MACAULAY CE SCHOOL
SCIENCE OVERVIEW

	AUTUMN	SPRING	SUMMER
Nursery	**All about Me :** Compare and contrast our similarities and differences **Festivals of Light :** Recognising changes of the season and signs of Autumn.Talk about what they see, using a wide vocabulary. Explore natural materials around them with similar and/or different properties e.g trees, seeds and leaves. Begin to understand the need to respect and care for the natural environment and all living things.	**It's cold outside :** Use all their senses in hands-on exploration of natural materials. Talk about what they see, and feel using a wide vocabulary. Begin to understand the need to respect and care for the natural environment and all living things, caring for migrating birds. Talk about the differences between materials and changes they notice (frost, ice, mist, melting, temperature). Observe changing states of water. **Grow, grow, grow :** Explore natural materials. Recognise parts of the(seed, bulb,roots, shoot, stem, leaves , petal). Explore collections of materials with similar and/or different properties. Plant seeds and care for growing plants and understand the key features of the life cycle of a plant and an animal. Understand the need to respect and care for the natural environment and all living things. Observe the differences between materials and changes and comment on what they see and feel.	**Changes :** Recognising how humans change over time in height, sizes and appearance. Explore a range of natural materials, compare and contrast the similarities and differences. Observe changes over time of plant growth and within the environment. Understand the key features of the life cycle of a plant and an animal(egg, larvae, pupa , caterpillar, butterfly, egg/ , egg duckling, duck, egg, plus humans. Begin to understand the need to respect and care for the natural environment and all living things. **Water, water everywhere :** Recognising different sources of water (sea , ocean, rain, cloud). Explore changing states of water. Begin to understand the need to respect and care for the natural environment and all living things.Talk about the differences between materials and changes they notice. To explore and ask questions about how things work due to their properties.

Reception	**Light and Dark -** identifying sources of light including the sun.Recognise that night is the absence of sunlight. Nocturnal animals -compare and contrast . Knowing how shadows are formed. How materials can be transparent, opaque or translucent and affect how light travels through them. Reflective materials keep us safe. How light allows us to see.	**The Natural World** Recognise some environments that are different to the one in which they live. Describe what they see, hear and feel whilst outside. Explore the natural world around them.Observe and interact with natural processes, such as ice melting, a sound causing a vibration in water, a magnet, floating objects Observing the weather and seasonal features.	**Healthy Me :** Understanding how exercise affects our bodies and a healthy lifestyle.Compare and contrast fruits and vegetables and conditions for growth. Exploring taste as one of our five senses **Under the Sea** Recognise some environments that are different to the one in which they liv**e.**
Year 1	**Ourselves:** recognising ways that humans change, collecting data about hand and feet size, the five senses. **Our pets:** habitats, looking after a pet, the key differences between birds, fish, amphibians, reptiles, mammals and invertebrates.	**Everyday Materials:** distinguishing the object from the material it is made from, describing and comparing the physical properties of materials and choosing the most suitable materials for specific purposes.	**Seasonal Changes:** understanding and describing the main changes across the seasons, the weather associated with the seasons and how day length varies across the year. **Plants:** name a variety of different plants (including deciduous and evergreen trees), understand and describe how plants are suited to different habitats, understand and describe the structure of plants including leaves, flowers (blossom), petals, fruit, roots, bulb, seed, trunk, branches and stem.
Year 2	**Healthy Animals:** animals and their offspring, basic needs, the importance of exercise, planning for a healthy, balanced diet. **Living things and their Habitats:** comparing things that are living/dead/have never been alive, microhabitats, food chains, making bug hotels.	**Materials Matter:** identifying and comparing the suitability of different materials, finding out how the shapes of solid objects can be changed by squashing, bending, twisting and stretching.	**Plants:** understand and describe the main changes as seeds and bulbs grow into mature plants, the basic needs of plants for water, light and a suitable temperature to grow and stay healthy. **Summer Gardens:** make a playground allotment, understand farming, food chains and the transfer of energy.
Year 3	**Muscles and Bones**: internal and exoskeletons, support, movement and protection, paired muscles, strength **Food and Nutrition**: carnivores, herbivores and omnivores, nutrition, balanced diet and exercise **Light**: white light, how light travels, shadows, reflected light, sunlight	**Rocks and Fossils**: different types of rock, sorting and classifying based on properties, describing how fossils are formed, recognising that soils are made from rocks and organic matter. **Amazing Magnets**: comparing how things move on different surfaces, observing how magnets attract or repel, compare and group together everyday materials based on whether they are magnetic, describe magnets as having two poles.	**Plants—Roots and Shoots:** identify functions of parts of plants, know the needed conditions for plant life, water transportation around a plant **Plants—artful flowers, fruits and seeds:** life cycle of flowering plants, pollination, seed formation and seed dispersal

Year 4	**Electricity**: safety, building a circuit, conductors and insulators **Solids, Liquids and Gas:** identifying properties, temperature, evaporation and condensation, the water cycle	**Sound**: how sounds are made, how it travels, pitch, sound and volume. **Living things and their Habitats:** grouping living things, using classification keys to group, identifying and naming a variety of living things in the local environment.	**Teeth and The Digestive System**: Types an functions of teeth, basic parts of the digestive system, food chains, producers, prey, predators **Help Our Habitats:** Recognise that environments can change, threats to life, wildlife havens, species specific habitats, rewilding.
Year 5	**Space**: movement of the Earth and other planets relative to the sun, movement of the moon relative to Earth, rotation, size and scale, spherical bodies, sun dials, lunar month **Living Things and their Habitats:** describe difference between groups of species, lifecycles for mammals, amphibians and birds, including reproduction in plants and animals	**Properties and changes of materials**: properties of everyday materials including hardness, transparency, electrical/thermal conductivity, uses of materials **Properties and changes of materials**: grouping materials, including by magnetism and solubility, dissolving, solutions, separating, filtering, sieving, evaporation, reversible and irreversible change	**Forces, Levers and Pulleys:** gravity, materials for air resistance, testing, recording data and drawing conclusions, water resistance and designs to overcome this **Life Explorers**: Human Lifecycle including growth, development, puberty and old age, fair testing and making comparisons
Year 6	**Light**: straight lines, reflecting, recording data using bar charts, line graphs, shadows, white light, refraction, bending light, rainbows, mixing light colours through filters **Electricity**: circuits (including manipulating the voltage), circuit terminology, resistance, dimmer switches, symbols	**Living Things and their Habitats**: classification, similarities and differences, in micro-organisms, plants and animals, predicting, controlling variables, recording (including statistics) **Evolution and Inheritance**: living things from millions of years ago, changes over time, uniqueness, adaptation	**Art of Being Human:** Human circulatory system, - functions of heart, blood vessels and blood, healthy lifestyles, exercise, diet, drugs education, transportation of nutrients **Second Look:** Revisiting the curriculum covered including forces, properties of materials, animals including humans, electricity and working scientifically