Science at Sir Alexander Fleming Primary School.

Planning Inclusive Lessons

At Sir Alexander Fleming, science involves children and young people building their knowledge of important concepts and procedures. When learning new content, learners must connect this to what they already know. This means that it is important that children develop a secure understanding of previously taught concepts and procedures. Science lessons offer a gradual progression of skills and include opportunities to develop children's capability in areas such as problem solving, fair testing methods and the application of factual knowledge. Lessons encourage students to ask questions about their learning and build in opportunities for small group and whole-class discussions. Oracy-led sessions, with visuals to support the access of all learners, enable teachers to build on and extend the children's scientific thinking.

Creating an Inclusive Environment

In creating a conducive learning environment, we ensure each lesson follows on from prior learning, this can be both from the lesson before, or the academic year before. The curriculum is developed to include key

concepts and procedures, which are systematically developed over the children's time at Sir Alexander Fleming. Teachers identify any possible misconceptions that learners may have, and plan for how they will address these in their lessons. For this reason, curriculum plans have been created to try and pre-empt misconceptions by making sure content is taught in a logical order. To assist with understanding practical experiments, teachers create step-by-step instructions. This allows them to modify work with visuals and/or more precise steps for learners needing additional guidance. At Sir Alexander Fleming we ensure pupils understand the purpose of each step and that they can link scientific content to what they are doing.

How do we support learners with literacy difficulties?

Provide topical word banks and picture cards to explain scientific processes.

Word/picture banks during to support independent learning.

Scaffold learning to make it accessible for students.

How do we support learners who struggle to retain vocabulary?

Begin each lesson with a review of the vocabulary learnt in the previous lesson.

Provide word banks that are throughout the science topic.

Refer to language regularly during lessons

How do we support learners to develop conceptual understanding?

Plan small group teaching opportunities.

Provide pre-teaching opportunities for learners to hear vocabulary prior to the lesson.

Provide students with worked examples to use as a model whilst completing independent work.

How do we support learners who struggle with attention?

Create a working classroom environment that is calming and simple, e.g., clear routines, organised workspaces.

Pre-expose learners to the equipment and nature of the lesson.

Plan movement breaks and classroom jobs for individual learners

Teaching considerations		
Early years	Key stage 1	Key stage 2
Children to be introduced to basic scientific language. - Use practical resources such as books and multi-media should be used to engage the children's interest. - Pupils to be introduced to science indirectly through activities that encourage every child to explore, problem solve, observe, predict, think, make decisions and talk about the world around them.	Children should regularly experience first-hand practical activities to explore and spark their interest in science. - Secondary sources such as books, photos, videos, and simulations should be used to help children and young people learn and make sense of the scientific content.	In lower Key Stage 2, learners should now be encouraged to broaden their scientific view of the world around them through exploration, discussion, testing and developing ideas. - In upper Key Stage 2, learners begin to learn about more abstract concepts which support learners in comprehending and predicting how the world around them works.