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| **Intended Progression** | **Chigwell Row Infant School****Intended Progression of Skills and Knowledge** **Science** |
| **BIG IDEAS** | **Aspect** | **Reception** | **Year One** | **Year Two** |
| **Humankind** | **Human Body** | AOL: World Explore the natural world around them, making observations and drawing pictures of animals and plants | 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.*Know key facts about puberty and the changing adolescent body?* |
| **Staying Safe** | AOL: PSED Explain the reasons for rules, know right from wrong and try to behave accordingly. | Develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics. | Find out about and describe the basic needs of animals, including humans, for survival (water, food and air). |
| **Healthy Lifestyle** | AOL: PSED Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices. | Know about safe and unsafe exposure to the sun, and how to reduce the risk of sun damage, including skin cancer Know about personal hygiene and germs including bacteria, viruses, how they are spread and treated, and the importance of handwashing. **BREADTH** | Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.Know the risks associated with an inactive lifestyle (including obesity).Know what constitutes a healthy diet (including understanding calories and other nutritional content).Know the characteristics of a poor diet and risks associated with unhealthy eating (including, for example, obesity and tooth decay) and other behaviours (e.g. the impact of alcohol on diet or health).Know the importance of sufficient good quality sleep for good health and that a lack of sleep can affect weight, mood and ability to learn.Know about dental health and the benefits of good oral hygiene and dental flossing, including regular check-ups at the dentist.Know about personal hygiene and germs including bacteria, viruses, how they are spread and treated, and the importance of handwashing. |
| **Processes** | **Pattern seeking** | AOL: World Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter. | Observe changes across the four seasons. | Develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics. **BREADTH**  |
| **Changes** | Observe and describe weather associated with the seasons and how day length varies. | Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. |
| **Earth** | Develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics. **BREADTH** |
| **Phenomena** | AOL: World Develop scientific knowledge through play activities, sharing stories and non-fiction books and discussion. | Develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics **BREADTH** | Develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them. **BREADTH** |
| **Modelling** | Are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future. | Develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics. **BREADTH** |
| **Forces** | AOL: World Develop scientific knowledge through play activities, sharing stories and non-fiction books and discussion. | Develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them. |
| **Creativity** | **Report and conclude** | AOL: CL Offer explanations for why things might happen, making use of recently introduced vocabulary from stories, non-fiction, rhymes and poems when appropriate. | Use their observations and ideas to suggest answers to questions. |
| **Gather and record data** |  | Gather and record data to help in answering questions. |
| **Investigation** | **Questioning** | AOL: CL Make comments about what they have heard and ask questions to clarify their understanding. | Ask simple questions and recognise that they can be answered in different ways. |
| **Measurement** | AOL: World Make observations about the world around them. | Observe closely, using simple equipment. |
| **Investigation** | AOL: Exp A&D Test their ideas. | Perform simple tests. |
| **Observation** | AOL: World Explore the natural world around them, making observations and drawing pictures of animals and plants. | Identify and classify. |
| **Materials** | **Identification and classification** | AOL: World Sort and group materials and resources and talk about how they are similar or different. | 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. | Develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them. **BREADTH** |
| **Properties and uses** | AOL: World Sort and group materials and resources and talk about how they are similar or different. | Describe the simple physical properties of a variety of everyday materials | Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. |
| **Nature** | **Identification and classification** | AOL: World Explore the natural world around them, making observations and drawing pictures of animals and plants. | Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees.CoveredIdentify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. | Identify and name a variety of plants and animals in their habitats, including microhabitats.Notice that animals, including humans, have offspring which grow into adults. |
|  | **Parts and functions** | Identify and describe the basic structure of a variety of common flowering plants, including trees.CoveredDescribe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets). | Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. |
|  | **Nutrition** | Identify and name a variety of common animals that are carnivores, herbivores and omnivores. | Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food. |
|  | **Survival** | AOL: World Develop scientific knowledge through play activities, sharing stories and non-fiction books and discussion. | Develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics. | Find out about and describe the basic needs of animals, including humans, for survival (water, food and air). |
|  | **Habitats** | AOL: World Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter | Use their observations and ideas to suggest answers to questions. | 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 |
| **Comparison** | **Physical things** | AOL: World Sort and group materials and resources and talk about how they are similar or different | Compare and group together a variety of everyday materials on the basis of their simple physical properties.covered | Explore and compare the differences between things that are living, dead, and things that have never been alive. |
|  | **Phenomena** | AOL: World Develop scientific knowledge through play activities, sharing stories and non-fiction books and discussion | Develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them. |
| **Change** | **Living things** | AOL: World Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter. | Develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them. | Observe and describe how seeds and bulbs grow into mature plants. |

**Enquiry: Thinking Scientifically through regular Investigation projects:**

**Year One** Observe closely using simple equipment. Identify and classify.

**Year Two** Perform simple tests. Use observations and ideas to suggest answers to questions.