of materials and components, including construction materials, , according to their functional properties and aesthetic qualities EVALUATE Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work TECH.KNOWLEDGE Apply their understanding of how to strengthen, stiffen and reinforce more complex structures		DESIGN Generate, develop, model and communicate their ideas through discussion, annotated sketches, diagrams MAKE Select from and use a wider range of materials and components, including construction materials, , according to their functional properties and aesthetic qualities EVALUATE Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work TECH.KNOWLEDGE Apply their understanding of how to strengthen, stiffen and reinforce more complex structures	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 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 textiles, according to their functional properties and aesthetic qualities EVALUATE Investigate and analyse a range of existing products	DESIGN Understand and apply the principles of a healthy and varied diet MAKE prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques MAKE select from and use a wider range ingredients, according to their functional properties and aesthetic qualities

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Year 5/6 Topic	**Reach for the Stars (Space)**	**Our Heroes (History WW1)** **TEXTILES - Sewing a button / darning a sock / decorating / upcycle**	**Oh Maya! (Mayans)** **Electrical Systems and Computer Programming – design a playground computer aided design**	**Boom! (Natural Disasters)**	**Eureka (Ancient Greece)** **FOOD & NUTRITION - Make a Healthy Dip**
D.T. objectives		DESIGN Generate, develop, model and communicate their ideas through annotated sketches MAKE Select from and use a wider range of materials and components (textiles) according to their functional properties and aesthetic qualities EVALUATE Evaluate their ideas and products against their own design criteria	DESIGN Generate, develop, model and communicate their ideas through computer-aided design EVALUATE Understand how key events and individuals in design and technology have helped shape the world TECH. KNOWLEDGE 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.		DESIGN Understand and apply the principles of a healthy and varied diet MAKE Prepare and cook a … savoury dish using a range of cooking techniques EVALUATE Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.

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Cycle B (2025-2027)						
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
EYFS	**Is There Room on a Broom for a Gruffalo?**	**In with a Bang** **Celebrating You**	**Once Upon a Time**	**Eggcellent!**	**Join our Journey**	**It's a Bug's Life**
Year 1/2 Topic	**Hooray for Hawley**	**Up, Up and Away** **STRUCTURES – Make a flying machine (rocket)**	**Victorious Victorians**	**Into the Toy Box** **MECHANISMS – Make a moveable puppet**	**To the Rescue!**	**Going for Gold** **COOKING & NUTRITION – Make a healthy snack for an athlete**
D.T. objectives		DESIGN Generate, develop, model and communicate their ideas through annotated sketches MAKE Select from and use a wider range of materials and components (textiles) according to their functional properties and aesthetic qualities EVALUATE Evaluate their ideas and products against their own design criteria		DESIGN Generate, develop, model and communicate their ideas for a puppet through talking, drawing. MAKE Select from and use a range of equipment EVALUATE Evaluate their ideas and products against design criteria		Use the basic principles of a healthy and varied diet to prepare dishes for a DESIGN: understand where food comes from. MAKE select from and use a wide range of ingredients EVALUATE evaluate their ideas and products against design criteria
Year 3/4 Topic	**Were the Romans really rotten?** **TEXTILES - Sewing – Make a Roman pouch**	**The Power of Words**	**Lights, Camera, Action** **STRUCTURE – Make a shadow puppet theatre**		**Walk like an Egyptian** **COOKING AND NUTRITION – Make an Egyptian flat bread**	
D.T. objectives	DESIGN Generate, develop, model and communicate their ideas for a Christmas		DESIGN Generate, develop, model and communicate their ideas for Wands through talking, drawing.		DESIGN Understand and apply the principles of a healthy and varied diet	

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	puppet through talking, drawing. MAKE Select from and use a range of equipment EVALUATE Evaluate their ideas and products against design criteria		MAKE Select from and use a range of equipment EVALUATE Evaluate their ideas and products against design criteria	MAKE Prepare and cook a … savoury dish (Egyptian flat bread) using a range of cooking techniques and understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed. EVALUATE Evaluate their ideas and products against design criteria and tasting.
Year 5/6	**Coastal Adventures**	**Sensational Shang** **MECHANICAL SYSTEMS - Fairground Rides**	**We Rule**	**Ever Evolving** **MECHANICAL SYSTEMS – Cam Toys**
D.T. objectives		DESIGN Generate, develop, model and communicate their ideas through discussion, annotated sketches, diagrams MAKE Select from and use a wider range of materials and components, including construction materials, , according to their functional properties and aesthetic qualities EVALUATE Evaluate their ideas and products against their own design criteria and consider the views of		DESIGN Generate, develop, model and communicate their ideas through discussion, annotated sketches, diagrams MAKE Select from and use a wider range of materials and components, including construction materials, , according to their functional properties and aesthetic qualities EVALUATE Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work TECH.KNOWLEDGE Apply their understanding of how to strengthen, stiffen and reinforce more complex structures

		others to improve their work TECH.KNOWLEDGE Apply their understanding of how to strengthen, stiffen and reinforce more complex structures		