Science Medium Term Plan The Federation of Rawcliffe and Rawcliffe Bridge

Year Group	National Curriculum Objectives	Planned Activities
Nursery and Reception RB	**Understanding of the world** **22-36 months** • Notices detailed features of objects in their environment. **30-50 months** • Comments and asks questions about aspects of their familiar world such as the place where they live or the natural world. • Can talk about some of the things they have observed such as plants, animals, natural and found objects. • Talks about why things happen and how things work. • Developing an understanding of growth, decay and changes over time. • Shows care and concern for living things and the environment **40-60 months** • Looks closely at similarities, differences, patterns and change. **Working scientifically** I have my own ideas I question why things happen I test my ideas I notice similarities and differences	Autumn seasonal changes Autumn walk Autumn Art Packing a suit case for Paddington – hot and cold weather

Science Medium Term Plan The Federation of Rawcliffe and Rawcliffe Bridge

Year 1/2/3 RB	Everyday Materials/ Changing Materials. -Distinguish between an object and the material that it is made from -Identify and name a variety of everyday materials. -Describe and compare simple physical properties. -Find out how the shape of a solid object made from some materials can be changed by squashing, bending, twisting and stretching. <u>Working Scientifically</u> § 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.	Material investigations. Looking at materials in real life e.g. in the classroom Properties of materials investigations. Ice cube investigation. Playdough challenge. How do our bodies change as we get older? Creating skeletons and looking at our bodies.

Science Medium Term Plan The Federation of Rawcliffe and Rawcliffe Bridge

Year 4/5/6 RB	Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago (Examine fossil evidence supporting the idea of evolution.) Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents (Identify inherited traits and adaptive traits. Identify the difference between selective and crossbreeding.) Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution. (Understand that adaptations are random mutations.) Identifying scientific evidence that has been used to support or refute ideas or arguments; Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago in the context of the evolution of human beings. W.S planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary W.S reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations W.S taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate W.S recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs	Life cycles (humans and animals) Y4 Classification of living things Y5 Revise life cycles and compare Y6 Evolution – link to inherited characteristics and acquired characteristics. Look at adaptation/survival of the fittest! Evolution: How do humans evolve? Q - Does your understanding of evolution link to your understanding of the creation of the world? Recap Big Bang Theory – last term Can a religious believer accept evolution? / Can you be a “true believer” if you are a scientist? Do you think we descended from apes? Which has more weight in exploring where we came from – the creation story or evolution? Is it possible to believe in both? Mummification Materials: Q - Which materials would best replicate Natron? Investigate the properties of different substances to find which historians and scientists could best use today in order to replace Natron.

Science Medium Term Plan The Federation of Rawcliffe and Rawcliffe Bridge

Reception R	**<u>30-50 months</u>** • Comments and asks questions about aspects of their familiar world such as the place where they live or the natural world. • Can talk about some of the things they have observed such as plants, animals, natural and found objects. • Talks about why things happen and how things work. • Developing an understanding of growth, decay and changes over time. • Shows care and concern for living things and the environment **<u>40-60 months</u>** • Looks closely at similarities, differences, patterns and change.	Autumn seasonal changes Autumn walk Autumn Art Packing a suit case for Paddington – hot and cold weather

Science Medium Term Plan The Federation of Rawcliffe and Rawcliffe Bridge

Year 1/2 R	Everyday Materials/ Changing Materials. -Distinguish between an object and the material that it is made from -Identify and name a variety of everyday materials. -Describe and compare simple physical properties. -Find out how the shape of a solid object made from some materials can be changed by squashing, bending, twisting and stretching. <u>Working Scientifically</u> § 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.	Material investigations. Looking at materials in real life e.g. in the classroom Properties of materials investigations. Ice cube investigation. Playdough challenge. How do our bodies change as we get older? Creating skeletons and looking at our bodies.

Science Medium Term Plan The Federation of Rawcliffe and Rawcliffe Bridge

Year 3/4 R	Describe the simple functions of the basic body parts of the digestive system in humans Identify the different types of teeth in humans and their simple functions Construct and interpret a variety of food chains, identifying producers, predators and prey Identify that animals, including humans need the right types of nutrition and that they cannot make their own food; they get nutrition form what they eat Identify that humans and some other animals have a skeleton and muscles for support, protection and movement <u>Working Scientifically</u> § asking relevant questions and using different types of scientific enquiries to answer them § setting up simple practical enquiries, comparative and fair tests § making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers § gathering, recording, classifying and presenting data in a variety of ways to help in answering questions § recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables § reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions § using results to draw simple conclusions, make predictions for new values, suggest improvements and	Research what is our Skelton for?

Science Medium Term Plan The Federation of Rawcliffe and Rawcliffe Bridge

Year 5/6 R	Evolution and inheritance Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago (Examine fossil evidence supporting the idea of evolution.) Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents (Identify inherited traits and adaptive traits. Identify the difference between selective and crossbreeding.) Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution. (Understand that adaptations are random mutations.) Identifying scientific evidence that has been used to support or refute ideas or arguments; Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago in the context of the evolution of human beings. W.S planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary W.S reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations W.S taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate W.S recording data and results of increasing complexity	Evolution: How do humans evolve? Q - Does your understanding of evolution link to your understanding of the creation of the world? Recap Big Bang Theory – last term Can a religious believer accept evolution? / Can you be a “true believer” if you are a scientist? Do you think we descended from apes? Which has more weight in exploring where we came from – the creation story or evolution? Is it possible to believe in both? Mummification Materials: Q - Which materials would best replicate Natron? Investigate the properties of different substances to find which historians and scientists could best use today in order to replace Natron. Inherited traits v acquired traits Adaptation: How do animals adapt to survive in different environments? Dromedaries (Arabian camels) were used in ancient Egyptian times for transport in the desert. Dromedaries only need water every ten to 15 days and can store fat in the hump on their back. Make a list of how dromedaries have adapted to suit a desert climate. How does each of these adaptations help the animal survive? Choose another animal that lives in Egypt, but not in a desert. Make a list of how this animal has adapted to its environment? Use a world map to match different animals to where they live.

Science Medium Term Plan The Federation of Rawcliffe and Rawcliffe Bridge