Summerville Primary School
EYFS Science Curriculum

Unlike other year groups, who follow the National Curriculum, children in Early Years settings follow the Early Years framework. At Summerville we also follow the EYFS Development Matters document, which although is non-statutory, provides excellent guidance on designing and delivering an effective early years' curriculum.

The EYFS Development Matters objectives which have direct links to the KS1/KS2 National Curriculum for Science are:

Personal, Social &Emotional Development

- Manage their own needs: personal hygiene, handwashing, healthy eating

Physical Development

- Know and talk about the different factors that support their overall health and wellbeing: physical activity, healthy eating, toothbrushing, sensible amounts of screen time, good sleep, being a safe pedestrian

Understanding the World

- Talk about members of their immediate family and community
- Name and describe people who are familiar to them
- Explore the natural world around them
- Describe what they see, hear and feel whilst outside
- Understand the effect of changing seasons on the natural world around them

Expressive Arts and Design

- Explore, use and refine a variety of artistic effects to express their ideas and feelings
- Listen Attentively, move to and talk about music, expressing their feelings and responses
- Sing in a group or on their own, increasingly matching the pitch and following the melody
- Explore and engage in music making and dance, performing solo or in groups

In order to create a smooth transition between our Early Years and Key Stage 1, we have linked the Framework and National Curriculum subjects so that it is clear to see how we build upon the firm foundations built in our EYFS unit. In the table below, examples are given of EYFS activities under the Development Matters objectives and how they link to the KS1/KS2 National Curriculum Science objectives.

	Across the academic year	Autumn Term	Spring Term	Summer Term

Science UNDERSTANDNG THE WORLD PHYSICAL DEVELOPMENT PERSONAL, SOCIAL AND EMOTIONAL DEVELOPMENT	*Children will have frequent opportunities for outdoor play and exploration.* ▪ Planting seeds and bulbs and watching them grow, identifying and naming common plants and flowers, naming parts of plants including trees (NC Science - Plants) ▪ Using their senses during exploration and play (NC Science – Animals, including humans) ▪ identify and name a variety of everyday materials (NC Science – everyday materials) ▪ exploring different environments and habitats and understanding that things live in habitats, including micro habitats (NC Science – Living things and their habitats) ▪ understanding the concept of things that are alive, dormant and dead through plants (NC Science – Plants, Living things and their habitats, Animals including humans)	***Autumn A Topic: Marvelous Me*** *Examples of the activities and how they link to the NC Science include:* ▪ Understanding the importance of looking after ourselves and being healthy: healthy eating, getting enough sleep, physical exercise, handwashing, toothbrushing (NC Science – Animals, including humans) ▪ Looking at photos of families and discussing similarities and differences (NC Science – Animals, including humans, Evolution) ▪ Creating self portraits in the style of Picasso using mirrors to look at facial features (NC Science – Light, Animals, including humans, paint mixing, materials) ▪ Looking at toys from the past including what they are made from and how they work such as push, pull, spin etc (NC Science – materials, forces) **Harvest** The children will learn about the concept of 'harvest' in Autumn and how a lot of the food we eat comes from plants (NC Science – Animals, including humans, Plants) **Halloween** The children will learn the 'Skeleton Dance' song (NC Science – skeletons) and experience 'trick or treat' feely boxes containing different objects and textures (NC Science – materials)	***Spring A Topic: Brr… It's Cold in Here*** *Examples of the activities and how they link to the NC Science include:* ▪ Learning about the poles and the animals that live there and how they have adapted to the environment (NC Science – Animals, including humans, living things and their habitats, adaptation and evolution) ▪ Learning about explorers and what clothing and equipment they need to explore the poles (NC Science – uses of everyday materials) ▪ Learn that the Sun is a source of light and heat and that electricity and fire can also produce heat and light (NC Science – Light, electricity) ▪ Explore shadows as an object blocking a light source (NC Science – light) **Chinese New Year** The children will celebrate Chinese New Year and look at dragons and other animals (e.g. The Year of the…) and taste different Chinese foods (NC Science – animals, senses) ***Spring B Topic: I need a hero*** *Examples of the activities and how they link to the NC Science include:*	***Summer A Topic: Living Things*** *Examples of the activities and how they link to the NC Science include:* • Trip to RHS Bridgewater – learning about parts of plants and what they need to grow (NC Science – plants, rocks and fossils (soil)) • The children will have the opportunity to watch the metamorphosis of butterflies from caterpillars (NC Science – Animals, including humans, Living things and their habitats, Seasonal changes) • Learning why bees are important and making 'bee seed bombs' to grow flowers that attract them kin the outdoor area (NC Science – Animals, including humans, Living things and their habitats, Seasonal changes, plants, rocks and fossils (soil)) • Making a 'bug hotel' and learning why insects are important and how to support and encourage them into the outdoor area (NC Science – Animals, including humans, Living things and their habitats, Seasonal changes, plants, rocks and fossils (soil)) • After learning the Incy Wincy Sprider rhyme, the C will test different adhesive materials to see which are the best at keeping Incy Wincy in a drainpipe and then which materials are waterproof and will keep him dry when water is poured down it (NC Science – materials)

	▪ observe and interact with natural processes such as ice melting, light travelling through transparent materials, shadows, floating and sinking, magnetism, changes in states of matter (NC Science – States of matter, light, forces and magnets) ▪ observe that noises can be made through banging and hitting objects and that the volume, pitch and dynamics of sounds can be changed (NC Science – Sound) ▪ exploring the different properties and uses of everyday materials and being able to identify the object and the material e.g. water, slime, sand, soil, wood, rock (NC Science – materials, rocks and fossils, states of matter) ▪ Riding balance bikes (NC Science – Forces)	***Autumn A Topic: Light and Dark*** *Examples of the activities and how they link to the NC Science include:* ▪ Understanding the importance of looking after ourselves and being healthy: healthy eating, getting enough sleep, physical exercise, handwashing, toothbrushing (NC Science – Animals, including humans) ▪ Looking at day and night (NC Science – Earth and space) ▪ Investigating animals that are nocturnal and those that aren't (NC Science –Animals, including humans, living things and their habitats) ▪ Making shadow puppets (NC Science – light) • Making firework pictures using different materials (NC Science – paint mixing, materials) **Diwali** The children will celebrate Diwali - the festival of light - and taste different Indian foods (NC Science – light, senses) **Christmas** The children will create Christmas cards using different materials (NC Science – paint mixing, materials)	• learning about staying healthy, oral health and have a visit from a local dentist (NC Science – animals including humans) • exploring the seasons as we move from winter to spring (NC Science – seasons) • exploring floating and sinking of toy lifeboats they have made (NC Science – properties of materials) • mini-beast hunt (NC Science – living things and their habitats, animals including humans) • studying the life cycles of spiders (animals, including humans, living things and their habitats) • making healthy fruit kebabs (NC Science – plants, animals including humans) • artist Andy Goldsworthy (NC Science – plants, properties of materials, rocks and fossils) **Pancake Day** The children will prepare and make pancakes (NC Science – handwashing, healthy eating, states of matter) **Life Cycles (Chicks)** The children will have the opportunity to watch chicks hatch from eggs (NC Science – Animals, including humans, Living things and their habitats, Seasonal changes)	• Art activities involving plants and insects e.g. observational drawings of plants and insects, mini beast art using leaves and web weaving (NC Science – plants, animals including humans, living things and their habitats, materials) • Learning various rhymes related to insects e.g. 'There's a worm at the bottom of my garden' and 'Incy Wincy Spider' (NC Science – animals including humans, living things and their habitats, materials, rocks and fossils (soil)) • Exploring plant and insect related books e.g. The Bad Tempered Ladybird, Omar, the Bees and Me', The Bee Book, A Tiny Seed (NC Science – animals including humans, living things and their habitats, materials, rocks and fossils (soil)) ***Summer B Topic: Pirates, Mermaids and Under the Sea*** *Examples of the activities and how they link to the NC Science include:* • Exploring aquatic animal related books e.g. If Sharks Disappeared (NC Science – animals including humans, living things and their habitats) • Grouping and sorting materials according to their properties as they make treasure boxes (NC Science – materials)

	▪ Observing a particular area in the outdoor provision understanding the effects of the changing seasons e.g. plants, weather, animals, colours, clothes you wear, temperature (NC Science – Seasonal changes, Plants, Living things and their habitats, Animals, including humans, Light, States of matter, Materials, Earth and space) ▪ Observing the daily weather through a weather station (NC Science – Seasonal changes, States of matter, Earth and space) ▪ Push/pull toys (NC Science – forces) ▪ Mud kitchen (NC Science – rocks and fossils) ▪ Water play (NC Science states of matter and materials) *During the year the children will also access a variety of indoor activities including continuous provision, circle time, story time, enjoying songs and rhymes.* ▪ Exploring magnets (NC Science – forces and magnets) ▪ Using mirrors (NC Science – Light) ▪ Small world play (NC Science – Animals, including humans)			• Exploring the life cycles of sharks living in and around the UK and looking for similarities and differences with other fish (NC Science – animals including humans, living things and their habitats) • Investigating the different materials our food is packaged in and conducting experiments to see which break down quickly, slowly or not at all (NC Science – materials) • Opportunity to touch and handle real fish (NC Science – animals including humans, living things and their habitats, materials) • Exploration of what plants and animals live in the seas and oceans (NC Science – animals including humans, living things and their habitats)

	▪ Separating mixtures e.g sieving (NC Science – States of matter, materials) ▪ Understanding night and day and that different things happen at different times throughout the day (NC Science – Earth and space, Light) ▪ Using objects that run on electricity e.g. BeeBots, iPads (NC Science – Electricity) ▪ Talking about their family members, looking at pictures of them and discussing how there are many different families (NC Science – Animals, including humans, Evolution) ▪ Musical activities including making noises by hitting, banging, singing; changing the volume, pitch and dynamics of sounds (NC Science – Sound) ▪ Art activities including colour mixing, collage, clay, sculpture (NC Science – states of matter, materials) ▪ Baking and cooking (NC Science – States of matter, Animals, including humans) *Throughout the year the children will be taught about how to stay healthy.*			• Exploring differences, change and transition as the children prepare to move to Y1 – through a selection of picture books including: Look Inside your Body, A Huge Bag of Worries, It Feels Good to Be Yourself, Hair Love and Hats of Faith. (Covering – naming parts of the body, knowing what foods are healthy, understanding that we grow from babies to adults, expressing feelings about moving to Year 1, talking about worries and sharing best bits of the Reception year. How have we changed? What can we do now that we couldn't do at the beginning of the year? Talk about favourite moments and what we are looking forward to as we grow and move on (NC Science – animals including humans)

	▪ Importance of exercise and eating the right food (NC Science – Animals, including humans) ▪ Importance of looking after their teeth (NC Science – Animals, including humans) ▪ Importance of protecting our eyes and skin from the sun (NC Science – Light, Animals, including humans) *Throughout the year the children will be read a wide range of books and stories and sing lots of songs and rhymes. Here is a small example of some of them and the links to science.* **Songs and Rhymes** **Head, Shoulders, Knees and Toes** (NC Science – naming body parts) **The Finger Song** (NC Science – naming body parts) **Baa Baa Black Sheep** (NC Science – animals) **5 Little Speckled Frogs** (NC Science – animals, habitats) **1-2-3-4-5 Once I Caught a Fish Alive** (NC Science – animals, habitats) **There Was an Old Lady who Swallowed a Fly** (NC Science – animals, food chains) **The Skeleton Dance** (NC Science – skeletons) **Planet Song** (NC Science – Earth and space) **I Hear Thunder, I Hear Rain** (NC Science – weather)			

	<u>Stories</u> **The 3 Little Pigs** (NC Science – animals, materials) **Jack and the Beanstalk** (NC Science – plants, animals) **Handa's Surprise** (NC Science – fruit and healthy eating) **Little Red Hen** (NC Science baking bread and the ingredients, reversible and irreversible changes)			