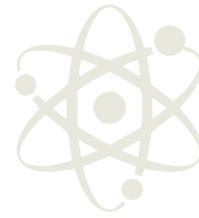




making physics matter



# How to...

## lead a primary science moderation meeting

### Aim

For teachers to work together to make confident and robust science assessments.

### Introduction

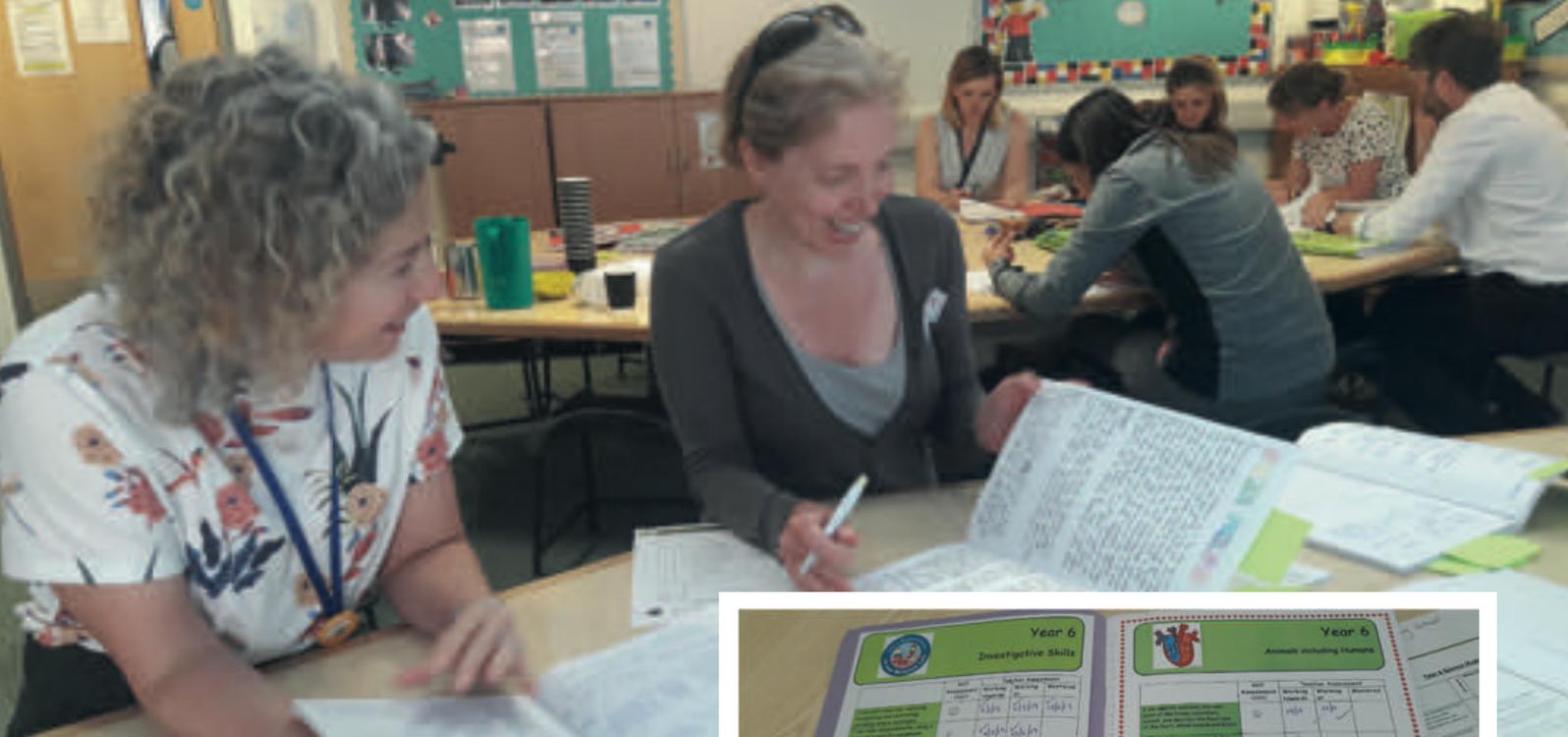
There is huge value in working together with other teachers within and between schools to calibrate the assessment judgements that teachers make in primary science. Coming together with children's books from different year groups and different schools, and comparing the learning to exemplification materials can be a very encouraging experience and gives valuable information on what needs to be done next.

The **TAPS pyramid model** created by Bath Spa University shows how moderation sits in the middle of an effective whole school plan for the assessment of primary science.



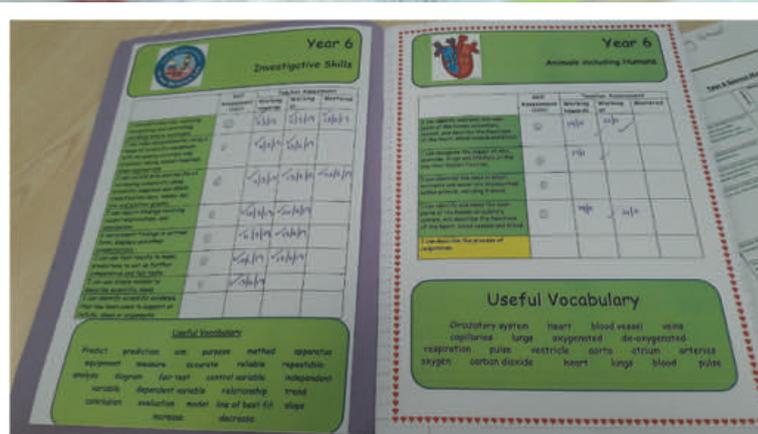
### Why moderate?

- Regular moderation opportunities give teachers greater confidence in planning for the correct level of outcome and ensure consistency in the quality of primary science provision for all children.
- When teachers get the opportunity to moderate primary science work from year groups that they do not teach, they get a better understanding of progression.
- Science leaders have evidence that all the content from each year group has been covered (or where there are any gaps).
- Moderation between groups of schools helps to ensure that children from different schools get consistent learning experiences and are working to the same standard in both their scientific knowledge and their skills. This is beneficial to secondary schools as it helps more children be 'secondary ready'.
- Regular moderation between schools is a fantastic way to share good practice, magpie ideas and inspire teachers to consider different approaches to teaching and learning in their classrooms.



## How to plan your meeting

First, decide what your focus will be: are you going to moderate across year groups or within a year group, for example?



### Moderating one year group:

- Teachers bring learning from a child who is working at age-related expectations (ARE), one working above and one working below. The learning is sorted into these three groups.
- Look at the exemplification materials to get a sense of the expected standard for that year group. Starting with the 'at expectations' group check if the full range of national curriculum (NC) statements has been covered and achieved for each child, including the working scientifically statements. These can be ticked off the Ogden moderation sheets or dated to show where the evidence can be found in books. Remember that a teacher's observations and discussions with the pupils are also a rich source of evidence.
- Repeat the process with the groups that are 'below expectations' and 'above expectations'. These could be rank ordered to get a sense of progression. Consider if you have enough evidence to make robust judgements and what the next steps might be.

### Moderating all year groups:

- Teachers bring learning from just one child who is working 'at expectations' in each year group from each school represented. (This could be a child who is on the cusp of achieving ARE or one a teacher is confident about – decide beforehand together).
- Separate the books into year groups and work in small teams to look through the learning and compare it to exemplification materials. For example, in a group of nine schools, three teachers could look through all the KS1 books together, three the Lower KS2 and three the upper KS2.
- Consider whether each child has achieved all of the NC statements and feedback the information to each school, either verbally or through completing a checklist so that any gaps can be addressed. This gives teachers or science leaders from each school a valuable document evidencing coverage across the whole science curriculum.

## Age-related expectations

When making science assessments at the end of KS1 or KS2, children are either working 'at' or 'below' age-related expectations and it is essential that teachers recognise that this refers to not only the subject knowledge objectives but also the working scientifically objectives. Every child needs to demonstrate that all criteria have been met. Only in EYFS is a best-fit judgement used.

Children can **only** be determined to be working 'at' age-related expectations if they have demonstrated a good knowledge of all the scientific ideas and facts **and** have evidence that they have met the working scientifically criteria. The working scientifically objectives are not a checklist of tasks that children should attempt only once – they are skills that children should get the opportunity to use regularly, developing confidence and skill with increasing independence.

## Exemplification materials

There are a number of valuable tools to exemplify age related expectations that can be used to support the moderation process.

- The Standards and Testing Agency has produced documents which contain material that exemplify both the science content and working scientifically statements for **KS1** and **KS2**.
- The ASE's **PLAN** resources are annotated collections of children's learning. They provide examples of what working at the expected standard for primary science might look like. Each collection of work shows one example of how a pupil has met national curriculum statements for a particular area of content but these are not intended to be the definitive way of teaching these statements.
- The **Teacher Assessment in Primary Science (TAPS)** project from Bath Spa University is another useful resource for helping with moderation of primary science.

## Evidence to support moderation

Pupil's books usually provide the key evidence to moderate teacher assessment and there is no doubt that schools who have separate science books, in which children report all of their science enquiries, find the moderation process much easier.

Nevertheless, there are many other sources of evidence that you may want to include to support the moderation process:

- teacher books and assessment records including observations and any science understanding children have shown verbally
- whole class big books or floor books
- individual science fair projects or science home learning
- end of unit test papers or interactive quiz records
- other curriculum books that contain science learning: English books might contain reports of research enquiries; maths books might contain data analysis and pattern seeking enquiries; and thematic books may have further evidence to support science assessment.

## Top tips

- Make sure the number of children or schools you want to moderate is manageable in the time you have for the meeting.
- Provide plenty of refreshments, snacks and time for breaks if needed.
- Keep a focus on the quality of evidence.
- Gently remind colleagues not to look for 'best fit' but ensure coverage of all the NC statements.
- Encourage teachers to make notes of any new ideas or imaginative lessons they would like to try in their schools/classes to share best practice.
- End the meeting on a positive note by collecting up good ideas from other schools and constructive suggestions for taking children forward in their learning.