

**KS2 Cycle 2 Science Medium Term Plan**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Autumn**  | **Spring** | **Summer** |
| **Unit of Work**  | **Animals Including Humans** **Rocks and Soils** | **Magnets and Forces****Light and Shadow** | **Plants** |
| **Significant Person** | Marie Curie Dr Anjana Khatwa | The Wright Brothers (covered from a historical perspective in KS1)Justus Von Liebig  | Joseph Banks |
| **Vocabulary** | Nutrition, nutrients, carbohydrates, sugars, protein, vitamins, minerals, fibre, fat, skeleton, bones, muscles, skull, ribs, spine, muscles, jointsRock, stone, pebble, boulder, layers, sedimentary, igneous, metamorphic, texture, permeable, impermeable, fossil, marble, chalk, granite, sandstone, slate, soil, peat | Force, push, pull, contact force, non-contact force, friction, magnet attract, repel, metal, iron, steel, poles, north pole, south poleLight, light source, dark, transparent, translucent, opaque, shiny, matt, surface, shadow, reflection, refraction, mirror, sunlight | Air, light, water, soil, nutrients, reproduction, seed dispersal (wind, animal, water), germination, pollination (wind and insect), lifecycle, transportation, species, flower, stem/trunk, root, leaf |
| **I will know….** | **Animals Including Humans 6 weeks****Why is what we eat important?*** Prior Learning and to understand that nutrition comes from the food we eat
* To research the main food groups
* To design a healthy meal (using research)

**How do our bodies move?*** To investigate how muscles are needed to move (make a hand using art straws and string for muscles)
* To group animals based on their skeleton (internal, external, no skeleton)
* To recognise what different animals would be like without a skeleton

**Rocks and Soils 6 weeks****Why do we have rocks?*** Prior Learning and to compare and group different rocks (practical)
* To understand the three main types of rock and how they are formed (practical and labelled drawings)
* To investigate differences between different rock types (harness, float/sink)
* To understand how fossils are formed

**What is soil made of?*** To understand that soil is made from organic materials
* To investigate what soils are made from (observational drawings of different soil samples) From this raise further questions as a class/small groups
 | **Forces and Magnets 6 weeks****Why don’t magnets attract everything?*** Prior Learning and to observe how magnets attracts somethings and not others (whole class)
* To group objects by if they are attracted to a magnet or not (individual) then together recognise which are magnetic materials
* To understand that magnets have 2 poles
* To predict if 2 magnets will attract or repel each other
* To understand what variables are (and to plan an investigation changing one variable – the surface)
* To complete an investigation to compare how things move on different surfaces.

**Light 6 weeks****Why do shadows move?*** Prior Learning and to recognise that dark is the absence of light (feely bag)
* To know that the sun is dangerous to our eyes and how to protect them
* To notice that light is reflected from surfaces (dataloggers)
* To know how shadows are formed
* To find patterns in how the size of shadows change (investigation from question)
* To use my results to answer my question (conclusion)
 | **Plants 12 weeks****Do we need to plant seeds?*** Prior Learning
* To recognise and name the parts of a flowering plants (practical)
* To understand the function of the parts of a plant.
* To understand what plants need for life and growth (research)
* To ask a question (select one question in groups and plan how to answer it- ie. Does a plant need leaves to live?)
* To set up an investigation (in groups based on previous lesson- revisit weekly)
* To investigate how water travels through plants (groups)
* To be able to present my results (water travelling)
* To understand what pollination is
* To understand a plants life cycle
* To collect final results and to come to a conclusion (based on group question
* To present my results
 |
| ***Working Scientifically*** **runs throughout and will be covered in some way during each lesson** |
| **Vocabulary** | Comparative/Fair testing, Research, Observation Over Time, Identifying Grouping and Classifying, Problem Solving, investigate, question, predict, method, fair test, answer, results, record, data, diagram, present, describe, conclusion, identify, compare, observe, group, sort, classify, equipment |
| **I will know….** | I can ask relevant questions and use different types of scientific enquiries to answer them.I can set up simple practical enquiries, comparative and fair tests. I can make systematic and careful observations and, where appropriate, take accurate measurements using standard units, use a range of equipment, including thermometers and data loggers. I can gather, record, classify and present data in a variety of ways to help in answering questions. I can record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables. I can report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. I can use results to come to simple conclusions, make predictions for new values, suggest improvements and raise further questions.I can identify differences, similarities or changes related to simple scientific ideas and processes.I can use straight forward scientific evidence to answer questions or to support my findings. |