

Science Non-Negotiables 24/25



Lesson Structure

- Science lessons should be taught for between 90 minutes and 2 hours per week. (This could be as 2 separate sessions, or across an afternoon)
- Each lesson should begin with a retrieval activity, revisiting content from the *Last lesson*, *Last Science unit* and *last year* (Previous year group).
- Retrieval practice should take around 10-15 minutes and must be evidenced in children's books for each lesson (For Year 1 children, this is expected from Spring 1)
- Retrieval practice should link to Science endpoints and can take a variety of forms (Written responses, matching exercises, drawing diagrams etc.)
- At the beginning of each unit, staff must confirm prior learning is secure, referring to Science endpoints to support this.
- Children should be taught to use vocabulary that is included on the topic cover.
- Lessons must be taught in the order that is outlined both on the planning document and topic cover to ensure learning is sequential and understanding is built over time.
- All children must be able to explain whether they are learning about biology, chemistry or physics.
("We are learning about habitats, which is biology as it is about animals and plants").

- Throughout each unit, and within lessons, substantive and disciplinary knowledge will be taught. Staff should be clear on the focus for each lesson- Are the children focusing on knowledge or scientific skills?

- Staff should refer to the Science disciplinary progression map when planning and delivering practical lessons to ensure they are clear on the skills being taught.
- Staff should explicitly teach disciplinary knowledge, initially scaffolding language and skills, before reducing the scaffold to allow children to answer their own questions and control their own investigations.
- Where possible, and in line with planning documents, pupils should have the opportunity to apply learning in a practical context (Ask questions, plan a suitable investigation to answer these, draw conclusions)
- Investigative work is outlined on planning documents, with guidance and examples on how to scaffold.
- Photographs to be taken of practical Science work to evidence this, and support children in recalling what has been undertaken and the learning from this.
- **Planning documents outline where work should be evidenced with photographs.**

Science Working Walls

- Science working walls have key vocabulary, diagrams and examples of children's work. These are **working walls**. There will be times when the Science wall has less on e.g. at the start of a new unit.
- **Elements can be created in front of the children to make teaching points explicit.**

Assessment and Evidence

- At the end of each unit planning document, assessment questions are outlined.

- Assessments should be printed and stored in a folder (Not stuck into books).
- Assessments should inform future planning and steps should be taken to address misconceptions and consolidate learning in retrieval practice.

Sonar Tracker

Each class uses Sonar Assessment Tracker to assess progress of the class as a whole:

- Grey = not yet taught
- Red = taught and the class has not achieved the objective
- Yellow = some of the class has achieved the objective
- Green = most of the class have achieved the objective
- Purple = all children have achieved the objective

This should be updated half-termly upon completion of each unit.