YEAR 3 SCIENCE CURRICULUM FRAMEWORK

St Peter's PRIMARY SCHOOL

Overview of Key Stage 2 Curriculum:
The principal focus of science teaching in lower key stage 2 is to enable pupils to broaden their scientific view of the world around them. They should do this through exploring, talking about, testing and developing ideas about everyday phenomena and the relationships between living things and familiar environments, and by beginning to develop their ideas about functions, relationships and interactions. They should ask their own questions about what they observe and make some decisions about which types of scientific enquiry are likely to be the best ways of answering them, including observing changes over time, noticing patterns, grouping and classifying things, carrying out simple comparative and fair tests and finding things out using secondary sources of information. They should draw simple conclusions and use some scientific language, first, to talk about and, later, to write about what they have found out.

AUTUMN TERM 1	AUTUMN TERM 2	SPRING TERM 3
MAJESTIC MOUNTAINS	**I AM WARRIOR!**	**POTIONS**
Sc SM 3 Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature. **Sc WS 2, 3, 5, 6** Children create a mini water cycle, observe changes and consider how the water moves from one container to another. **Sc SM 2 Observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C).** **Sc WS 5, 8** Children investigate how water changes state due to heating and cooling and explain how this relates to the water cycle. They draw a flow diagram to show what		**Sc SM 1 Compare and group materials together, according to whether they are solids, liquids or gases.** Children sort empty packaging for a range of household products into groups of solids, liquids and gases. **Sc WS 2 Set up simple practical enquiries, comparative and fair tests.** **Sc WS 3, 5, 7; Sc SM 1** Children test the rates at which different liquids flow (viscosity) down a ramp. They time how long it takes five different fluids to reach the bottom, decide what to measure, and identify the factors that would make it a fair test. They record results using diagrams, tables and charts. **Sc WS 3 Make systematic and careful observations and, where appropriate, take accurate**

happens to water at different temperatures and the processes occurring at those points. **Sc WS 5 Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.** Children look at images of animal species that have adapted to live at high altitude. They explore their characteristics and features and summarise how they have adapted to suit a hostile environment.		**measurements using standard units, using a range of equipment, (e.g. thermometers and data loggers).** **Sc SM 2; Sc WS 5** Children measure temperatures using degrees Celsius. They make predictions about the temperature of different jars or cups of water including those labelled 'iced water', 'room temperature water' and 'hand-hot water' before using a thermometer or data logger to take accurate temperature readings and recording findings on simple graphs or charts. **Sc WS 7 Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.** **Sc WS 2** Children observe the chemical reaction when a balloon is inflated using the magical ingredients of vinegar and bicarbonate of soda. They make predictions and ask further questions based on their observations. **Sc WS 5 Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables.** Children use scientific books, websites and models to research how particles are typically arranged and move in solids, liquids and gases. They use diagrams to illustrate how particles of different materials vary in size and explain how this affects the materials' properties and behaviour. **Sc SM 2 Observe that some materials change state when they are heated or cooled and measure or research the temperature at which this happens in degrees Celsius (˚C).** **Sc WS 2, 3, 4, 5**

		Children investigate what happens when water is boiled and describe what happens during heating and cooling, recording observations in a scientific report with diagrams or photographs. **Sc WS 9 Use straightforward scientific evidence to answer questions or to support their findings.** **Sc SM 1** Children take part in a science quiz on the theme of solids, liquids and gases, drawing on their own experiences to support their answers and explanations.
SPRING TERM 4	**SUMMER TERM 5**	**SUMMER TERM 6**
A JOURNEY OF DIGESTIVE DISCOVERY	**1066**	**BLUE ABYSS**
Sc WS 3 Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers. **Sc WS 2, 4** Children investigate the effects of different drinks on a tooth-like substance by Placing individual eggs (or eggshells) into beakers containing a range of different liquids such as fruit juice, full sugar and sugar-free fizzy pop, milk, water and coffee or tea. **Sc A 2 Identify the different types of teeth in humans and their simple functions.** **Sc WS 4; AD 2** Children use models and real examples of teeth to find out about the four main teeth types – incisors,		**Sc LT 1 Recognise that living things can be grouped in a variety of ways.** Children sort a wide range of images of living things seen at the aquarium into groups. They re-sort the images repeatedly using a different grouping strategy each time. **Sc LT 2 Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment.** **Sc WS 5** Children use classification keys (branching databases) to identify creatures that live in seas and oceans and sort them into groups, including cnidarian, mollusc, fish, mammal, arthropod, annelid, reptile or echinoderm.

canines, premolars and molars. They annotate diagrams of the four types, using labels and captions to describe the characteristic shape, size, parts and function of each one. **Sc WS 5 Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.** **Sc A 2; Sc WS 3** Children use wall and dental mirrors to count their teeth, noting down tooth type, number and relative size. We read *The Story of the Little Mole who knew it was None of his Business,* and talk about the characteristics of the different animals' poo and then match pictures of animal poo to a picture card of an animal. We use this to construct a classification key / branching database for the indentification of an animal by its poo, using simple 'yes' and 'no' questions. **Sc WS 9 Use straightforward scientific evidence to answer questions or to support their findings.** **Sc A 2; Sc WS 4, 5** Children think carefully about how different teeth help them eat. They Examine a range of foods and test to see which teeth are best suited for chopping, tearing and grinding. They go on to investigate why some animals have different types of teeth to our own. **Sc A 1 Describe the simple functions of the basic parts of the digestive system in humans.** Children work in pairs to make life-size wearable digestive system aprons, placing the organs in the correct positions before labelling them. They use these aprons to describe the digestive process to a partner. **Sc WS 8 Identify differences, similarities or changes related to simple scientific ideas and processes.**		**Sc A 3 Construct and interpret a variety of food chains, identifying producers, predators and prey.** Children research the food chain of a sea creature using a diagram or model to show their findings. They use their representation to explain where their particular creature fits into the food chain. Describe it and other parts of the food chain as producers, predators or prey and consider what would happen if any of the living organisms in their chain became unavailable. **Sc WS 5 Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.** Children watch clips from the BBC's *Blue Planet* series about creatures of the deep. As they watch, they make notes on how creatures have adapted for survival in this extreme environment. They select an adaptation from their observations and find out more about it. They create a new and original 'monster of the deep' using what they have learned about deep-sea adaptations. **Sc WS 3 Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.** **Sc WS 2, 4, 5** Children use a data logger and a range of sensors to investigate the change in temperature light, sound and barometric pressure at different depths of water. **Sc LT 3 Recognise that environments can change and that this can sometimes pose dangers to living things.** In groups, children use the web or other source material to research the crown-of-thorns starfish,

Sc A 1; En SL 6, 9 In groups, children research and compare the digestive system of a human with that of either a cow, rabbit, lion, chicken, owl, snake, horse, fly, snail or koala. Noticing key similarities and differences in size and the number of main organs. They report their discoveries to the class, giving reasons for the differences – particularly those relating to diet.		thought to be one of the greatest threats to the Great Barrier Reef. Present their findings digitally to the class, explaining what the crown-of-thorns starfish eats, its predators, why it is having such a devastating effect on the Great Barrier Reef and what measures are being taken to tackle the problem.