

## Science – Intent, Implementation & Impact

### Intent

At The Aspire Hub(s) we encourage children to be inquisitive throughout their time at school and beyond. The Science Curriculum fosters a health curiosity in children about our universe and promotes respect for the living and non-living. We believe science encompasses the acquisition of knowledge, concepts, skills and positive attitudes.

Throughout the programmes of study, the children will acquire and develop the key knowledge that has been identified within each unit and across each year group, as well as the application of scientific skills. We ensure that the Working Scientifically skills are built-on and developed throughout children's time at the school so that they can apply their knowledge of science when using equipment, conducting experiments, building arguments and explaining concepts confidently and continue to ask questions and be curious about their surroundings.

We intend to –

- Develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics
- Develop understand of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them
- Equip children with the scientific skills requires to understand the uses and implications of science, today and for the future
- Understand that it is important for lessons to have a skill-based focus, built on a foundation of supporting knowledge

### Implementation

The Science Curriculum is lead by our Room Leaders and overseen by our Curriculum Lead alongside SLT. They will regularly monitor, evaluate and review the Science Curriculum. SLT complete regular formal observations of classrooms and lessons, along with informal observations, critiquing constructively and celebrating and sharing good practice.

Our Science Curriculum is Developing Experts and their supportive resources, amongst other for differentiation along with the Developing Experts mini unit assessments at the end of each unit.

Teachers create a positive attitude to science learning within their classrooms and reinforce an expectation that all children are capable of achieving high standards in science. Our whole school approach to the teaching and learning of science involves the following;

- Science will be taught in planned and arranged topic blocks by the Room Leader, to have a project-based approach. This is a strategy to enable the achievement of a greater depth of knowledge.
- Through our planning, we involve problem solving opportunities that allow children to find out for themselves. Children are encouraged to ask their own questions and be given opportunities to use their scientific skills and research to discover the answers. This curiosity is celebrated within the classroom. Planning involves Curriculum Lead and Room

Leaders creating engaging lessons, often involving high-quality resources to aid understanding of conceptual knowledge. Room Leaders use precise questioning in class to test conceptual knowledge and skills and assess children regularly to identify those children with gaps in learning, so that all children keep up.

- We build upon the learning and skill development of the previous years. As the children's knowledge and understanding increases, and they become more proficient in selecting, using scientific equipment, collating and interpreting results, they become increasingly confident in their growing ability to come to conclusions based on real evidence.
- Working Scientifically skills are embedded into lessons to ensure these skills are being developed throughout the children's school career and new vocabulary and challenging concepts are introduced through direct teaching. This is developed in-keeping with the topics.
- Room Leaders demonstrate how to use scientific equipment, and the various Working Scientifically skills in order to embed scientific understanding. Room Leaders find opportunities to develop children's understanding of their surroundings by accessing outdoor learning and workshops with experts.
- Regular events, such as Science Week or project days, such as Nature Day, allow all pupils to come off-timetable, to provide broader provision and the acquisition and application of knowledge and skills. These events often involve families.

### Impact

Our Science Curriculum should ensure that –

- Lessons are fun, engaging, educational and provide children with the foundations and knowledge for understanding the world
- Ensures that children learn through varied and first hand experiences of the world around them
- Frequent, continuous and progressive learning outside the classroom is embedded throughout the Science Curriculum.
- Children learn the possibilities for careers in science
- All children feel they are scientists and capable of achieving
- All children enjoy science which results in motivated learners with sound scientific understanding.