Progression of Skills- Science Early Years

What an EYFS scientist needs to understand?	What do they need to know?	How can they show they are scientists?
That there are changes in the natural world through the seasons;	That there are four seasons across the year; That the seasons affect the temperature; Plants and animals react to seasons in the way they grow and their natural life cycles; The length of day and night changes depending on the season; Know the vocabulary of the four seasons.	Start to use the vocabulary associated with the seasons. Comment on the weather and temperature making simple observations linked to seasonal understanding. Comment on what they see in their local environment such as flowers in bud or leaves falling from trees and make connections, linking it to their seasonal understanding. Comment on characters, settings and events in stories that are linked to seasonal characteristics and changes. Collect and examine evidence of changing seasons talking about what they see.
That there are similarities and differences in the natural world.	That the natural environment and world around them supports them to live and grow; How to respect and care for the natural environment and all living things; How to care for their immediate environment and the wider world; That there are different natural environments around the world that have specific characteristics such as deserts, forests, islands	Communicate orally, in simple descriptions and explanations for example talk about a farm, which animals live there / plants grow there and the job of the farmer. Talk about their knowledge for example that some animals habitats need certain conditions such as polar bears prefer to live in cold climates. Demonstrate this through their small world play and storytelling. Take part in activities such as recycling in school, rewilding projects, traffic calming posters and develop an eco- conscious approach to classroom practices and resources.

		Ask and answer questions about what they have observed, e.g. Who lives where? Why do some animals live in cold places and some do not? Why is plastic harmful? How can we help to keep our planet clean?
That there are key words/vocabulary associated with science;	Know a range of scientific words such as habitat (what words will lead into Year 1 topics for example) Know a range of words that relate to scientific enquiry such as observe, explore, results, investigate, explain (in line with consistent vocabulary that is used in Year 1) Be able to name a range of equipment that they use such as pooter, magnifying glass, incubator	Be able to talk about the work / activity/ experience they are having, organising their thinking, explaining how things work and why they might happen. Use appropriate vocabulary for science specific equipment and processes building on Tier 1 vocabulary and understanding. For example understanding that where an animal lives is known as a habitat.
That the world is made up of different animals and plants;	That some things are living and others are non-living; How to plant seeds and look after living plants to help them grow; That animals change as they grow and have life cycles;	Sort e.g. living things, into two simple groups, using given criteria. Communicate what they have learned through drawing or some other way of recording. Can comment on how two animals, are similar or different from each other; notice and describe how they change as they grow. Ask and answer questions about what they have observed, e.g. May ask and answer science based questions on first hand experiences and books.
There are important processes and changes that happen;	Know that temperature can change materials in both reversible and irreversible ways such as melting ice, chocolate or baking bread; Notice changes that happen in the natural world;	Use their senses and hands on exploration of natural materials and their environment to explore and talk about what they see, hear, smell and touch.

		Ask questions and investigate why things happen in the classroom and wider environment through adult led and child initiated activities for example creating a volcano experiment that leads to a discussion of the process alongside real life pictures and videos – often linked to the children's own interests.
Use a range of Scientific equipment to help them develop their lines of enquiry.	How to handle equipment carefully, safely and appropriately; Know that some specialist equipment can help us to understand the natural world and enhance our experiences;	Select equipment and materials to use to create e.g. a nest, or animal habitat (bug hotel, hedgehog home) To observe closely and present results
How science is used to help us.	That science has helped us to live healthier lives for example understanding our bodies – link to oral hygiene That science helps us to develop equipment that makes our lives easier (and more fun), cameras, cars, bouncy castles…	Understand the importance of oral hygiene and how to look after their bodies and own personal hygiene. Be able to ask and answer questions in familiar contexts, e.g. What happens at night? What can we see when it's dark? What helps us to see in the dark? How do we travel? How do things move? Explore how things work and talk about it for example magnifying glasses and how they make things bigger to be seen in more detail.