Science Long Term Plan - Formal Pathway

Formal pathway	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
CC Topic	Street detectives	Gods and Mortals	Flow	Heroes and Villains	Mighty Metals	Tremors
Science Topic	Biodiversity minibeasts	Forces and magnets	Water cycle	Scientists and Inventors	Electricity	Rocks
Overview	Pupils will learn about the importance of biodiversity and what an ecosystem is. The unit focuses on minibeasts and habitats found in the UK. Pupils will learn about different types of minibeasts, their microhabitats, what they need from their habitat and how living things depend on each other in order to survive.	Pupils will learn about forces, friction and magnetic attraction. Pupils will work scientifically and collaboratively to investigate friction, by exploring the movement of a toy car over different surfaces. They will work in a hands-on way to identify magnetic materials.	From humble beginnings, the river flows down the mountain and into the sea. Pull on your wellies and wade right in. How deep does it go and how fast does it travel? What soil types can you find by the river? Which animals make their homes there? Let's get down to the river bank and find out.	Pupils will learn about the men and women who risked their lives to find new plants, and will design their own new plant, thinking about its requirements for life. The pupils will have a chance to investigate how images change in convex and concave mirrors and will hear about the inventions and devices that use convex and concave mirrors.	Pupils will learn about common electrical appliances and how to construct simple series circuits. They will become familiar with the keywords linked to the topic and how to apply them appropriately. Children will learn about cells, wires, bulbs and buzzers and about the different types of switches. They will be able to troubleshoot and identify whether or not a bulb will light in a simple series circuit and be able to identify a complete circuit. The children will also learn about conductors and insulators and know that metals are very good electrical conductors.	Mother Nature's awesome energies hiss and roar deep within the Earth. Plates collide, spewing lava. Rocks rain down and mudslides in torrents. Discover the dangerous and ferocious world of natural disasters and glimpse their savage and deadly effects. Discover the properties of rocks shaped by the Earth's breathtaking power. Volcanologists detect formidable rumblings from an extinct volcano in Scotland's capital. Red alert! What would you do?