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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. |