Overfields Primary School - Long Term Plan	SCIENCE

EYFS Statement relating to subject
Science at Foundation Stage is introduced indirectly through activities that encourage children to explore, problem solve, observe, predict, think, make decisions and talk about the world around them. They will explore creatures, people, plants and objects in their natural environment. They will observe and anipulate objects and materials to identify differences and similarities.

Year group/term	Year 1 Autumn Term	Year 1 Spring Term	Year 1 Summer Term
Learning Topic	Seasonal Changes	Seasonal Changes	Seasonal Changes
Key knowledge and skills to be secured	• Observe changes across the four seasons· Everyday Materials • distinguish between an object and the material from which it is made • identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock • describe the simple physical properties of a variety of everyday materials. • Talk about what I have found out	• Observe and describe weather associated with the seasons. Animals, including Humans • identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals • identify and name common animals that are carnivores, herbivores and omnivores • describe/compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets) • identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. • Ask simple questions. • Observe closely.	• Observe and describe weather associated with the seasons and how day length varies. Plants • identify and name a variety of common wild and garden plants, including deciduous and evergreen trees • identify and describe the basic structure of a variety of common flowering plants, including trees • Compare things.

Year group/term	Year 2 Autumn Term	Year 2 Spring Term	Year 2 Summer Term
Learning Topic Key knowledge and skills to be secured	Everyday Materials • Identify and compare suitability of everyday materials to particular uses • Find out how shapes of solid objects can be changed by squashing, bending, twisting, stretching. • Sort, compare and group things. • Use simple scientific language.	Animals, including Humans • Notice that animals inc humans have offspring which grow into adults. • Find out the basic needs of animals for survival • Describe the importance of exercise, correct diet and hygiene for humans. • Recognise that questions can be answered in different ways.	Plants • Observe/describe how bulbs grow in mature plants. • Find out how plants need water, light and a suitable temperature to grow. • Use simple equipment to make measurements. • Gather and record simple data in different ways.
	Living Things and their Habitats • Explore the difference between things that are dead/never been alive. • Know how habitats provide for particular animals • Identity/name plants /animals in their habitats inc microhabitats. • Perform simple tests.		

Year group/term	Year 3 Autumn Term	Year 3 Spring Term	Year 3 Summer Term
Learning Topic Key knowledge and skills to be secured	Rocks and Soils • Compare/group rocks together on the basis of appearance/simple physical properties. • Describe how fossils are formed • Know that soils are made from rocks/organic matter • Make careful observations • Gather, record, present data as tables.	Animals, including Humans • Identify that animals, inc humans, need the right type/amount of nutrition • Know that humans/animals have skeletons and muscles for support. protection and movement. • Use relevant scientific language. Gather, record, present data as tables. • Gather, record, present data as labelled diagrams.	Plants • Describe the functions of different parts of plants – roots, stems, leaves, flowers. • Explore requirements of plants for life and how they vary from plant to plant. • Explore the part flowers play in the life cycle of flowering plants – pollination, seed dispersal/formation. • Set up my own simple tests. • Use scientific language • I draw simple conclusions and make new predictions • Gather, record, present data as keys.
	Forces and Magnets • Compare and group materials based on whether they are attracted to a magnet. • Describe some magnetic materials. • To ask my own questions. Use different ways to answer them.		Light • Know they need light to see and that dark is the absence of light. • Know that light from the sun can be dangerous • Recognise that shadows are formed when light from alight source is blocked. • Find patterns in the size of shadows and notice that light is reflected from surfaces. • Explain what I have found out using speaking and listening.

Year group/term	Year 4 Autumn Term	Year 4 Spring Term	Year 4 Summer Term
Learning Topic Key knowledge and skills to be secured	Living Things and their Habitats • Living things can be grouped in different ways • Use classification skills to group/name/identify living things • Know environments can change • Gather and record data in diagrams and tables • Make careful observations.	States of Matter • Compare and group materials together, according to if they are solids, liquid, gas. • Observe that some materials change state when they are heated/cooled • Set up my own simple tests. • Draw simple conclusions.	Animals including Humans • Describe the basic parts/function of the digestive system. • Identify the different types of teeth in humans and their simple function. • Construct/interpret food chains, identifying producers, predators and prey. • Explain what I have found out using speaking and listening.
	Electricity • Know common appliances that run on electricity • Make a simple circuit – cells, wires, bulbs, switches, buzzers • Know that a switch open/closes a circuit • Use different equipment to measure accurately in standard units. • Suggest improvements and raise further questions.		Sound • Identify how sounds are made – vibrating • Know that vibrations travel through the ear • Find patterns between pitch/volume • Make predictions for new values.

Year group/term	Year 5 Autumn Term	Year 5 Spring Term	Year 5 Summer Term
Learning Topic Key knowledge and skills to be secured	Forces • Know that unsupported objects fall towards the earth due to force • Identify the effects of air resistance and friction • Know that mechanisms allow a smaller force to have a greater effect • Decide what observations and measurements to make. • Use different scientific equipment to measure with precision – repeat. • Set up a fair test when necessary	Animals, including Humans • Describe the changes as humans develop to old age. • Ask different types of questions. • Draw a timeline to indicate growth and development. • Research gestation periods of other animals. Compare. • Ask different types of questions • Use scientific language and illustrations.	Living Things and their Habitats • Recognise the differences in a mammal, amphibian, insect and bird • Describe reproduction in some plants and animals. • Decide what observations and measurements to make. • Report/present findings using speaking/writing – displays, presentations • Ask different types of questions. • Use scientific language and illustrations.
	Earth and Space • Describe the movement of the earth and other planets • Describe the movement of the moon relevant to the earth • Use the idea of the earth's rotation to explain day and night and the apparent movement of the sun across the sky • Report/present findings using speaking/writing – displays, presentations • Use scientific language and illustrations. • Ask different types of questions. • Report/present findings using speaking/writing – displays, presentations		Properties and Changes of Materials • Compare everyday materials on the basis of properties – hardness, solubility, transparency, conductivity • Know some materials will dissolve in liquid – recover a substance from a liquid. • Use knowledge of solids, liquids and gases to separate - filtering, sieving and evaporating. • Recognise reversible and irreversible changes. • Demonstrate that dissolving, mixing are reversible. • Explain that some changes are not reversible – including burning/acid. • Set up and carry out comparative/fair tests. • Use results to make predictions and set up more tests. Decide what observations and measurements to make. • Plan different types of scientific enquires to answer questions

Year group/term	Year 6 Autumn Term	Year 6 Spring Term	Year 6 Summer Term
Learning Topic Key knowledge and skills to be secured	Evolution and Inheritance • Know that living things change over time • Fossils provide information about living things from millions of years ago. • Recognise that offspring can be identical/non-identical to their parents • Know how animals/plants are adapted to suit their environment • Report and present findings using speaking and writing, including displays and presentations. • Use relevant language and illustrations.	Light • Know that light travels in straight lines. • Know that light travels in straight lines from light sources to our eyes. • Know that shadows have the same shape as the objects that cast them. • Decide what observations and measurements to make. • Use different scientific equipment to measure with precision. Take repeat readings.	Living Things and their Habitats • Know that living things are classified by common characteristics, based on similarities and differences. • Plan different types of scientific enquiries to answer questions.
	Electricity • Associate the brightness of a lamp with the number/voltage of cells in a circuit • Give reasons for how bright components function • Use recognised symbols to represent a diagram. • Set up fair testing when necessary		Animals, including Humans • Identify/name parts of the human circulatory system • Recognize impact of diet, exercise, drugs, lifestyle on their bodies • Describe how nutrients and water are transported. • Ask different types of questions.