**Science at Oldfield Primary School**

**Year 1 Objectives**

* **Animals and Humans**: Identify common animals, categorize them by diet (herbivore, carnivore, omnivore), compare their structures, and recognize human body parts and their functions.
* **Living Things**: Explore differences between living, dead, and non-living things; understand how offspring grow into adults.
* **Plants**: Identify and describe common plants and their parts.
* **Seasonal Changes**: Observe weather changes across seasons and relate these to varying day lengths.
* **Materials**: Recognize, name, and compare physical properties of everyday materials.

**Year 2 Objectives**

* **Feeding and Exercise**: Understand the basic needs for survival, food sources, simple food chains, and the importance of exercise and hygiene.
* **Living Things**: Identify habitats and relationships within them; name plants and animals in various environments.
* **Plants**: Describe the growth process of seeds and bulbs and explore plant requirements for health.
* **Materials**: Examine the suitability of materials for specific uses; observe how objects can change shape.

**Year 3 Objectives**

* **Movement and Feeding**: Recognize the nutritional needs of animals and the role of skeletons and muscles.
* **Rocks and Soils**: Group and describe rocks by properties, learn fossil formation, and recognize soils as a rock byproduct.
* **Plants**: Study plant parts and their functions, water transportation, and the role of flowers in reproduction.
* **Magnets and Forces**: Compare movement on surfaces, identify magnetic materials, and understand magnetic attraction and repulsion.
* **Light and Shadows**: Explore how light enables vision, the reflection of light, shadow formation, and safety from sunlight.

**Year 4 Objectives**

* **Human Nutrition**: Understand digestion and teeth functions in humans.
* **Living Things**: Group living organisms, classify them, and identify environmental changes' impacts on them.
* **States of Matter**: Differentiate between solids, liquids, and gases; study changes in states and the water cycle.
* **Sound**: Explore sound production, vibration travel, pitch, volume, and the effect of distance on sound.
* **Electricity**: Build simple circuits, identify components, and explore conductors and insulators.

**Year 5 Objectives**

* **Life Cycles**: Compare life cycles across species and describe reproduction processes.
* **What Plants Need**: Examine plant growth requirements and variation among plants.
* **Earth and Space**: Study planetary movement, moon phases, and Earth's rotation.
* **Forces**: Investigate gravity, friction, air/water resistance, and simple machines like levers and pulleys.
* **Separating Mixtures**: Learn about dissolving, solutions, and methods of separation (filtering, sieving, evaporating).

**Year 6 Objectives**

* **Our Bodies**: Study the circulatory system, diet/exercise effects, and nutrient transportation in animals.
* **Evolution and Inheritance**: Explore fossil evidence, variation in offspring, and adaptations leading to evolution.
* **Classifying Living Things**: Learn criteria for classification, including microorganisms.
* **Materials**: Compare properties like hardness and solubility; study reversible and irreversible changes.
* **Light and Sight**: Explain vision, straight-line travel of light, and shadow shapes.
* **Electricity**: Study circuit variations (voltage effects) and use symbols for representation.

Each year builds progressively on concepts, ensuring depth and continuity across the curriculum.