



# St Augustine's CE Primary School

# Technology



Curriculum Progression Map for knowledge, skills and understanding  
(1 Year Cycle)

# The International Curriculum Overview: Intent, Implementation and Impact

The International Early Years Curriculum (IEYC) and the International Primary Curriculum (IPC) are curriculum models based on thematic units that cover Nursery to Y6. Today's children face more diverse challenges and opportunities than any other generation before them: climate change, political change, inequality, migration, an accelerating pace of technology and access to more information than ever before are just some of the issues that our children will face in their lives.

## **The Vision and Philosophy of the International Curriculum**

**Aim:** *the International Curriculum aims to improve learning in schools by supporting teachers and leaders through the provision of internationally researched curriculum materials and engaging units of learning.*

**Philosophy:** *central to the international curriculum is the belief in, and commitment to, the holistic development of learners through enjoyable academic, personal and international learning that prepares them for opportunities and challenges now and in the future.*

At **St Augustine CE Primary**, the aim and the philosophy of the International Curriculum fits with our own school vision of 'achieving excellence together' where we offer an engaging curriculum where our children can foster a passion for learning and curiosity that will help to develop high aspirations and a lifetime of opportunities.

## **Seven Foundations of the IPC**

The IPC is designed and driven by underpinning foundations that ensure the curriculum remains learning focused and puts the goal of improving learning at the centre of what we do. The following seven underpinning foundations from the structure of the IPC.

- **Foundation 1:** Learner-focused personal, international and subject learning goals
- **Foundation 2:** A progressive pedagogy
- **Foundation 3:** A process to facilitate learning for all
- **Foundation 4:** Globally competent learners
- **Foundation 5:** Knowledge, skills, and understanding are taught, learned and assessed differently
- **Foundation 6:** Connected learning
- **Foundation 7:** Assessment for improving learning

Each of the seven foundations for learning are exemplified below.

### **Foundation 1: Learner-focused personal, international and subject learning goals**





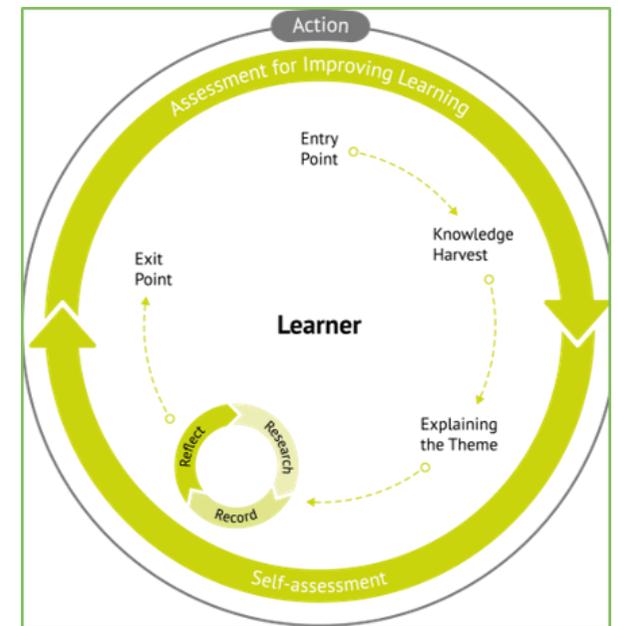
Learning should be at the core of what every good school does, and the overarching question that IPC asks is 'how does this improve learning?' The subject learning goals covered the knowledge, skills and understanding that children should learn across a range of subjects. The eight personal learning goals are integral to the IPC. The aim of the personal learning Goals is to develop character and attitudes rather than knowledge, skills and understanding. The development of an inquisitive mind and a sense of curiosity about the world and its people is essential for international learning. The international learning goals help learners begin the move towards increasing their knowledge and understanding of national, international, global and intercultural perspectives on the world around them whilst developing the capacity to take action and make a difference.

### Foundation 2: A progressive pedagogy

A key part of the IPC focuses on brain-based learning. The IPC recognises that we have two types of memory: the working memory and the long-term memory. The IPC units of learning work on the theory of children being able to extract prior learning and apply this to new learning as they complete the units of work across the year groups. The international curriculum has been designed to promote the use of a constructive pedagogy in classrooms whereby learners connect new knowledge to prior knowledge and are actively engaged in constructing their own understanding. The Knowledge Harvest enables children the opportunity to share what they already know about the upcoming learning so that it can be tailored accordingly to their needs. It also supports the strengthening of neuronal connections by helping learners to make links between new and existing learning.

### Foundation 3: A process to facilitate learning for all

All IPC units follow the process to facilitate learning with a learner at the centre, which is structured to make sure that children's learning experiences are stimulating and therefore effective. The key parts of the process include: Entry Point, Knowledge Harvest, Explaining the Theme, Research, Record, Reflect and the Exit Point, all underpinned by assessment for improving learning. The process to facilitate learning is repeated many times through an academic year, providing familiarity and routine to children's learning journeys.



## Foundation 4: Globally competent learners



In order for children who learn through the International Curriculum to become engaged globally, competent citizens, it is crucial for them to develop not only a strong interest in their own and others cultures and a deep understanding of multiple perspectives, but also a keen desire to help shape local and global communities through actions that impact positively on society. Being globally aware starts in our own school community before expanding to the local area and then further afield to the UK and more globally. All units within the International Curriculum cover an international dimension to allow the children to reflect, deepen their understanding of the world in which they live.

## Foundation 5: Knowledge, skills, and understanding are taught, learned and assessed differently

Across the international curriculum, Knowledge, skills and understanding are all considered valuable. All of the Knowledge Learning Goals start with 'to know', all of the Skills Learning Goals start with 'be able to' and all of the Understanding Learning Goals start with 'understand'. Icons for knowledge, skills, and understanding are shared with children along with the definitions for each.

<b>KNOWLEDGE</b>		<b>Definition:</b> We think of knowledge as 'knowing that'	<b>Characteristics of knowledge:</b> Knowledge can be new or consolidated. Knowledge is continually expanding and can change as new discoveries are made.
<b>SKILLS</b>		<b>Definition:</b> We think of skills as 'being able to do something'	<b>Characteristics of skills:</b> Skills are learnt in a practical way; they can be new or consolidated. We define developmental stages of acquiring skills as 'Beginning, Developing, Mastering and Innovating'.
<b>UNDERSTANDING</b>		<b>Definition:</b> We think of understanding as making meaning	<b>Characteristics of understanding:</b> Understanding is personal and connections have to be made actively by the learner in order to make meaning. Multiple opportunities should be offered for learners to develop and demonstrate their understanding. Understanding includes components of knowledge, skills and experience.

## Foundation 6: Connected Learning



The international curriculum promotes connected learning in a variety of ways. Learning is interdependent through connecting ideas to subjects and between subjects and prior learning to current learning so that the connections in the brain are reinforced. In the IPC subjects are built independently and interdependently into different thematic units of learning so that learners can engage in dialogue from different viewpoints. This enables children to see the wider context of their learning and to make connections both through and across different subjects.



## Foundation 7: Assessment for improving learning

Whilst teachers are expected to plan for assessment opportunities, the reality is that learner performance, interactions and questions provide a constant stream of important information that the teacher should be using on an ongoing basis to inform future planning. Assessment for improving learning involves teachers and learners becoming partners in learning, helping teachers to further develop the knowledge, skills and understanding of their learners. Knowledge is assessed in a range of ways. This might include the Knowledge Harvest, quizzes, question and answer sessions. Skills are assessed through rubrics.

At St Augustine's we encourage our children to develop and master a range of knowledge, skills and understanding in all areas of the curriculum. As a whole school community, we have devised a range of subject characters and knowledge, skills and understanding principles that are specific to each area of the curriculum, to enable the children to identify not only the subject they are learning but also the content. The characters were shared with the children and they generated a list of knowledge, skills and understanding for each area.

**In Technology, when the children are being designers they:**

design purposeful products based on a design criteria

use a range of tools and materials to make products

evaluate products against design criterion

understand how key events in technology have impacted on the world in which we live

explain and reason about design choices and suggest ways to improve their own products



use computer programmes to control their products

know where food comes from and the principles of being healthy

investigate and analyse a range of products

design, prepare and make food dishes

explore and use mechanisms and electrical systems in the products they produce

make suggestions on how to improve products made by others

In Early Years Technology coverage will include:

Key Vocabulary

<b>Early Years</b>	<b>DT</b>				
	Three and Four-Year-Olds	Personal, Social and Emotional Development	<ul style="list-style-type: none"> <li>• Select and use activities and resources, with help when needed. This helps them to achieve a goal they have chosen or one which is suggested to them.</li> </ul>		
		Physical Development	<ul style="list-style-type: none"> <li>• Use large-muscle movements to wave flags and streamers, paint and make marks.</li> <li>• Choose the right resources to carry out their own plan.</li> <li>• Use one-handed tools and equipment, for example, making snips in paper with scissors.</li> </ul>		
		Understanding the World	<ul style="list-style-type: none"> <li>• Explore how things work.</li> </ul>		
		Expressive Arts and Design	<ul style="list-style-type: none"> <li>• Make imaginative and complex 'small worlds' with blocks and construction kits, such as a city with different buildings and a park.</li> <li>• Explore different materials freely, in order to develop their ideas about how to use them and what to make.</li> <li>• Develop their own ideas and then decide which materials to use to express them.</li> <li>• Create closed shapes with continuous lines, and begin to use these shapes to represent objects.</li> </ul>		

design  
plan  
arrange  
create  
perform

Reception	Physical Development	<ul style="list-style-type: none"> <li>• Progress towards a more fluent style of moving, with developing control and grace.</li> <li>• Develop their small motor skills so that they can use a range of tools competently, safely and confidently.</li> <li>• Use their core muscle strength to achieve a good posture when sitting at a table or sitting on the floor.</li> </ul>
	Expressive Arts and Design	<ul style="list-style-type: none"> <li>• Explore, use and refine a variety of artistic effects to express their ideas and feelings.</li> <li>• Return to and build on their previous learning, refining ideas and developing their ability to represent them.</li> <li>• Create collaboratively, sharing ideas, resources and skills.</li> </ul>

ELG	Physical Development	Fine Motor Skills	<ul style="list-style-type: none"> <li>• Use a range of small tools, including scissors, paintbrushes and cutlery.</li> </ul>
	Expressive Arts and Design	Creating with Materials	<ul style="list-style-type: none"> <li>• Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.</li> <li>• Share their creations, explaining the process they have used.</li> </ul>

	Units being taught in Nursery	The Big Idea	The learners will be finding out.....	Key Vocabulary
	<b>This is me</b>	<p>We learn and play together, supporting one another as we explore and experience new things every day. We have lots in common, but there are also lots of things about ourselves that make us special. Together, we are going to be learning about ourselves and each other and celebrating what we have learned with our families.</p>	<p>Learning the names of our friends  Learning about the parts of our body, head, arm, leg, foot  Making a simple portrait  Making art with our hands or feet  Exploring how we are feeling  Exploring what is inside a room in our home, eg kitchen (and what is safe and not safe)  Making a room from our own home  Finding out about homes/room around the world  Finding out about our families  Looking at our favourite toys  Planning a birthday party  Finding out how to wash our hands  Finding out how and why we brush our teeth  Learning to cross a road safely  Learning to be a good friend  Learning how to work together</p>	<p>Name parts of the body, head, arm, leg, foot</p>
	<b>Dinosaur Detectives!</b>	<p>A long time ago, before people like you and me lived on the Earth, there were dinosaurs! No one has ever seen a real dinosaur before, but we know lots about them – what they looked like, what they ate and just how big and tall they were. We are going to travel back in time to the land of the dinosaurs to find out more about these amazing creatures. Get ready for an exciting adventure!</p>	<p>Hatching our own dinosaur egg  Finding out how big dinosaurs really were  Exploring dinosaur opposites  Creating our own dinosaur world  Making model dinosaurs  Finding treasures  Digging up dinosaur bones  Finding out about fossils  Solving a dinosaur mystery  Running our own Museum of Dinosaur Wonders  Describing a missing dinosaur  Going on an adventure to find our missing dinosaurs  Finding out what dinosaurs ate  Helping our dinosaur friends  Finding out what happened to the dinosaurs  Moving and dancing like a dinosaur</p>	<p>Hatching, dinosaurs and their names eg tyrannosaurus  Treasure, bones, fossil, dig, museum, mystery, costume, swap</p>

		<p>Creating a dinosaur costume</p> <p>Making dinosaur music</p> <p>Getting messy with swamp play</p> <p>Enjoying our own dino party!</p>	
<b>Once Upon A time</b>	<p>When we hear the words 'Once upon a time', we know we are about to be taken on an exciting adventure. Everyone, no matter what their age, has a favourite story that they like to hear, and often we like to enjoy them over and over again. Now, we're going to discover some new stories! By exploring these stories, we will be learning how to become better storytellers, and will create our own amazing worlds of make believe. Shall we begin? 'Once upon a time...'</p>	<p>Exploring pushes and pulls with 'The Enormous Turnip'</p> <p>Buying and selling vegetables at our own market</p> <p>Exploring size with 'The Three Billy Goats Gruff'</p> <p>Building our own bridge for a troll</p> <p>Making a race course for 'The Tortoise and the Hare'</p> <p>Finding out about tortoises and how to look after them</p> <p>Setting our own goals</p> <p>Creating a sports day for different animals</p> <p>Making a character from 'The Gingerbread Man'</p> <p>Baking our own gingerbread</p>	<p>Soil, dig, plant, build, bridge, race, bake, mix</p>
<b>Brilliant Bug Ball</b>	<p>We share our space with thousands and thousands of little visitors – minibeasts that live in the soil, under stones, amongst the plants and grass, in the trees and even in our homes. Minibeasts come in lots of different shapes and sizes, from tiny ants and long wriggly worms to beautiful butterflies with brightly-coloured wings. We are going to be exploring minibeasts in our local area and finding out more about what they look like, how they live and how they move about. And who knows – if the minibeasts like us, perhaps they'll invite us to a special party!</p>	<p>Finding out how to look after a minibeast</p> <p>Seeing how a caterpillar changes into a butterfly</p> <p>Making a wormery</p> <p>Building a home for a minibeast</p> <p>Making a book about minibeasts</p> <p>Sorting minibeasts that walk and fly</p> <p>Counting with a very hungry caterpillar</p> <p>Making butterfly wings</p> <p>Counting with ladybird spots</p> <p>Comparing the size of different insects and animals</p> <p>Making spider webs</p> <p>Finding out about honey bees</p> <p>Working as a team – just like ants!</p> <p>Moving about like pond minibeasts</p> <p>Comparing fast and slow minibeasts</p> <p>Dancing to 'The Ugly Bug Ball'</p> <p>Making minibeast costumes</p> <p>Planning a minibeast party</p>	<p>Minibeast, caterpillar, worm, wormery, butterfly, ladybird, spider, spider-web, insect and names such as honey bee, ants, pond</p>

			Making minibeast party food Creating a minibeast party menu	
<b>Ocean Treasures</b>	Have you ever wondered what you might find under the sea? We're going to be exploring the oceans of the world, investigating forests of swaying seaweed, and diving deep into the darkest depths, to find out more about all the amazing and beautiful animals that make the sea their home. Are we ready to take the plunge and see what we can find?		Making patterns and shapes out of sand Exploring a collection of shells Making art from beach objects Helping a turtle baby reach the sea Creating our own fish school Learning to share with the Rainbow Fish Making a home for a hermit crab Finding out more about animals under the sea Helping a whale to make friends Learning to dive and explore the sea Finding out about the amazing things an octopus can do! Explore light and dark under the sea In Learning to move like waves and paint our own pictures Creating an undersea dance Using music to tell a story Performing our own dolphin show!	Patterns, shells, beach, turtle, sea, fish, hermit crab, whale, octopus, waves, dolphin
<b>Animal Rescuers</b>	We share our world with many different animals – from the pets that we might look after at home to the big wild animals we might see on television or in books. We are going to imagine we are travelling all around the world, to visit some very exciting places and meet the animals that live there. We're also going to help these animals to feel happy and safe. Some might even want to share some amazing stories with us! Are you ready to pack your bags for a fabulous adventure?		Growing our own jungle Following animal footprints Making animal masks and costumes Learning to share with a crocodile! Going on a safari Exploring animal patterns Discovering some African fruit Teaching a giraffe how to dance Building an igloo Finding out why polar bears are white Helping animals stay afloat Exploring friendship with the help of a penguin Making patterns with sand Looking after a camel Making desert snakes Helping animals to feel at home	Pets and names eg. Hamsters, guinea pigs, , wild animals eg. lion, tigers, igloo, polar bear, penguin, snake

	Units being taught in Reception	The Big Idea	The learners will be finding out.....	Key Vocabulary
	<p><b>This is me</b></p>	<p>We learn and play together, supporting one another as we explore and experience new things every day. We have lots in common, but there are also lots of things about ourselves that make us special. Together, we are going to be learning about ourselves and each other and celebrating what we have learned with our families.</p>	<p>Learning the names of our friends  Learning about the parts of our body  Making a portrait  Making art with our hands and feet  Exploring how we are feeling In  Exploring what is inside a home  Making our own home  Finding out about homes around the world  Making a key for a home  Sending a letter to a friend  Finding out about our families  Looking after a baby  Looking at our favourite toys  Planning a birthday party  Finding out what we do when we go to bed and wake up in the morning In  Finding out how to wash our hands  Finding out how and why we brush our teeth  Learning to cross a road safely  Learning to be a good friend  Learning how to work together</p>	<p>Name parts of the body, on the face  Senses, touch, see, smell, taste, hear, fingers</p>
	<p><b>Blast Off!</b></p>	<p>At bedtime, the moon and the stars come out. They shine down from the night sky. Have we ever imagined what it might be like to go on a journey to the moon and the stars? What might we find there? Who might be living there? And what is the moon really made of? Perhaps it is time to find out!</p>	<p>Exploring the stars</p> <p>Learning about the planets  Training to be an astronaut  Building a rocket ship  Exploring moon shapes  Having a picnic on the moon  Playing with moon rocks  Making a moon buggy  Exploring a new planet  Making a home for the Moonbeams  Running a space restaurant  Having a party with the Moonbeams</p>	<p>Rocket  Space  Aliens  Maps  Stars  Earth  Telescope  Shape  Size  Astronaut  Suit  Helmet  Journey  Launch</p>

				Phases of the moon Eclipse Half moon Full moon Craters Moon rocks Take off Landing Planets Moon
	<b>Once Upon A time</b>	When we hear the words 'Once upon a time', we know we are about to be taken on an exciting adventure. Everyone, no matter what their age, has a favourite story that they like to hear, and often we like to enjoy them over and over again. Now, we're going to discover some new stories! By exploring these stories, we will be learning how to become better storytellers, and will create our own amazing worlds of make believe. Shall we begin? 'Once upon a time...'	Exploring pushes and pulls with 'The Enormous Turnip' Buying and selling vegetables at our own market Planting and growing our own vegetables Making a delicious vegetable soup! Exploring size with 'The Three Billy Goats Gruff' Building our own bridge for a troll Making sound effects to tell a story Performing a story with props and music. Making a race course for 'The Tortoise and the Hare' Finding out about tortoises and how to look after them Setting our own goals Creating a sports day for different animals Making a character from 'The Gingerbread Man' Baking our own gingerbread Changing the story of 'The Gingerbread Man' Creating a modern-day version of the story	Seed, soil, dig, plant, build, bridge, race, buy, sell, bake, mix
	<b>The World Around Us</b>	Look out of the window and what do you see? We share our world with lots of living things – people, insects, animals, birds, plants and trees. We need to make sure that our world is well	Going on a bear hunt! Exploring stones and pebbles Making a tree friend Meeting a Gruffalo Making food for birds	Tree, birds, vegetables, litter, reduce, reuse, recycle, junkyard, building, place

		looked after, so that everyone in it can enjoy a healthy and happy life.	<ul style="list-style-type: none"> <li>Finding out about things that grow</li> <li>Exploring fruit and vegetables</li> <li>Tidying up lots of litter</li> <li>Making paper</li> <li>Finding out what happens to our litter</li> <li>Making a junkyard band</li> <li>Making recycled art</li> <li>Building homes</li> <li>Going shopping</li> <li>Exploring the places we like to go</li> <li>Finding out about people who help us</li> </ul>	names, people who help us, eg. Gardeners, farmers, refuse collectors
	<b>Going Places</b>	A journey can start at any time and take you to exciting places. We go on journeys every day, sometimes by car, sometimes by walking – perhaps we might go on a train, or an aeroplane, or a boat setting sail across the sea. There are many ways we can travel and many adventures we can have. Where would you like to go today?	<ul style="list-style-type: none"> <li>Exploring how we travel</li> <li>Going on a car journey</li> <li>Helping a friend in need</li> <li>Becoming bus drivers!</li> <li>Exploring a beach</li> <li>Making a boat</li> <li>Finding a treasure island</li> <li>Taking a trip under the sea!</li> <li>Finding out about things that fly</li> <li>Going on a plane journey</li> <li>Playing with balloons</li> <li>Drawing our own adventure</li> <li>Visiting the North Pole</li> <li>Finding out about different places</li> <li>Having a holiday celebration</li> <li>Tasting foods from around the world</li> </ul>	Travel, journey, island, sea, treasure, adventure, trip, plane, fly, places, celebration
	<b>To The Recue</b>	Superheroes to the rescue! Superheroes are all around us, using their special super powers to help others in need. We're going to become heroes too, by making our own costumes and imagining the amazing and incredible powers we will use to help ourselves and other people around us. Lots of exciting new adventures await us as we explore and learn about the world of Superheroes!	<ul style="list-style-type: none"> <li>Listening to a story about a superhero</li> <li>Telling the story using puppets and models</li> <li>Exploring the beginning, middle and ending of a story</li> <li>Making our own comic book</li> <li>Imagining being a character in a story</li> <li>Thinking about what makes a superhero</li> <li>Exploring different superhero costumes</li> <li>Making a superhero costume of our own</li> <li>Making a superhero den</li> <li>Training to be a superhero</li> <li>Showing off our costumes with a grand parade In</li> </ul>	Models, superhero, names for materials eg. Plastic, den, vehicle, directions, eg. Left, right, fly, freezing, melting, senses, fruit names, eg. Bananas, apples

Finding out about people who help us  
 Making a vehicle for a superhero  
 Giving directions to our vehicle  
 Making a gift for a hero we look up to  
 Working as a team to help each other  
 Exploring freezing and melting with ice  
 Exploring how things move  
 Finding out about things that fly  
 Exploring our own super senses – sight, hearing, touch, taste and smell  
 Making a fruit smoothie for a superhero

## Key Stage 1 and 2 NC Purpose of Study for Technology

### Purpose of study

Design and technology is an inspiring, rigorous and practical subject. Using creativity and imagination, pupils design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. They acquire a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing and art. Pupils learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens. Through the evaluation of past and present design and technology, they develop a critical understanding of its impact on daily life and the wider world. High-quality design and technology education makes an essential contribution to the creativity, culture, wealth and well-being of the nation.

## Year 1

### NC Statutory Programme of Study for 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]
- 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.

#### 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:

#### Key stage 1

- use the basic principles of a healthy and varied diet to prepare dishes

Unit being taught	The learners will be finding out.....	Key Vocabulary
<b>The Magic Toymaker</b> Classifying materials	<ul style="list-style-type: none"> <li>• About 'magic' toys that fool our eyes</li> <li>• How to design and make our own board game</li> <li>• How to design and make our own puppets</li> </ul>	Tools, Materials, Thaumatrope, Model, Product, Invent, Movement, Finger puppet, Glove puppet, Shadow puppet, String puppet
<b>Science – Super Humans</b> Living things: humans	<ul style="list-style-type: none"> <li>• How to plan and prepare a healthy meal</li> </ul>	Plan, Describe, Materials, Design, Adapt, Pictures
<b>Science – Green Fingers</b> Living things: plants and animals	<ul style="list-style-type: none"> <li>• How to make a watering device</li> </ul>	Tools, Product, Design, Sketch Materials, Construction, Creation, Mechanisms
<b>Science - The Earth Our Home</b> Habitats	<ul style="list-style-type: none"> <li>• How to make a habitat and nesting box for bees</li> </ul>	Plan, describe Tools, Design, Materials, Polystyrene, Annotate, Improve Comment, Sketch Measure

## NC Statutory Programme of Study for 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]
- 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.

### 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:

### Key stage 1

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

### Unit being taught

### The learners will be finding out.....

### Key Vocabulary

**Treasure Island**  
Past civilisations

- About the foods pirates ate
- About where food comes from in the world
- About a healthy diet
- How to plan a pirate packed lunch

Packaging, Protein, Fruits, Vegetables, Oils, Fats, Carbohydrates, Dairy, preserved

**From A to B**  
Inventions and development

- How to make a 'vehicle' to transport a small toy from one place to another
- How to make plans for vehicles
- How to test our vehicles to see how well they work

Materials, Cardboard, Plastic Wood, Paper, Pulley , Axles,

			Wheels, Tools, Plans, Products
	<b>Time Travellers</b> Finding out about the past	<ul style="list-style-type: none"> <li>About favourite meals from 50 years ago</li> <li>About food groups and healthy eating</li> <li>Where food comes from</li> </ul>	Food group, Proteins, Vegetables, Fruit, Dairy, Ingredients Utensils, Origin
	<b>Science – What's it made of?</b> Classifying materials	<ul style="list-style-type: none"> <li>How to plan and design a classroom makeover</li> </ul>	Plan, Materials, Create, Design Solution, Mechanisms
	<b>Science – Live and Let Live</b> Living things: plants and animals	<ul style="list-style-type: none"> <li>How to make and design a bird feeder</li> </ul>	Describe, Tools, Mechanism, Materials, Structure, Design, Annotate, Sketch

## NC Statutory Programme of Study for 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

- 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]
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## 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:

### Key stage 2

- 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
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Unit being taught	The learners will be finding out....	Key Vocabulary
<b>Saving the World</b> Rainforests	<ul style="list-style-type: none"> <li>How to plan and make our own tropical fruit drink</li> </ul>	Food tasting, planning, likes/dislikes, flavours, investigations, rainforests fruits, tropical fruit.
<b>Scavengers and Settlers</b> Past Civilisations	<ul style="list-style-type: none"> <li>About the types of foods that the first farmers would have grown</li> <li>How we can update the dishes that the early settlers may have eaten</li> </ul>	Crops, grain, lbex meat, deer meat, hummus, bread, corn and wheat.
<b>Science - How Humans Work</b>	<ul style="list-style-type: none"> <li>How to plan and prepare a healthy meal</li> </ul>	Healthy, meal, menu, fats, sugars, minerals, plan, prepare.
<b>Science - Let's Plant It!</b>	<ul style="list-style-type: none"> <li>How to make a garden obelisk</li> </ul>	Garden, tools, design, product, obelisk.
<b>Science - Feel the Force</b>	<ul style="list-style-type: none"> <li>How to design and make a marble run</li> <li>How to add sounds, lights and control mechanisms to a structure</li> </ul>	Design, make, product, marble, sounds, light, structure, control.

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When designing and making, pupils should be taught to:

### Design

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	Unit being taught	The learners will be finding out....	Key Vocabulary
	<b>Science – Turn it up!</b>	<ul style="list-style-type: none"> <li>• How to make panpipes</li> </ul>	Panpipes, designer, create, make, instruments, create, instructions, safety.
	<b>Science – Land, Sea and Sky</b>	<ul style="list-style-type: none"> <li>• How to set up an aquarium</li> </ul>	Instructions, aquarium, design, plan, create, assemble.
	<b>Science – Bright Sparks</b>	<ul style="list-style-type: none"> <li>• How to make a house with lighting and a door buzzer</li> </ul>	Plan, design, create, product, electric, product, house, buzzer.

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	Unit being taught	The learners will be finding out....	Key Vocabulary
	<b>Weather and Climate</b> Change and natural forces	<ul style="list-style-type: none"> <li>• How to design and build our own weather station instruments</li> <li>• About the different types of modern technology used to measure the weather</li> </ul>	Construct, Plan, Design, Evaluate Material , Function Purpose, Equipment Mechanism
	<b>The Holiday Show</b> Globalisation and economics	<ul style="list-style-type: none"> <li>• How to evaluate materials used to market holidays</li> <li>• How to create our own marketing materials to sell a holiday</li> </ul>	Promotional, Attention, Intent, Desire, Action, (AIDA)Marketing, Promotional, Advertising, Campaign
	<b>Science – Fascinating Forces</b> Forces	<ul style="list-style-type: none"> <li>• How to make a sailing boat or flying paper plane</li> </ul>	Fold, Construct, Plan, Design, Evaluate, Test, Function, Material
	<b>Science – Bake It!</b> Changing materials	<ul style="list-style-type: none"> <li>• How to design and make a new brand of food</li> </ul>	Identified needs, Informed design, Recipe, Hygienic, Measuring, Preserve, Insulate
	<b>Science – Space Scientists</b> Earth and space	<ul style="list-style-type: none"> <li>• About the Saturn and Soyuz rockets</li> <li>• How we can make a model rockets</li> </ul>	Plan, Design, Evaluate, Label

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<b>Earth as an Island</b> Globalisation and economics	<ul style="list-style-type: none"> <li>About the different food groups and their importance in our diets</li> <li>How different foods come from different places, and why that is</li> <li>How to keep safe when preparing food</li> <li>How to prepare simple savoury dishes from islands around the world</li> <li>How to plan, create and evaluate an island-inspired dish</li> </ul>	Cut, Slice, Portion, Hygiene, Utensils, Measure, Ingredients
<b>Going Global</b> Globalisation and economics	<ul style="list-style-type: none"> <li>How to create our own global brand and market it to others</li> </ul>	Marketing, logo, adverts, brand, slogans,
<b>Science – Out of Africa</b> Evolution and inheritance	<ul style="list-style-type: none"> <li>What foods early humans ate, grew and cooked</li> </ul> About prehistoric food and cooking techniques	Devise, Plan, Design, Make
<b>Science – Full Power</b> Electricity and energy	<ul style="list-style-type: none"> <li>How to design a car's headlights, horn and fan</li> </ul>	Plan, Evaluate, Design, User, Tools, Materials Circuit, Motor, Drill, Pulley, Robust
<b>Science – Look, Hear!</b> Sound and Light	<ul style="list-style-type: none"> <li>How to make an elastic-band guitar</li> </ul>	Cut, Slice, Portion, Hygiene, Utensils, Measure Ingredients
<b>Science – Being Human</b> Living things: humans	<ul style="list-style-type: none"> <li>How to plan and prepare a healthy meal</li> </ul>	Essential, Luxury, Design, Features, Applications, Aesthetics, Function, Ergonomics, Quality, User, Cost Plan, Mechanism, Control, Evaluate, Criteria
<b>Science – Existing, Endangered, Extinct</b> Living things: plants and animals	<ul style="list-style-type: none"> <li>How to make our own compost bin</li> </ul>	Construct, Plan, Design, Evaluate Material, Function

			Purpose, Equipment Mechanism
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## Progression of **Knowledge** within the Technology Curriculum

Year Group	By the end of Early Years, the learners will:		
<b>Early Years</b>	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		
<b>Year 1 and 2</b>	By the end of Key Stage One, the learners will:		Unit/s where the knowledge is covered/revisited
		Year 1	Year 2
	Know that products in everyday use have an effect on people's lives	Green Fingers The Magic Toymaker	From A to B Treasure Island Time Travellers What's it made of?
<b>Year 3 and 4</b>	By the end of Lower Key Stage 2, the learners will:		Unit/s where the knowledge is covered/revisited
		Year 3	Year 4
	Know that the way in which products in everyday use are designed and made affects their usefulness	Let's Plant It Scavengers and Settlers	Bright Sparks Land, Sea and Sky Turn it up!
<b>Year 5 and 6</b>	By the end of Upper Key Stage 2, the learners will:		Unit/s where the knowledge is covered/revisited
		Year 5	Year 6
	Know that technology affects people's lives	Space Scientists	Full Power
	Know how the lives of people in the host country are affected by the extent of technological advance		
	Know how the lives of people in their home country are affected by the extent of technological advance		

## Progression of **Skills** within the Technology Curriculum

Year Group	By the end of Early Years, the learners will:		
<b>Early Years</b>	To construct with a purpose in mind, using a variety of resources. To use simple tools and techniques competently and appropriately. To build and construct with a wide range of objects, selecting appropriate resources and adapting their work when necessary. To select the tools and techniques they need to shape, assemble and join materials they are using.		
<b>Year 1 and 2</b>	By the end of Key Stage One, the learners will:		Unit/s where the skill is covered/revisited
			Year 1
			Year 2
	Be able to plan what they are going to make	Green Fingers Super Humans The Earth our Home The Magic Toymaker	A Day in the Life From A to B Live and Let Live Treasure Island What's it made of? Time Travellers
	Be able to describe their plans in pictures and words	Green Fingers The Earth our Home Super Humans The Magic Toymaker	From A to B Live and Let Live Treasure Island What's it made of? Time Travellers
Be able to use simple tools and materials to make products	Green Fingers Super Humans The Earth our Home The Magic Toymaker	From A to B Live and Let Live Treasure Island What's it made of? Time Travellers	
Be able to choose appropriate tools and materials for their tasks	From A to B Green Fingers	From A to B Live and Let Live	

		Super Humans The Earth our Home The Magic Toymaker	Treasure Island What's it made of? Time Travellers
	Be able to comment on their own plans and products and suggest areas of improvement	Green Fingers Super Humans The Magic Toymaker The Earth our Home	A Day in the Life From A to B Live and Let Live Treasure Island What's it made of? Time Travellers
	Be able to comment on the usefulness of products in everyday use	Green Fingers The Magic Toymaker	Live and Let Live
<b>Year 3 and 4</b>	By the end of Lower Key Stage 2, the learners will:	Unit/s where the skill is covered/revisited	
		Year 3	Year 4
	Be able to design and make products to meet specific needs	Let's Plant It Feel the Force How Humans Work Saving the World Scavengers and Settlers	Bright Sparks Turn it up! Shake It!
	Be able to make usable plans	Let's Plant It Feel the Force Saving the World Scavengers and Settlers	Bright Sparks Land, Sea and Sky Shake It!
	Be able to make and use labelled sketches as designs	Let's Plant It Feel the Force How Humans Work Saving the World Scavengers and Settlers	Bright Sparks Shake It!
	Be able to use simple tools and equipment with some accuracy	Let's Plant It Feel the Force How Humans Work	Bright Sparks Land, Sea and Sky Turn it up!

		Saving the World Scavengers and Settlers	Shake It!
	Be able to identify and implement improvements to their designs and products	Feel the Force How Humans Work Saving the World Scavengers and Settlers	Shake It!
	Be able to identify the ways in which products in everyday use meet specific needs	How Humans Work Scavengers and Settlers Let's plant it!	Bright Sparks Land, sea and sky Turn it up! Shake It!
	Be able to suggest improvements to products in everyday use		
<b>Year 5 and 6</b>	By the end of Upper Key Stage 2, the learners will:	Unit/s where the skill is covered/revisited	
		Year 5	Year 6
	Be able to respond to identified needs, wants and opportunities with informed designs and products	Bake It! The Holiday Show Weather and Climate Space Scientists	Existing, endangered, extinct
	Be able to gather and use information to suggest solutions to problems	Bake It! The Holiday Show Weather and Climate Space Scientists	Being Human Full Power Existing, endangered, extinct Look, hear
	Be able to devise and use step-by-step plans	Bake It! Fascinating Forces The Holiday Show Weather and Climate Space Scientists	Being Human Earth as an Island Full Power Existing, endangered, extinct Out of Africa
	Be able to consider the needs of users when designing and making	Bake It! The Holiday Show	Being Human Full Power Out of Africa

	Be able to select the most appropriate available tools and materials for a task	Bake It! Fascinating Forces The Holiday Show Space scientists	Earth as an Island Full Power Existing, endangered, extinct Look, hear Out of Africa
	Be able to work with a variety of tools and materials with some accuracy	Bake It! Fascinating Forces The Holiday Show Weather and Climate Space scientists	Being Human Earth as an Island Full Power Existing, endangered, extinct Look, hear Out of Africa
	Be able to test and evaluate their own work and improve on it	Bake It! Fascinating Forces The Holiday Show Weather and Climate Space scientists	Earth as an Island Full Power Look, hear
	Be able to investigate the way in which simple products in everyday use are designed and made and how they work	The Holiday Show	Full Power Existing, endangered, extinct Look, hear
	Be able to evaluate the effectiveness of simple products in everyday use	The Holiday Show	The Holiday Show

## Progression of **Understanding** within the Technology Curriculum

Year  
Group

By the end of Early Years, the learners will:

## Early Years

Be aware that designing does not necessarily entail drawing.

To understand that designing can mean using hand gestures, arranging and re-arranging materials and components, talking and listening.

Be aware about using equipment safely.

<b>Year 1 Year 2 and 3</b>	By the end of Key Stage One, the learners will:	Unit/s where the understanding is covered/revisited	
		Year 1	Year 2
<b>Year 3 Year 4 and 5</b>	By the end of Lower Key Stage 2, the learners will:	Unit/s where the understanding is covered/revisited	
		Year 3	Year 4
<b>Year 5 and 6</b>	By the end of Upper Key Stage 2, the learners will:	Unit/s where the understanding is covered/revisited	
	Understand the need for accurate design and working	The Holiday Show Weather and Climate Space scientists	
	Understand the ways in which technology can be used to meet needs, wants and opportunities	The Holiday Show Weather and Climate Space scientists	Earth as an Island Full Power
	Understand that different techniques, tools and materials are needed for different tasks	The Holiday Show Weather and Climate Space scientists	
	Understand that the quality of a product depends on how well it is made and how well it meets its intended purpose	Earth as an Island The Holiday Show Weather and Climate Space scientists	Earth as an Island