

# Ferncumb Science Long Term Overview



| Year Group | Autumn 1                                                                                                                                                                                                                          | Autumn 2                                                               | Spring 1                                                                                  | Spring 2                                                    | Summer 1                                                               | Summer 2                                                                           |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-------------------------------------------------------------|------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| 1          | Seasonal Changes and Plants - observed throughout the year and a diary kept                                                                                                                                                       |                                                                        |                                                                                           |                                                             |                                                                        |                                                                                    |
|            | Seasonal Changes                                                                                                                                                                                                                  | Everyday Materials                                                     | Seasonal Changes 2 and Plants (Flowers/Plants)                                            | Materials 2 Science Week or Science Enquiry                 | Seasonal Changes 3 and Plants (Flowers and Trees)                      | Animals including humans<br><br>Very Brief Season Changes Pt 4 for Summer          |
| 2          | Plants - observe how seeds and bulbs grow at key times of the year (Autumn plant bulbs, Spring observe bulbs, Spring plant seeds, Summer observe plants growing)<br>Observe the needs of plants/trees/animals throughout the year |                                                                        |                                                                                           |                                                             |                                                                        |                                                                                    |
|            | Animals and their babies                                                                                                                                                                                                          | Humans and health - exercising (how do they feel), hygiene, food TYPES | Materials                                                                                 | Full investigation (pref sound/light based) or Science Week | Plants (Focus on need for light, temp and water)                       | Habitats - adaptation and life cycles<br>Micro-habitats and habitats around the UK |
|            | Bulb planting lesson                                                                                                                                                                                                              |                                                                        | Check on bulbs through the term                                                           |                                                             | Plant Seeds after Easter                                               |                                                                                    |
| 3          | Use our school trees to study function of the parts of a plant/tree, requirements for growth, flowering, plants, including pollination, seed formation and seed dispersal topic in Summer term to use school grounds              |                                                                        |                                                                                           |                                                             |                                                                        |                                                                                    |
|            | Light<br>Shadows, reflection, sources of light, the sun                                                                                                                                                                           | Forces<br>Movement, magnetism (Cars on ramps)                          | Animals - skeletons, adaptation, diets (Food GROUPS)<br>Humans - skeletons, muscles, diet | Full investigation or Science Week                          | Types of rocks, rock cycle, properties of rocks, soil make up, fossils | Plants (progress to - room to grow, nutrients/room to grow/air)                    |
| 4          | Animals incl humans<br>Digestion                                                                                                                                                                                                  | Electricity                                                            | Changes of State                                                                          | Full investigation or Science Week                          | Sound                                                                  | Living things and habitats<br>Classification, habitat change                       |
| 5          | Forces and gravity (School Shoes on Newton meters)                                                                                                                                                                                | Earth and Space                                                        | Living things and their habitats<br>Animals Incl Humans                                   | Full investigation or Science Week                          | Properties and changes of materials                                    | Properties and changes of materials                                                |

# Ferncumbe Science Long Term Overview



|   |                         |             |                                                                        |                                    |       |                                  |
|---|-------------------------|-------------|------------------------------------------------------------------------|------------------------------------|-------|----------------------------------|
| 6 | Evolution & Inheritance | Electricity | Animals - including humans<br>Circulation (explain effect of exercise) | Full investigation or Science Week | Light | Living things and their habitats |
|---|-------------------------|-------------|------------------------------------------------------------------------|------------------------------------|-------|----------------------------------|

## Using Our school Grounds

### Notes

#### Year 6 -

Electricity before light to aid understanding when we learn about electrical light in the Summer. Also fits well as consolidation of knowledge to combine this with DT project to design an electrical Christmas decoration. Living things left to the summer to make better use of our school trees for identification/classification.

Year 5 - forces before Earth and Space so gravity knowledge is embedded first.

Living things and the life cycles of animals is taught before humans, so the human life cycle can be better understood and compared to other living things.

#### Year 4

States of matter is taught before sound so the movement of sound can be understood using previous knowledge.

Living things left until the summer to maximise use of school grounds.

Year 3 - Plants done in the summer for optimal growing conditions. Plant/tree visited throughout the year to show life cycles. Links are made by the teacher between plants and rocks when the plants topic is taught in the summer. Links are made by the teacher between plants and light when the plants topic is taught in the summer.

#### Year 2 -

Local plants and trees diary needed, but different to year 1 so variety learnt. Plant/Tree visited throughout the year to show how seeds/bulbs grow into mature plants. Also to visit areas to show good conditions to grow eg bald area under tree with no light/grass under sheeting to show white roots/plant limp with no water/small plant amongst bigger one to show stealing of nutrients. Have e-mailed Emma to ask her to plant bulbs (Oct 28 '22)

## Ferncumbe Science Long Term Overview



Year 2/3 - make distinction clear between food types in year 2 (think supermarket aisles/categories) and food groups in Year 3 (carbs/protein/fat). Build up this knowledge.

Year 5 - Life changes - take our lead from PSHE - NC short on vocab and guidance, PSTT are creating an advice document with vocab currently, but until then, we can cover all except names of body parts and changes in PSHE.

Year 3/5 - clear distinction discussed between forces investigation in Year 3 - car ramps and distance travelled by car over different surface. No Newtons yet. Year 5 - show pulling investigation with Newton meters using N units and more independence in data collection/results table creation.

Year 3/6 - Exercise - In year 3, we focus on the effects of exercise outwardly (increased breathing, thumping heart, sweating, achy muscles), and build on this in Year 5 with new understanding of heart and circulation to carry out an investigation to measure the effects.

Plants in Year 2/3 - in Year 2, we focus on conditions needed for growth being light, temperature and water. This is consolidated and built upon in Year 3 by introducing the ideas of room to grow/nutrients/air.

Year 1 - Seasons visited termly, and Big Book evidence collated. The same tree is visited, and our outfits observed at the same time, and how the Teddy needs to be dressed for that season. Evergreen trees at school known to teacher and sought out by class in the winter months, including evergreen ivy making a fluffy jacket up the trunk of a leafless deciduous tree.