WOMBWELL PARK STREET PRIMARY SCHOOL

SUBJECT: Science **SUBJECT LEADER: Miss Fury (supported by Mrs Longden)**

KEY STAGE 1				
YEAR GROUP	**SCIENCE TOPICS COVERED: THEMATIC/TOPIC LINKS CURRICULUM DELIVERY METHOD**	**NC CONTENT: KNOWLEDGE AND SKILLS COVERED** (Which key skills and content from NC is covered) **PUPILS WILL BE TAUGHT TO…**	**LEARNING OUTCOMES**	**KEY VOCABULARY**
Ya. YEAR 1 and 2	**AUTUMN:** **Year A: <u>Seasons: How are the seasons different?</u>** **SPRING:** **Year A: <u>What can we find out about buildings?</u>**	**Ya Y1 and 2** **SEASONAL CHANGES** • observe changes across the 4 seasons • observe and describe weather associated with the seasons and how day length varies **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 • compare and group together a variety of everyday materials on the	**SEASONAL CHANGES by the end of KS1** • I can observe and comment on changes in the seasons. • I can name the seasons and suggest the type of weather in each season **EXP by end of KS1** Changes across the four seasons are observed and discussed. Generally, the weather associated with the seasons and the variation in day length is observed and described. **GDS by end of KS1** The changes across the four seasons are observed and discussed independently, and a clear explanation can be given as to how the four seasons in the UK occur Without support, the weather associated with the seasons and the variation in day length is observed and described **EVERYDAY MATERIALS AND USES OF** **Y1** • I can distinguish between an object and the material it is made from. • I can explain the materials that an object is made from. • I can name wood, plastic, glass, metal, water and rock. • I can describe the properties of everyday materials. • I can group objects based on the materials they are made from. **Y2** • I can identify and name a range of materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard. • I can suggest why a material might or might not be used for a specific job. • I can explore how shapes can be changed by squashing, bending, twisting and stretching. **EXP by end of KS1** Generally, a variety of everyday materials are identified and named. The simple physical properties, e.g. strength, flexibility and transparency, of a variety of everyday materials are described.	**SEASONAL CHANGES** season spring summer autumn winter weather hot/warm cool/cold sun/sunny cloud/cloudy wind/windy rain/rainy snow/snowing hail/hailing sleet frost fog/mist ice/icy rainbow thunder lightning storm light/dark day/night **EVERY DAY MATERIALS AND USES OF** **Y1** wood, plastic, glass, metal, water and rock. object material wood plastic glass metal water rock brick paper fabrics elastic foil card/cardboard rubber wool clay hard soft stretchy stiff bendy/floppy waterproof absorbent breaks/tears rough smooth shiny dull see through not see through **Y2** suitable/unsuitable use/useful object material property wood plastic glass metal water

	SUMMER: **Year A <u>How do plants grow? Plants and lifecycles</u>** Elements of health covered during Sport and health week **DELIVERY METHOD** Weekly science lessons. Science elements also integrated into creative, enquiry based creative curriculum. Two year rolling program differentiated throughout the key stage. Cookery and nutrition lessons **ENRICHMENT/EXTRA-CURRICULAR OPPORTUNITIES** Science and technology week.	basis of their simple physical properties **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. • -observe and describe how seeds and bulbs grow into mature plants • -find out and describe how plants need water, light and a suitable temperature to grow and stay healthy **Yb.** **Y 1 and 2** **USES OF EVERYDAY MATERIALS** identify and compare the suitability of a variety of everyday materials, including wood, metal,	Generally, a variety of everyday materials are grouped and compared on the basis of their simple physical properties, using appropriate vocabulary. Generally, there is an ability to distinguish between an object and the material from which it is made, with some corrections if needed. **GDS by end of KS1** A variety of materials are independently named, identified and compared. The simple physical properties of a variety of everyday materials are described. More complex physical properties of a variety of materials, e.g. waterproof, rigid, magnetic, hard, conductor, insulator, absorbent, are beginning to be described. Without support, a variety of everyday materials are grouped and compared on the basis of their simple physical properties. There is an ability independently to distinguish between an object and the material from which it is made. **PLANTS** **Y1** • I can name a variety of common wild and garden plants. • I can name the petals, stem, leaf and root of a plant. • I can name the roots, trunk, branches and leaves of a tree. **EXP** Generally, a variety of common plants and trees and those classified as deciduous and evergreen are identified and named. The basic structure of a variety of common flowering plants, including roots, stem/trunk, leaves and flowers, are identified and described. **GDS** Without support, a variety of common plants and trees, and those classified as deciduous and evergreen, are identified and named. The basic structure of a variety of common flowering plants, including roots, stem/trunk, leaves and flowers, are identified and described independently. **Y2** • I can describe how seeds and bulbs grow into plants. • I can describe what plants need in order to grow and stay healthy (water, light & suitable temperature). **EXP** Generally, observations are made and descriptions are given of how seeds and bulbs grow into mature plants. The conditions required for plants to grow and stay healthy (food, water, air, warmth and light) are identified and described. **GDS** Observations are clearly made and detailed descriptions are given of how seeds and bulbs grow into mature plants.	rock brick paper fabrics elastic foil card/cardboard rubber wool clay hard soft stretchy rigid flexible waterproof absorbent strong/weak rough smooth reflective non reflective transparent opaque translucent shape changed push/pushing pull/pulling twist/twisting squash/squashing bend/bending stretch/stretching pinch/pinching poke/poking roll/rolling squeeze/squeezing **PLANTS** **Y1** names of locally found wild plants names of locally found garden plants names of locally found flowering plants names of locally found trees names of flowers grown names of vegetables grown Adult vocabulary wild plant garden plants flowering plants deciduous and evergreen leaf/leaves flower blossom petal fruit berry root bulb seed trunk branch stem bark stalk vegetable **Y2** seeds bulbs fully grown water light damp/wet/dry dark/light hot/warm/cool/cold use comparatives e.g. hotter grow/growth healthy shoot

Yb. **YEAR 1 and 2**	Health and Sports Week. Educational Visits sea-side, Wetlands, (walk in locality) **AUTUMN:** **Year B: <u>Material: Let's investigate everyday materials</u>** **SPRING:** **Year B**: **<u>What can we find out about animals including humans?</u>**	plastic, glass, brick, rock, paper and cardboard for particular uses • find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching **ANIMALS INCLUDING HUMANS** • identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals • identify and name a variety of common animals that are carnivores, herbivores and omnivores • describe and 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. • -notice that animals, including humans, have offspring which grow into adults • -find out about and describe the basic needs of animals, including	The conditions required for plants to grow and stay healthy (food, water, air, warmth and light) are identified and described in detail. Explanations are offered for changes in living things, e.g. light or water altering plant growth. **ANIMALS INCLUDING HUMANS** **Y1** • I can name a variety of animals including fish, amphibians, reptiles, birds and mammals. • I can sort animals into categories (including fish, amphibians, reptiles, birds and mammals). • I can sort living and non-living things. • I can name the parts of the human body that I can see. • I can link the correct part of the human body to each sense **EXP** Generally, some common animals that are birds, fish, amphibians, reptiles, mammals and invertebrates are identified and named. Generally, living things can be sorted into groups with justification as to why they have been placed into these groups. A variety of common animals that are carnivores, herbivores and omnivores are identified and named. Generally, the structure of a variety of common animals, e.g. spine, tail, fur, wings, is described. These structures can then be compared. The basic parts of the human body are identified, named, drawn and labelled. The part of the body associated with each sense is identified. **GDS** Common, and some exotic, animals are named and classified as birds, fish, amphibians, reptiles, mammals and invertebrates independently. The structure of a variety of common animals is described independently. These structures are then compared and reasons for their differences are suggested Parts of the human body are identified, named, drawn and labelled independently. The part of the body associated with each sense is identified. **Y2** • I can explain the basic stages in a life cycle for animals, including humans. • I can describe what animals and humans need to survive.	seedling wither/limp die dry/crispy soil earth **ANIMALS INCLUDING HUMANS** **Y1** wild animals pets Food fish, Fish, Amphibians, Birds, Mammals (including Humans), Farm animals, Pet animals, Woodland animals body head neck arms elbows legs knees face ears eyes eyebrows eyelashes nose hair mouth teeth tongue feet toes fingers nails ankle calf thigh hips waist trunk chest shoulders back hands wrist tail wing claw fin scales feathers fur beak senses hear/hearing see/seeing touch/touching smell/smelling taste/tasting **Y2** living dead never been alive move grow feed have offspring/ young/ babies grow change adults older/younger baby/toddler/child/teenager

	SUMMER: **Year B: <u>What lives there? Animals and habitats. (Coastal habitats)</u>** **DELIVERY METHOD** Weekly science lessons. Science elements also integrated into creative, enquiry based creative curriculum. Two year rolling program differentiated throughout the key stage. Cookery and nutrition lessons **ENRICHMENT/EXTRA-CURRICULAR OPPORTUNITIES** Science and technology week. Health and Sports Week. Educational Visits sea-side, Wetlands, (walk in locality)	humans, for survival (water, food and air) • describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. **ANIMALS IN THEIR HABITATS** • explore and compare the differences between things that are living, dead, and things that have never been alive • identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other • identify and name a variety of plants and animals in their habitats, including micro-habitats	• I can describe why exercise, a balanced diet and good hygiene are important for humans. **ANIMALS IN THEIR HABITIATS** **Y1** • I can classify and name animals by what they eat (carnivore, herbivore and omnivore). • I can name a variety of animals including fish, amphibians, reptiles, birds and mammals. **EXP** Generally, some common animals that are birds, fish, amphibians, reptiles, mammals and invertebrates are identified and named. A variety of common animals that are carnivores, herbivores and omnivores are independently and confidently identified and named **GDS** Common, and some exotic, animals are named and classified as birds, fish, amphibians, reptiles, mammals and invertebrates independently A variety of common animals that are carnivores, herbivores and omnivores are independently and confidently identified and named **Y2** • I can describe what animals need to survive. **EXP** Generally, the fact that most living things live in habitats to which they are suited is identified. Generally, the way in which different habitats provide for the basic needs of different kinds of animals and plants is described, e.g. rainforest, coral reefs and the tundra are all habitats where particular kinds of plan Generally, plants and animals are identified and named. Animal habitats are identified and described. Generally, simple food chains are described and animals where might be found. **GDS** The fact that most living things live in habitats to which they are suited is independently identified. Without support, the way in which different habitats provide for the basic needs of different kinds of animals and plants is described, e.g. rainforest, coral reefs and the tundra are all habitats where particular kinds of plants and animals might be found**.**	**ANIMALS IN THEIR HABITATS** **Y1** names of common animals (that eat other animals/ eat plants) names of common animals (that eat plants and animals) tail wing claw fin scales feathers fur beak **Y2** name local habitats e.g. a pond, a woodland, a meadow seashore woodland ocean rainforest damp/wet/dry dark/light hot/warm/cool/cold use comparatives e.g. hotter suited/suitable basic needs depend shelter name micro-habitats e.g. under log, on stony path, under bushes food food chain

		WORKING SCIENTIFICALLY During years 1 and 2, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content: • asking simple questions and recognising that they can be answered in different ways • observing closely, using simple equipment • performing simple tests • identifying and classifying • using their observations and ideas to suggest answers to questions • gathering and recording data to help in answering questions.	Without prompts, a variety of plants and animals are named and described. Animal habitats are identified, described and there is an awareness of why habitats are suitable for an animal. More advanced food chains are described and explained. **WORKING SCIENTIFICALLY – TO RUN THROUGH ALL SCIENCE UNITS OF WORK** **Y1** • I can ask simple questions • I can make simple observations and describe what I can see • I am beginning to perform simple tests • I can identify and sort with support • I can gather data and use to answer questions verbally **Y2** • I can ask simple questions and recognise that they can be answered in different ways. • I can observe closely and describe what I can see • I can perform simple tests. • I can identify and classify. • I can use my observations and ideas to suggest answers to questions. • I can gather and record data to help in answering questions.	**Working Scientifically Y1:** questions answers equipment gather measure record sort group test explore observe compare describe similar/similarities different/differences **Working Scientifically Y2:** questions types of scientific enquiry answer similarities differences changes identify classify sort group order observe changes over time notice patterns link comparative tests fair tests careful accurate observations questions equipment gather measure record results evidence keys bar charts table results conclusions prediction

CONCEPTUAL LINKS TO OTHER CURRICULUM AREAS

GEOGRAPHY – links with climate, weather, biomes, location in relation to temperature and climate. Map skills physical and human elements of geography.

DESIGN & TECHNOLOGY – links to properties of materials and suitability to function and purpose. Elements of building design and architecture.

PSHE – Links between biology and the importance of diet, fitness and mental wellbeing to health. Conservation

HISTORY – links between historical periods covered and science knowledge and understanding at the time. How historical scientific innovation has impacted on our lives today.

MATHEMATICAL CONCEPTS – measurement. Recording, presenting and interpreting data.