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| **Happiness** | **Responsibility** | | **Friendship** | | **Respect** | | **Courage** |
| **Science – Year 3** | | | | | | | |
| **Autumn Term** | | | | | | | |
| Unit | | Planning and teaching sequence | | Work Scientifically Opportunities | | National Curriculum Objectives | |
| Skeletons  (Biology) | | Identify and name bones in the human body. | | Working scientifically – Asking relevant questions and using different types of scientific enquiries to answer them. | | * identify that humans and some other animals have skeletons and muscles for support, protection and movement | |
| Functions of the skeleton | | Working scientifically – Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. | |
| Identify and name bones in a range of animals. | | Working scientifically – Talk about criteria for grouping, sorting and classifying (non-statutory). | |
| Animals with and without a spine | | Working scientifically – Talk about criteria for grouping, sorting and classifying (non-statutory). | |
| Are skeletons the same? | | Working scientifically – Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. | |
| Movement  (Biology) | | Joints | | Working scientifically − Recognise when and how secondary sources might help them to answer questions that cannot be answered through practical investigations (non-statutory). | | * identify that humans and some other animals have skeletons and muscles for support, protection and movement | |
| How we move | | Working scientifically – Communicate their findings in ways that are appropriate for different audiences (non-statutory). | |
| Nutrition and diet  (Biology) | | Food groups | | Working scientifically – Talk about criteria for grouping, sorting and classifying (non-statutory). | | * 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 | |
| Understand the five food groups | | Working scientifically – Using straightforward scientific evidence to answer questions or to support their findings. | |
| Balanced diets | | Working scientifically – Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. | |
| Compare diets | | Working scientifically – Identifying differences, similarities or changes related to simple scientific ideas and processes. | |
| Animal diets | | Working scientifically – Using straightforward scientific evidence to answer questions or to support their findings. | |
| Food waste  (Sustainability) | | What is food waste? | | Working scientifically – Asking relevant questions and using different types of scientific enquiries to answer them. | |  | |
|  | | How can we reduce our food waste? | | Working scientifically – Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. | |
| Rocks  (Chemistry) | | Identify rocks | | Working scientifically − Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers. | | * compare and group together different kinds of rocks on the basis of their appearance and simple physical properties | |
|  | | Group rocks | | Working scientifically – Talk about criteria for grouping, sorting and classifying (non-statutory). | |
|  | | Test rocks | | Working scientifically − Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers. | |
|  | | Local rock survey | | Working scientifically − Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions. | |
| Spring Term | | | | | | | |
| Fossils  (Chemistry) | | Explore fossils | | Working scientifically − Asking relevant questions and using different types of scientific enquiries to answer them. | | * describe in simple terms how fossils are formed when things that have lived are trapped within rock | |
| Fossil formation | | Working scientifically − Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. | |
| Soils  (Chemistry) | | Explore soil | | Working scientifically – Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables | | * recognise that soils are made from rocks and organic matter | |
| The importance of soil | | Working scientifically – Using straightforward scientific evidence to answer questions or to support their findings. | |
| Plan – soil experiment | | Working scientifically – Setting up simple practical enquiries, comparative and fair tests. | |
| Investigate – soil experiment | | Working scientifically – Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers. | |
| Evaluate – soil experiment | | Working scientifically – Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions. | |
| Light | | Light sources | | Working scientifically − Identifying differences, similarities or changes related to simple scientific ideas and processes. | | * recognise that they need light in order to see things and that dark is the absence of light. * notice that light is reflected from surfaces * recognise that light from the sun can be dangerous and that there are ways to protect their eyes * recognise that shadows are formed when the light from a light source is blocked by an opaque object * find patterns in the way that the size of shadows change | |
| The Sun | | Working scientifically − Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables. | |
| How we see | | Working scientifically − Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. | |
| Shadows | | Working scientifically − Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions. | |
| Opaque, translucent or transparent? | | Working scientifically − Asking relevant questions and using different types of scientific enquiries to answer them. | |
|  | | Plan – shadow experiment | | Working scientifically − Setting up simple practical enquiries, comparative and fair tests. | |
|  | | Investigate – shadow experiment | | Working scientifically − Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions. | |
|  | | Evaluate – shadow experiment | | Working scientifically − Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions. | |
| Summer | | | | | | | |
| Plants A  (Biology) | | Parts of a plant and their functions | | Working scientifically − Using straightforward scientific evidence to answer questions or to support their findings. | | * identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers * explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant * investigate the way in which water is transported within plants * explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal | |
| Plant dissection | | Working scientifically − Talk about criteria for grouping, sorting and classifying (non-statutory). | |
| Plan – plant growth | | Working scientifically − Asking relevant questions and using different types of scientific enquiries to answer them. | |
| Plant – plant growth | | Working scientifically − Setting up simple practical enquiries, comparative and fair tests. | |
| The stem and water transportation | | Working scientifically − Setting up simple practical enquiries, comparative and fair tests. | |
| Looking at seeds | | Working scientifically − Identifying differences, similarities or changes related to simple scientific ideas and processes. | |
| Reproductive parts in plants | | Working scientifically − Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. | |
| Pollination | | Working scientifically − Use relevant scientific language to discuss their ideas and communicate their findings in ways that are appropriate for different audiences (non-statutory). | |
| Seed dispersal | | Working scientifically − Identifying differences, similarities or changes related to simple scientific ideas and processes. | |
| Life cycle of plants | | Working scientifically − Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. | |
| Forces  (Physics) | | Explore forces | | Working scientifically − Identifying differences, similarities or changes related to simple scientific ideas and processes. | | * compare how things move on different surfaces * notice that some forces need contact between 2 objects, but magnetic forces can act at a distance | |
| Friction | | Working scientifically – Using straightforward scientific evidence to answer questions or to support their findings. | |
| Plan – friction experiment | | Working scientifically − Setting up simple practical enquiries, comparative and fair tests. | |
| Investigate – friction experiment | | Working scientifically − Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions. | |
| Magnets  (Physics) | | Magnets | | Working scientifically − Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions. | | * notice that some forces need contact between 2 objects, but magnetic forces can act at a distance * observe how magnets attract or repel each other and attract some materials and not others * 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. * describe magnets as having 2 poles. * predict whether 2 magnets will attract or repel each other, depending on which poles are facing | |
| Magnetic and non-magnetic materials | | Working scientifically − Identifying differences, similarities or changes related to simple scientific ideas and processes. | |
| Investigate metals | | Working scientifically − Setting up simple practical enquiries, comparative and fair tests. | |
| North and south poles – attract and repel. | | Working scientifically − Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. | |
| Plants B  (Biology) | | Findings – Plant growth | | Working scientifically − Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions. | |  | |
| Biodiversity  (Sustainability) | | What is biodiversity? | | Working scientifically − Asking relevant questions and using different types of scientific enquiries to answer them. | |  | |
| How can we increase biodiversity in our local area? | | Working scientifically − Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. | |