



Key Steps to Successful Science Planning

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Purpose

The purpose of this document is to set out expectations and support for high quality science planning and to ensure consistency and progression in the planning of scientific investigations from Years 1 to 6.

What you need:

- Focus Education document: *Science*
- Long term planner
- Medium term planner for foundation subjects
- Year group expectations for planning and carrying out investigations

These documents are found on the shared area in the folder entitled 'Planning' > Problem Solving Curriculum' > 'Science'

Steps:

1. Check the units of work for your year group in the Focus Education document and update them onto your long term planner
2. Use the medium term planner for foundation subjects to plan a unit of work in science for a half term using the learning challenges from the Focus Education document – the learning challenges become learning intentions
3. Plan success criteria and main body of the lesson using introduction, model, practise and review to structure the lesson of appropriate
4. Differentiate each science lesson by at least three ways and avoid 'mixed ability' activities as these activities do not stretch the more able pupils and are often too challenging for lower ability and SEN children (see below regarding differentiation for investigations)
5. Plan purposeful plenaries which review or rehearse learning or move learning on
6. Ensure that any writing or mathematical activities in science are planned sufficiently so that the level of challenge for pupils in writing or mathematics matches the pupils' attainment in these subjects
7. Plan one scientific investigation each half term linked to the unit of work – this should be a class investigation and can be conducted in mixed ability groups with the purpose of enabling more able pupils to support less able pupils and to aid peer coaching and learning
8. During scientific investigations the teacher and the TA should record observations of children's learning including children's understanding, comments and quotations to be used for assessment of pupils' abilities in investigative science; observations may be recorded on post it notes or iPads may be used for this purpose
9. Use the appropriate year group expectations for planning and carrying out scientific investigations – this provides progression in investigative vocabulary and clearly structured planning formats for each year group which build on the format from the previous year
10. Evidence of 6 investigations carried out over the year (one per each half term) should be kept as evidence in the class floor book – the type of evidence to put in the floor book includes: children's planning sheets, photographs with captions, children's comments, teacher/TA observational notes, evidence of children's writing e.g. scientific write up or reports, presentation of findings and any use of computing

Computing

Consider how laptops, iPads and other devices can be used to enhance your science lessons, for example, there may be an app which enhances learning of a concept or the use of spreadsheets may help results to be recorded efficiently from which graphs and charts can be made. You should ask a member of the problem solving team if you find a useful app or need support with including computing in your science planning.

Monitoring and evaluation:

The problem solving team will carry out termly monitoring of science through scrutiny of planning, children's science books, class floor books and lesson observations.