AL NOOR LONG TERM PLAN – SCIENCE

Year Group	Autumn 1st Half (6wks)	Autumn 2nd Half (6wks)	Spring 1st Half (6wks)	Spring 2nd Half (6wks)	Summer 1st Half (6wks)	Summer 2nd Half (6wks)
Year 1	**My body** Names of the main body parts and their functions	**Seasonal changes** Changes in the weather and the season, including day length, as the seasons change.	**Identifying animals** Names of the main body parts Animals in local environment, caring for animals in the local environment.	**Identifying plants** Explore plants in the habitat using local environment. Names of flowers, plants, plant structures, compare and contrast familiar plants.	**Everyday materials** Everyday materials properties. Simple tests to explore suitable material for individual need.	**Seasonal changes/Pets and gardens** Changes in the weather and the season, including day length, as the seasons change.
Working scientifically:	Asking a question, handling equipment **Enquiry**: recording changing weather: measuring temperature, rain fall, wind strength, cloud cover, sunniness		Conducting and observing **Enquiry**: Identify and classify plants in the local park		Presenting and concluding **Enquiry**: What is the right material for the right job? (paper vs plastic vs metal vs rubber vs stone…)	
Year 2	**Living Things** Characteristics of living healthy being. Life processes in living things.	**Animals, including humans** Animals survival, importance of exercise and nutrition. Processes of reproduction and growth in animals.	**Plants** Plants germination, growth and survival, processes of reproduction and growth.	**Use of everyday materials** Use of materials. Suitable materials particular purposes.	**Habitats** Learn terms 'habitat'. study variety of plants and animals within the habitat. Compare animals in different habitats	Investigation
Working scientifically:	Asking a question, planning and conducting **Enquiry:**		Observing, presenting and concluding **Enquiry:**		Whole investigation: **Enquiry:**	
Year 3	**Plants** relationship between structure and function	**Aminals including Humans** Importance of nutrition and skeleton. animals with and without skeletons	**Forces and magnets** behavior and everyday uses of different magnet	**Light** How light behaves, shadows- forms and changes.	**Aminals including Humans** Importance of nutrition and skeleton. animals with and without skeletons	**Rocks** different kinds of rocks and soils
Working scientifically:	Asking a question, choosing an enquiry, predicting **Enquiry:** I can identify that humans and some other animals have skeletons and muscles for support, protection and movement. I can ask simple questions about the world around me. I can observe closely, using simple equipment. I can perform simple tests. I can identify and classify.		Conducting and observing, recording, presenting (drawings and labeled diagrams) **Enquiry:** • I can compare how things move on different surfaces • I can notice that some forces need contact between two objects, but magnetic forces can act at a distance		Concluding, reporting, applying • **Enquiry:** I can identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat I can use my observations and ideas to suggest answers to questions	

	I can use my observations and ideas to suggest answers to questions I can gather and record data to help in answering questions. **Enquiry:** I can compare and group together different kinds of rocks on the basis of their appearance and simple physical properties I can describe the properties of rock using language such a waterproof, strong, hard, opaque, heavy. I can observe closely, using simple equipment. 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.		• I can observe how magnets attract or repel each other and attract some materials and not others • I can compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials I can ask simple questions about the world around me. I can observe closely, using simple equipment. 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. **Enquiry:** • I can recognise that they need light in order to see things and that dark is the absence of light • I can notice that light is reflected from surfaces • I can recognise that light from the sun can be dangerous and that there are ways to protect their eyes • I can recognise that shadows are formed when the light from a light source is blocked by a solid object. • I can find patterns in the way that the size of shadows change. I ask relevant questions. I can report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. I can use results to draw simple conclusions and suggest improvements, new questions and predictions for setting up further tests I can identify differences, similarities or changes related to simple scientific ideas and processes.		I can gather and record data to help in answering questions. I can report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. I can use results to draw simple conclusions and suggest improvements, I can identify differences, similarities or changes related to simple scientific ideas and processes. **Enquiry:** I can compare the effect of different factors on plant growth, for example, the amount of light, the amount of fertiliser; discovering how seeds are formed by observing the different stages of plant life cycles over a period of time; observe how water is transported in plants, for example, by putting cut, white carnations into coloured water and observing how water travels up the stem to the flowers. I can use my observations and ideas to suggest answers to questions I can gather and record data to help in answering questions. I can report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. I can use results to draw simple conclusions and suggest improvements, I can identify differences, similarities or changes related to simple scientific ideas and processes.	
Year 4	**Living Things** Identifying animals in different environments –	**Animals, including humans** Introduction to the digestive system.	**States of Matter** Exploring everyday materials – solids, liquid and gases	**Animals, including habitats** Classify animals, identifying vertebrate and invertebrate	**Sound** Vibration, pitch and volume, sound patterns	**Electricity** Constructing circuits precautions for working safely with electricity

	Identifying plants – Classify flowering and non-flowering plants	Examining teeth of different animals				
Working scientifically:	Asking a question, choosing an enquiry, planning a fair test, predicting **Enquiry:**		Conducting and observing, recording and presenting (tables and graphs) **Enquiry:**		Concluding, evaluating, reporting, applying **Enquiry:**	
Year 5	**Forces** Exploring air resistance, friction and gravity	**Earth and Space** Explanation of day and night Models of sun, earth and moon Solar system	**Living things and their habitats** Lifecycle changes, Reproduction in plants and animals	**Animals including humans** Growth stages of humans Gestation periods of humans and animals	**Properties of Materials** Comparing properties – magnetism and electricity **changes of materials** Reversible and irreversible changes	Project/revision
Working scientifically:	Asking a question, choosing an enquiry, planning a fair test (input and output variables), predicting, conducting and observing, repeating measurements (accuracy and precision), recording **Enquiry:**		presenting (scatter graphs, line graphs), concluding (causal relationships), evaluating (anomalies, probing effectiveness of experiment), reporting, applying **Enquiry:**		Whole investigation:	
Year 6	**Living things and their habitats** Classification system and subdivisions, Vertebrates and invertebrates	**Animals, including humans** Main body parts and internal organs, circulatory system	**Light** exploring the way that light behaves, including light sources, reflection and shadows	**Electricity** Constructing circuits, drawing and labelling circuits, precautions for working safely with electricity	**Evolution and inheritance** Fossils and the change of living things over time, Genetic inheritance from parents to their offspring	**Animals, including humans** How to keep healthy and prevent damage to your body
Working scientifically:	Repeating measurements (accuracy and precision), predicting & concluding (refuting or supporting ideas based on evidence), evaluating (anomalies, , probing effectiveness of experiment, explanations of and degree of trust in results) **Enquiry:**		Whole investigation:		Whole investigation:	