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| Year 3 National Curriculum Objectives | | | | | |
| Autumn Term | | Spring Term | | Summer Term | |
| **Forces & Magnets**  ▪ compare how things move on different surfaces.  ▪ notice that some forces need contact between two 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 two poles.  ▪  predict whether two magnets will attract or repel each other, depending on which poles are facing.  **Rocks**  ▪  compare and group together different kinds of rocks on the basis of their appearance and simple physical properties.  ▪  describe in simple terms how fossils are formed when things that have lived are trapped within rock.  ▪  recognise that soils are made from rocks and organic matter. | | **Light**  ▪  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.  **Plants**  ▪  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. | | **Animals, Including Humans**  ▪ 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.  ▪ identify that humans and some other animals have skeletons and muscles for support, protection and movement. | |
| Year 3 Key Skills | | | | | |
| **Forces & Magnets**  Compare how some things move on different surfaces.  Notice that some forces need contact between two 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 two poles (like and unlike poles).  Predict whether two magnets will attract or repel each other, depending on which poles are facing.  **Rocks**  Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties.  Describe in simple terms how fossils are formed when things that have lived are trapped within rock.  Recognise that soils are made from rocks and organic matter.  Recognise that rocks and soils can feel and look different.  Recognise that rocks and soils can be different in different places/environments.  Some materials can be found naturally; others have to be made. | | **Light**  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 a solid object.  Find patterns in the way that the size of shadows can change.  **Plants**  Identify, locate 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.  Roots grow downwards and anchor the plant.  Water, taken in by the roots, goes up the stem to the leaves, flowers and fruit.  Nutrients (not food) are taken in through the roots.  Stems provide support and enable the plant to grow towards the light.  Plants make their own food in the leaves using energy from the sun.  Flowers attract insects to aid pollination.  Pollination is when pollen is transferred between plants by insects, birds, other animals and the wind.  Seeds are formed after the flowers are pollinated.  Many flowers produce fruits which protect the seed and/or aid seed dispersal.  Seed dispersal, by a variety of methods, helps ensure that new plants survive.  Plants need nutrients to grow healthily (either naturally from the soil or from fertiliser added to soil). | | **Animals, Including Humans (health & nutrition)**  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.    An adequate and varied diet is beneficial to health (along with a good supply of air and clean water).  Regular and varied exercise from a variety of different activities is beneficial to health (focus on energy in versus energy out, include information on making informed choices).  **Animals, Including Humans (skeletons & movement)**  Identify that humans and some other animals have skeletons and muscles for support, protection and movement.  Identify animals (vertebrates) which have a skeleton which supports their body, aids movement & protects vital organs (e.g. name and locate skull, backbone, ribs, bones for movement/limbs, pelvis and be able to name some of the vital organs protected).  Identify animals without internal skeletons/backbones (invertebrates) and describe how they have adapted other ways to support themselves, move & protect their vital organs.  Know how the skeletons of birds, mammals, fish, amphibians or reptiles are similar (backbone, ribs, skull, bones used for movement) and the differences in their skeletons.  Know that muscles, which are attached to the skeleton, help animals move parts of their body.  Explore how humans grow bigger as they reach maturity by making comparisons linked to body proportions and skeleton growth - e.g. do people with longer legs have longer arm spans?  Recognise that animals are alive; they move, feed, grow, use their senses and reproduce. | |
| Year 3 Working Scientifically | | | | | |
| **Forces & Magnets**  **Similarities & Differences, Questions, Data, Test, Record, Report, Conclude & Predict**  Comparing how different things move and grouping them.  Raising questions and carrying out tests to find out how far things move on different surfaces.  Gathering and recording data to find answers to their questions.  Exploring the strengths of different magnets and finding a fair way to compare them.  Sorting materials into those that are magnetic and those that are not.  Looking for patterns in the way that magnets behave in relation to each other and what might affect this, for example, the strength of the magnet or which pole faces another.  Identifying how these properties make magnets useful in everyday items and suggesting creative uses for different magnets.  **Rocks**  **Observe, Similarities & Differences, Questions, Test**  Observing rocks, including those used in buildings and gravestones.  Exploring how and why they might have changed over time.  Using a hand lens or microscope to help them.  Identify and classify rocks according to whether they have grains or crystals, and whether they have fossils in them.  Research and discuss the different kinds of living things whose fossils are found in sedimentary rock.  Explore how fossils are formed.  Explore different soils.  Identify similarities and differences between them.  Investigate what happens when rocks are rubbed together or what changes occur when they are in water.  Raise and answer questions about the way soils are formed. | | **Light**  **Observe, Record, Report, Conclude & Predict**  Looking for patterns in what happens to shadows when the light source moves or the distance between the light source and the object changes.  **Plants**  **Test, Similarities & Differences, Observe, Record, Report, Conclude & Predict, Evidence**  Comparing 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 cycles over a period of time.  Looking for patterns in the structure of fruits that relate to how the seeds are dispersed.  Observing how water is transported in plants, for example, by putting cut, white carnations into coloured water.  Observing how water travels up the stem to the flowers. | | **Animals, Including Humans (health & nutrition)**  **Similarities & Differences,**  Comparing and contrasting the diets of different animals (including their pets).  Decide ways of grouping them according to what they eat.  Researching different food groups and how they keep us healthy.  Designing meals based on what they find out.  **Animals, Including Humans (skeleton & movement)**  **Similarities & Differences, Observe, Evidence**  Identifying and grouping animals with and without skeletons.  Observing and comparing their movement.  Exploring ideas about what would happen if humans did not have skeletons. | |
| Year 3 Curriculum Enrichment Opportunities | | | | | |
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| Year 3 Vocabulary | | | | | |
| **Forces & Magnets**  magnetic forces  attract  repel  poles  predict | **Rocks**  organic matter  fossils  crystals  sedimentary rock  permeability | **Light**  dark  light  reflect  shadow  light source  opaque | **Plants**  pollination  seed dispersal  fertiliser  reproduction  life cycle  nutrients | **Animals, Including Humans**  nutrition  diet  energy  ‘Eat Well’ plate  protein  carbohydrates  dairy  fruit and vegetables  fats and sugar |  |