

# SCIENCE AT KILLIGREW

Let's get ready to learn together!

## Curiosity and Wonder

We believe that the key driver of our science curriculum is to provoke curiosity about the world around us and the wider universe. We encourage families to ask questions and challenge what they have seen and experienced in their every day lives. We often use 'I wonder if...' to spark scientific discussions.



## Scientific Skills

Our children learn through the different types of enquiry: fair and comparative tests, observation over time, research, pattern seeking and classifying and sorting. Through these they learn skills linked to 10 key themes:

1. Posing ideas and asking questions
2. Planning approaches
3. Gathering equipment
4. Considering variables
5. Observing and measuring
6. Utilising secondary sources
7. Recording and presenting data
8. Looking for patterns
9. Explaining results
10. Evaluating outcomes

## Talk Like a Scientist

Science is all around us and contributes to many aspects of our every day lives. Identify the roles science plays in the things they use and the people they meet. Topical vocabulary is much easier to use when they have heard it in a range of contexts, so use the key vocabulary in the year group pages to help your child.

## Scientific Knowledge

At Killigrew, we teach a range of topics across biology, chemistry and physics with a focus on how to work scientifically. We follow the national curriculum and offers additional challenges that engage and inspire all learners.



**[Click here to see an overview of our whole school science curriculum!](#)**

# SCIENCE IN THE EARLY YEARS

## Topics and how they link to science

	Autumn	Spring	Summer
Scientific skills across the year			
Nursery Knowledge	<u>All Around Me</u> Where we live (environment) Autumn & Harvest (Seasonal Changes and growing) Baking (changes to materials)	<u>Let's Celebrate</u> Weather (seasons and changes in states of matter) Festivals (linked to light)	<u>Rhyme and Rhythm</u> Sound (how loud noises travel)
Reception Knowledge	<u>Bigger and Bigger</u> Babies to adults (physical change) Spring and Easter (animals & change) Spring walk (seasonal change)	<u>Splash!</u> Floating and sinking (forces) Creating texture (materials)	<u>Building and Making</u> Homes in the past (old and new materials) Summer (seasonal change)
	Keeping Healthy Cookery (changes to materials) Seasonal changes (Autumn) Observing in our local area	Clothes we wear (materials) Light and dark Seasonal changes (winter)	Plants and Growth Observing animals (minibeasts)
	Around the World (weather and animals in different countries)  Seasonal changes (Spring)	Rainbows and Puddles (changes over time and colour investigation)  Weather	Up in the Air (observing animals/ birds and insects) Planets Seasonal changes (Summer)

## Skills Progression

**[Click here to see an overview of the skills we teach in each topic.](#)**



### Recommended Reads

Book Lists for Primary Science Topics  
([booksfortopics.com](http://booksfortopics.com)).

A Super Sticky Mistake  
Find out about Animal Babies  
Izzy Gismo  
Meet the Planets!

## Helpful Links

Early Years Science themed experiment ideas

Science Fun at Home | Primary Science Teaching Trust ([pstt.org.uk](http://pstt.org.uk)).

Pairing for Early Science ([stormedapps.co.uk](http://stormedapps.co.uk)).

Pre-School Science Games and Videos

Pet Education

The Great British Year - BBC Teach

## Try this at home!

- Go for a nature walk and observe objects such as leaves, twigs, fir cones or anything else you find.
- Explore water- put objects in the bath or bowl and get your child to guess which will float, and which will sink
- Venture into the garden and go on a bug hunt. Draw pictures of the insects you see. Can you name the insect?
- During visits to the dentist or doctors, discuss what their job is. How do they help us stay healthy? What equipment or tools do they use?
- Role model good hygiene routines and discuss the importance of these routines in keeping us healthy.
- Get the children involved in planning and preparing healthy meals.



# SCIENCE IN YEAR 1

## Animals including Humans

We learn to name a range of animals including fish, amphibians, reptiles, birds and mammals and understand how and why they are grouped. We explore their diets and compare different animals. We learn the basic parts of the human body and say which part is associated with each sense.

**Vocabulary:** human, senses, groups, herbivore, carnivore, omnivore, diet, body, brain, heart, lungs, stomach, legs, arms, ears, eyes

## Everyday Materials

We learn to name a variety of everyday materials including wood, plastic, glass, metal, water and rock and explore their physical properties. We use this to compare and group materials.

**Vocabulary:** hard/soft; stretchy/stiff; shiny/dull; rough/smooth; bendy/not bendy; waterproof/not waterproof; absorbent/not absorbent; opaque/transparent

## Plants

We learn to identify and name a variety of common plants and trees. We explore their basic structure.

**Vocabulary:** Seeds, garden, wild, stem, leaves, roots, flower, trunk, branches, bark, petals, fruit, bulb, flowers, blossom, deciduous, evergreen

## Seasonal Changes

We learn to observe changes across the four seasons. We describe weather and day length associated with the seasons.

**Vocabulary:** seasons, autumn, winter, spring, summer, weather, UK, season, seasonal, warm, cool, wind, rain, sun, fog, snow, thermometer

## Fancy a trip?

The Boxmoor Trust  
Local Home Improvement shop  
Tring Natural History Museum  
Local Garden Centre

## Recommended Reads

Book Lists for Primary Science Topics  
([booksfortopics.com](http://booksfortopics.com))

DK Look I'm a Scientist  
RSPB- My First Book of Garden Birds  
Foxton Science- Everyday Materials  
Tree by Britta Teckentrup

## Helpful Links

Everyday materials - KS1 Science - BBC Bitesize

Science Fun at Home | Primary Science Teaching Trust ([pstt.org.uk](http://pstt.org.uk))

Pairing for Early Science ([stormedapps.co.uk](http://stormedapps.co.uk))

animal photos wildlife photographs

Parts of the human body? - BBC Bitesize

The Great British Year - BBC Teach

## Try this at home!

- Take a stroll to the local park or your garden and identify common wild and garden plants and trees by their names. You could talk about the plants we eat and use them to cook a meal.
- Grow your own vegetables at home.
- Look around the house to find anything made of that material. Discuss with your child why each material is used to make the different objects.
- Show your child a list of the months of the year. Ask them to circle the months that they think are the winter months. Sort them into seasons. Watch or listen to weather reports on the news.
- Practise naming animals in puzzles or building them out of Lego.
- Play Simon Says to help children learn the names of the different parts of our body.

# SCIENCE IN YEAR 2

## Animals including Humans

We learn that animals have offspring which grow into adults. We find out about the basic needs of animals and describe the importance of a good diet, exercise and hygiene.

Vocabulary: offspring, hygiene, exercise, humans, babies, toddlers, healthy, growth, pulse, stopwatch, breath, heart



## Living Things and their Habitats

We learn to compare things that are living, dead and things that have never been alive. We explore the suitability of habitats. We name a variety of plants and animals in their habitats, including micro-habitats. We describe simple food chains.

Vocabulary: habitat, food, nature, food chain, materials, lifecycle, micro-habitat



## Fancy a trip?

Whipsnade Zoo  
Wendover Woods  
Frogmore Papermill  
The Wildlife Garden Natural History Museum



## Recommended Reads

Book Lists for Primary Science Topics  
([booksfortopics.com](http://booksfortopics.com))

Usborne- My First Science Encyclopedia  
DK- Science Squad  
Amazing Animal Homes- Chris Packham  
FA Little Guide to Wild Flowers- Charlotte Voake

## Uses of Everyday Materials

We learn to identify and compare the suitability of a variety of everyday materials for particular uses. We find out how shapes of solid objects can be changed by squashing, bending, twisting and stretching.

Vocabulary: hard/soft; stretchy/stiff; shiny/dull; rough/smooth; bendy/not bendy; waterproof/not waterproof; absorbent/not absorbent; opaque/transparent, change, force, materials, absorbency, flexibility



## Plants



We learn to observe and describe how seeds and bulbs grow into mature plants. We explore and describe what conditions plants need to grow and stay healthy.

Vocabulary: seeds, bulbs, water, light, temperature, healthy, grow, germinate, cycle, habitat

## Helpful Links

[Science KS1 : Ivy's Plant Shop - BBC Teach](#)

[Science Fun at Home | Primary Science Teaching Trust \(pstt.org.uk\)](#)

[Pairing for Early Science \(stormedapps.co.uk\)](http://stormedapps.co.uk)

[Explain This... Primary science - BBC Teach](#)

[KS1 Science - England - BBC Bitesize](#)

[|Y2 STEM Home Learning](#)

## Try this at home!

- Play games with your senses: use a blindfold and try to identify objects just by touch, sound, smell and taste.
- Buy some seeds or bulbs and plant some in various different places. Do they grow healthily?
- Take your child to a 'habitat' (for example: a pond in the park or a wooded area). Look for as many animals as they can find and ask them what parts of the habitat the animals rely on and why.
- Create your own habitats for minibeasts by building bug hotels!
- Look together at baby photographs and discuss how they have changed.
- Start a collection of materials: rocks, sand, plastic Lego pieces - and sort it by size, colour, shape.
- Make ice lollies and talk about what happens to water when it goes in the freezer.