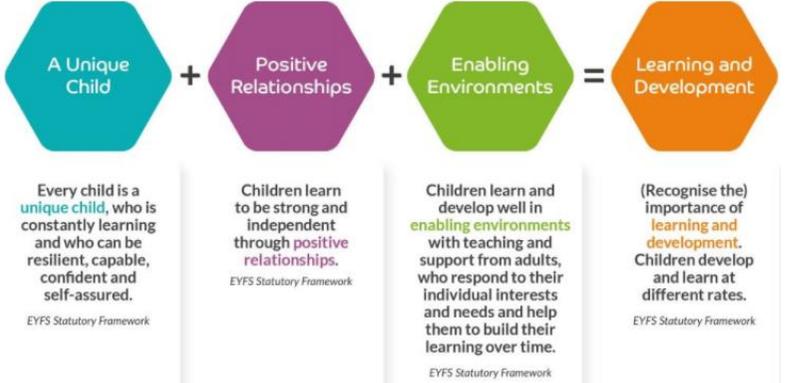


# How the EYFS at Ashton Gate Primary School provides the foundations for scientific understanding

Principles and practice of EYFS – an overview	How the Characteristics of Effective Learning are fundamental to all current and future learning	How the prime areas of learning are fundamental to all current and future learning
<p><b>4 Statutory underpinning principles of EYFS are:</b></p>  <p>Every child is a <b>unique child</b>, who is constantly learning and who can be resilient, capable, confident and self-assured. <small>EYFS Statutory Framework</small></p> <p>Children learn to be strong and independent through <b>positive relationships</b>. <small>EYFS Statutory Framework</small></p> <p>Children learn and develop well in <b>enabling environments</b> with teaching and support from adults, who respond to their individual interests and needs and help them to build their learning over time. <small>EYFS Statutory Framework</small></p> <p>(Recognise the importance of <b>learning and development</b>. Children develop and learn at different rates. <small>EYFS Statutory Framework</small></p> <p>These are used to plan and guide curriculum and pedagogy decisions for all children in EYFS.</p> <p><b>UNIQUE CHILD</b>-Practitioners are required to observe and understand each child’s development and learning, assess, progress, plan for and act on next steps.</p> <p><b>POSITIVE RELATIONSHIPS</b> are sensitive and responsive to the individual child’s needs, interests and feelings and supportive of child’s own efforts and independence.</p> <p><b>ENABLING ENVIRONMENTS</b> value all people, development and learning and offer stimulating resources, spaces inside and out that are relevant to all the children’s communities and cultures. They offer rich learning experiences through play and playful teaching. They support children to take risks and explore.</p> <p><b>LEARNING AND DEVELOPMENT</b>- practitioners teach children by ensuring challenging, playful opportunities across the <b>PRIME AREAS</b> (communication and Language, Personal, Social and Emotional Development and Physical Development) and <b>SPECIFIC</b> areas (Literacy, Maths, Understanding of the World and Expressive Arts and Design)</p>	<p><b>Characteristics of Effective Learning</b></p> <p><b>Playing and Exploring</b></p> <p>ENGAGEMENT Finding out and exploring Playing with what they know Being willing to ‘have a go’</p> <p><b>Active Learning</b></p> <p>MOTIVATION Being involved and concentrating Keep trying Enjoying achieving what they set out to do</p> <p><b>Creative and Critical Thinking</b></p> <p>THINKING Having their own ideas Making links Working with ideas</p> <p>The <b>Statutory Characteristics of Effective Learning and the Prime and Specific Areas of Learning and Development are all inter-connected.</b></p> <p>Different elements of learning are identified in the EYFS, to make the complex picture of learning clearer. But children’s learning is not compartmentalised and many or all of these elements are in action at the same time as children interact with people and things.</p> <p><b>The Characteristics of Effective Learning describe behaviours children use in order to learn.</b> To learn well, children must approach opportunities with curiosity, energy and enthusiasm. Effective learning must be meaningful to a child, so that they are able to use what they have learned and apply it in new situations. These abilities and attitudes of strong learners will support them to learn well and make good progress in all the Areas of Learning and Development.</p>	<p><b>Prime areas of development and learning lay vital foundations in the early years.</b></p> <p>The three Prime areas, <b>Personal, social and emotional development (PSED), Communication and language (CL), and Physical development (PD)</b>, describe universal core aspects of early child development. They are time-sensitive because of biological factors that enable rapid brain connections, particularly in the first three years of life but continuing throughout early childhood. Developmental steps missed at this early crucial stage are much harder to address later on, so it is crucial that children’s interactions and experiences in the first few years support development in these fundamental areas.</p> <p>All three Prime areas are always in action for a young child. In every activity, the child is experiencing feelings and developing a sense of self and others, is physically engaged through their senses and movements, and is learning to understand and communicate with others. It is through these aspects that a child accesses the world around them and relationships with other people, which in turn opens the door to learning in all areas. The Prime areas therefore strongly influence learning in the Specific areas of learning and development.</p> <p><small>Birth to 5 Matters Non Statutory Guidance for EYFS, 2021</small></p>

### How the Early Years Foundation Stage provides the foundations for scientific understanding

- Which EYFS areas of learning provide the foundations and background for NC science?
- What is the foundational knowledge that supports the curriculum intent in this subject?
- How does this link across other areas of learning in EYFS both specific and prime, e.g. CLL, PSED, PD?
- How is the learning sequenced so that it is meaningful to young learners? How is it linked to children’s current and ongoing experience and understanding of the world?
- How does the environment support the learning and development, e.g. adult/child interactions, small world resources, books, outdoor learning environment, experiences out and about?
- How will this be monitored by subject leaders?

### What is the National Curriculum subject content that is supported by the EYFS provision and practice? Science

- *Key stage 1 pupils should develop a range of different scientific skills and understanding. They should develop an understanding of all living things, how they live and the impact on human life. Children will also learn about materials both natural and person made. They will learn about different types of enquiry and how to work scientifically on their own and in a group.*
- **Plants**
- **Animals, including humans**
- **Materials**
- **Seasonal changes**
- **Scientific enquiry**
- **Working scientifically**

#### Play and exploration experiences that support the Foundational Knowledge and skills for the Subject

Continuous Provision Play experiences with provocations for geographical based thinking and talk	Core Books that link to foundational experiences & knowledge	Possible Adult-planned experiences and contexts for interactions that support thinking about the world around us	Key Vocabulary that might be introduced & practised in interactions in play /activities
<ul style="list-style-type: none"> <li>• <i>Sensory play and observation (water, ice, sand)</i></li> <li>• <i>Small world – animals, dinosaurs, habitat based play</i></li> <li>• <i>Magnifying glasses, collecting pots, tweezers</i></li> <li>• <i>Role play – test tubes, goggles, predictions</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Rebel girls/ Women in Science</i></li> <li>• <i>Ada Twist</i></li> <li>• <i>Tad</i></li> <li>• <i>The Lighthouse Keeper’s lunch</i></li> <li>• <i>Stick man</i></li> <li>• <i>Here we are</i></li> <li>• <i>Monkey Puzzle</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Cooking (non-reversible change)</i></li> <li>• <i>Making playdough</i></li> <li>• <i>Planting</i></li> <li>• <i>Floating and sinking</i></li> <li>• <i>Design challenges</i></li> <li>• <i>What is a question?</i></li> <li>• <i>I Wonder Why enquiries</i></li> <li>• <i>Experiments based on interests</i></li> <li>• <i>Bean diaries</i></li> <li>• <i>Observational/growth mindset drawings</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Leaf, steam, petal, seed, fruit, roots, oxygen, light, grow, tree, bush, vegetable, alive</i></li> <li>• <i>Insect, mammal, reptile, amphibian, fish, bird, breath, move, functions of being alive, habitat, environment, desert, arctic, forest, rainforest, nocturnal, egg,</i></li> <li>• <i>Skeleton, muscle, organs, growth, change, age, senses,</i></li> <li>• <i>Seasons, months, Spring, Summer, Autumn, Winter, evergreen, deciduous, weather, moon, space, universe, lightening, tornado, volcano, storm, river,</i></li> <li>• <i>Hard, soft, rough, freeze, boil, gas, heavy, light, transparent, waterproof, melting, cracking, breaking</i></li> </ul>

<ul style="list-style-type: none"> <li>• <i>Observational drawing station</i></li> <li>• <i>Material mixing – paint, ink, food colouring</i></li> <li>• <i>Planters</i></li> <li>• <i>Bug hotel/hunting</i></li> <li>• <i>Mud kitchen</i></li> <li>• <i>Trees</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Up, Up and Away</i></li> <li>• <i>Look Up!</i></li> <li>• <i>On the Moon</i></li> <li>• <i>Jabari Tries</i></li> <li>• <i>Croc and Bird</i></li> <li>• <i>Hungry Caterpillar</i></li> <li>• <i>Tidy</i></li> <li>• <i>My Pet Star</i></li> <li>• <i>See inside Usbourne books</i></li> <li>• <i>Tadpoles promise</i></li> <li>• <i>Animals are delicious</i></li> <li>• <i>One day on our blue planet.... In the rainforest</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Park/farm/forest school trips</i></li> <li>• <i>Making bread, sharing bread, keep slice and watch decay</i></li> <li>• <i>Research projects about class specific interests (information gathering from fact books, internet)</i></li> <li>• <i>Conversations about seasons and weather</i></li> <li>• <i>Freezing and boiling (reversible/non-reversible)</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Why, what, where, when, who, how, measure, predict, hypothesis, fair test, experiment, watch, notice, prove, next, design, wonder, scientist, science, pattern,</i></li> </ul>
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**Further Actions/ Resources needed:**

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**Prompts for discussion**

