**HILL VIEW SCHOOL SCIENCE PROVISION MAP**

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| **BIOLOGY - Year one** | | | |
| **Animals including Humans** | **Plants** | **All living things and their Habitats** | **Evolution and Inheritance** |
| * Know how to classify a range of animals by amphibian, reptile, mammal, fish and birds * Know and classify animals by what they eat (carnivore, herbivore and omnivore) * Know how to sort by living and non-living things * Know the name of parts of the human body that can be seen | * Know and name a variety of common wild and garden plants found in and around Floodbrook Clough * Know and name the petals, stem, leaves and root of a plant * Know and name the roots, trunk, branches and leaves of the beech tree in our own locality |  |  |

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| **BIOLOGY - Year Two** | | | |
| **Animals including Humans** | **Plants** | **All living things and their Habitats** | **Evolution and Inheritance** |
| * Know the basic stages in a life cycle for animals, (including humans) * Know why exercise, a balanced diet and good hygiene are important for humans | * Know and explain how seeds and bulbs grow into plants in our school garden * Know what plants need in order to grow and stay healthy (water, light & suitable temperature) | * Classify things by living, dead or never lived * Know how an ancient woodland habitat provides for the basic needs of things living there (plants and animals) * Match living things to their habitat * Name some different sources of food for animals * Know about and explain a simple food chain |  |

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| **BIOLOGY - Year Three** | | | |
| **Animals including Humans** | **Plants** | **All living things and their Habitats** | **Evolution and Inheritance** |
| * Know about the importance of a nutritious, balanced diet * Know how nutrients, water and oxygen are transported within animals and humans * Know about the skeletal and muscular system of a human | * Know the function of different parts of flowering plants and trees * Know how water is transported within plants * Know the plant life cycle, especially the importance of flowers specifically found in Floodbrook Clough |  |  |

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| **BIOLOGY - Year Four** | | | |
| **Animals including Humans** | **Plants** | **All living things and their Habitats** | **Evolution and Inheritance** |
| * Identify and name the parts of the human digestive system * Know the functions of the organs in the human digestive system * Identify and know the different types of human teeth * Know the functions of different human teeth * Use and construct food chains to identify producers, predators and prey |  | * Recognise that living things can be grouped in a variety of ways * Use classification keys to group, identify and name living things * Know how changes to an environment could endanger living things * Explore the positives and negatives of human impact on Floodbrook Clough |  |

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| **BIOLOGY - Year Five** | | | |
| **Animals including Humans** | **Plants** | **All living things and their Habitats** | **Evolution and Inheritance** |
| * Create a timeline to indicate stages of growth in humans |  | * Know the life cycle of different living things e.g. mammal, amphibian, insect and bird * Know the differences between different life cycles * Know the process of reproduction in plants * Know the process of reproduction in animals |  |

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| **BIOLOGY - Year Six** | | | |
| **Animals including Humans** | **Plants** | **All living things and their Habitats** | **Evolution and Inheritance** |
| * Identify and name the main parts of the human circulatory system * Know the function of the heart, blood vessels and blood * Know the impact of diet, exercise, drugs and lifestyle on health * Know the ways in which nutrients and water are transported in animals, including humans |  | * Classify living things into broad groups according to observable characteristics and based on similarities and differences * Know how living things have been classified * Give reasons for classifying plants and animals in a specific way | * Know how the Earth and living things have changed over time * Know how fossils can be used to find out about the past, such as the fossils found on Runcorn Hill * Know about reproduction and offspring (recognising that offspring normally vary and are not identical to their parents) * Know how animals and plants are adapted to suit their environment * Link adaptation over time to evolution * Know about evolution and can explain what it is |

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| **CHEMISTRY - Year One** | | | |
| **Everyday Materials** | **Rocks** | **States of Matter** | **Properties and changes in Materials** |
| * Know the name of the materials an object is made from * Know about the properties of everyday materials |  |  |  |

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| **CHEMISTRY - Year Two** | | | |
| **Everyday Materials** | **Rocks** | **States of Matter** | **Properties and changes in Materials** |
| * Know how materials can be changed by squashing, bending, twisting and stretching * Know why a material might or might not be used for a specific job |  |  |  |

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| **CHEMISTRY - Year Three** | | | |
| **Everyday Materials** | **Rocks** | **States of Matter** | **Properties and changes in Materials** |
|  | * Compare and group rocks based on their appearance and physical properties, giving reasons * Know how soil is made and how fossils are formed * Know about and explain the difference between sedimentary, metamorphic and igneous rock * Understand the importance of sandstone to Runcorn |  |  |

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| **CHEMISTRY - Year Four** | | | |
| **Everyday Materials** | **Rocks** | **States of Matter** | **Properties and changes in Materials** |
|  |  | * Group materials based on their state of matter (solid, liquid, gas) * Know the temperature at which materials change state * Know about and explore how some materials can change state * Know the part played by evaporation and condensation in the water cycle |  |

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| **CHEMISTRY - Year Five** | | | |
| **Everyday Materials** | **Rocks** | **States of Matter** | **Properties and changes in Materials** |
|  |  |  | * Compare and group materials based on their properties (e.g. hardness, solubility, transparency, conductivity, [electrical & thermal], and response to magnets * Know and explain how a material dissolves to form a solution * Know and show how to recover a substance from a solution * Know and demonstrate how some materials can be separated (e.g. through filtering, sieving and evaporating) * Know and demonstrate that some changes are reversible and some are not * Know how some changes result in the formation of a new material and that this is usually irreversible |

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| **CHEMISTRY - Year Six** | | | |
| **Everyday Materials** | **Rocks** | **States of Matter** | **Properties and changes in Materials** |
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| **PHYSICS - Year One** | | | | | |
| **Seasonal Change** | **Forces** | **Light** | **Electricity** | **Sound** | **Earth and Space** |
| * Name the seasons and know about the type of weather in each season * Track the impact of the seasons on Floodbrook Clough |  |  |  |  |  |

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| **PHYSICS - Year Two** | | | | | |
| **Seasonal Change** | **Forces** | **Light** | **Electricity** | **Sound** | **Earth and Space** |
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| **PHYSICS - Year Three** | | | | | |
| **Seasonal Change** | **Forces** | **Light** | **Electricity** | **Sound** | **Earth and Space** |
|  | * Know about and describe how objects move on different surfaces * Know how a simple pulley works and use to on to lift an object * Know how some forces require contact and some do not, giving examples * Know about and explain how magnets attract and repel Predict whether magnets will attract or repel and give a reason | * Know that dark is the absence of light * Know that light is needed in order to see and is reflected from a surface * Know and demonstrate how a shadow is formed and explain how a shadow changes shape * Know about the danger of direct sunlight and describe how to keep protected |  |  |  |

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| **PHYSICS - Year Four** | | | | | |
| **Seasonal Change** | **Forces** | **Light** | **Electricity** | **Sound** | **Earth and Space** |
|  |  |  | * Identify and name appliances that require electricity to function * Construct a series circuit * Identify and name the components in a series circuit (including cells, wires, bulbs, switches and buzzers) * Predict and test whether a lamp will light within a circuit * Know the function of a switch * Know the difference between a conductor and an insulator; giving examples of each | * Know how sound is made, associating some of them with vibrating * Know how sound travels from a source to our ears * Know the correlation between pitch and the object producing a sound * Know the correlation between the volume of a sound and the strength of the vibrations that produced it * Know what happens to a sound as it travels away from its source |  |

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| **PHYSICS - Year Five** | | | | | |
| **Seasonal Change** | **Forces** | **Light** | **Electricity** | **Sound** | **Earth and Space** |
|  | * Know what gravity is and its impact on our lives * Identify and know the effect of air and water resistance * Identify and know the effect of friction * Explain how levers, pulleys and gears allow a smaller force to have a greater effect |  |  |  | * Know about and explain the movement of the Earth and other planets relative to the Sun * Know about and explain the movement of the Moon relative to the Earth * Know and demonstrate how night and day are created * Describe the Sun, Earth and Moon (using the term spherical) * Know how scientists in both the past and present understand our solar system through a visit to Jodrell Bank |

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| **PHYSICS - Year Six** | | | | | |
| **Seasonal Change** | **Forces** | **Light** | **Electricity** | **Sound** | **Earth and Space** |
|  |  | * Know how light travels * Know and demonstrate how we see objects * Know why shadows have the same shape as the object that casts them * Know how simple optical instruments work e.g. periscope, binoculars, mirror, magnifying glass etc. | * Compare and give reasons for why components work and do not work in a circuit * Draw circuit diagrams using correct symbols * Know how the number and voltage of cells in a circuit links to the brightness of a lamp or the volume of a buzzer |  |  |