



making physics matter

Your role as a science governor

Introduction

Science governors have a vital role to play in the encouragement and development of science and science leaders within schools. They are in a prime position to ensure that science is embedded into the ethos of the school from the very top, and that continued progress and success in science is not dependent on any one person.

Science governors often have a science background or career and a passion to promote science, technology, engineering and maths (STEM) subjects. They play a crucial role in setting the strategic direction for science education across their school and monitoring progress against it.

Science governors need to ask the right questions to dig beneath the surface and get a good grasp of the quality of science provision across the school. In bringing together the evidence from these questions, a science governor will be well placed to support school leaders in making informed decisions about the school's next steps in developing primary science education.

Top tips for being a science governor

- Review an aspect of science education every academic year, provide the science subject leader with your questions in advance and give them a half term to collect evidence to be able to answer before you come in for a review.
- Each year present the findings of your review, in collaboration with the science subject leader, to the governing body. Use this presentation to identify the new targets for the development of science.
- Encourage schools to ensure that targets for developing science education are included in the school development plan.
- Support science subject leaders in their quality assurance of the subject by being involved in:
 - pupil voice focus groups
 - pupil interviews to explore their science books (summer term)
 - learning walks
 - paired lesson observations
 - work scrutiny
- Where possible, be actively involved in enrichment activities by joining science field trips, supporting teachers in finding science visitors to support learning, attending family learning nights and being actively involved in events such as Science Week or the annual science fair.
- Understand the physical environment where science is taught – is it in the classrooms or does the school have a Phiz Lab? Are there science wall displays?

Key challenge questions

If you are new to the role of science governor, you may want to keep your first review of science quite general so that you get a feel for the strengths and areas that need development.

General review

- What are the strengths in science provision across the school and how do you know?
- What are the areas for development in science provision across the school? How will these be addressed? What are the priority areas?
- Review any supporting documentation – eg self-evaluation form, school development plan, portfolios prepared for awards such as PSQM, SEQM.

As you become more familiar with science provision across the school you might like to focus your review in a particular area so that you can really support the science leader in developing teaching and learning. Possible foci might include curriculum, working scientifically, assessment, resources, enrichment or science capital.

Focused review

Curriculum

- What science topics are taught most effectively in the school? Why is that?
- What proportion of the science curriculum is being covered in lessons?
- Are teachers secure in their subject knowledge for the areas of the science curriculum they teach?
- How often are science-based staff meetings held?
- Is there internally/externally led CPD available for teachers? Is this encouraged and completed?
- Are teaching materials in line with the latest key stage curriculum? If an Academy or Free School, how is the curricula developed to ensure it is broad and balanced?
- How do we know that children have developed the required standard of scientific understanding for their age group? How does the school support transitions between phases of education in regard to science?
- To what extent do children get the opportunity to apply their English knowledge and skills in science lessons?

Working scientifically

- What proportion of lessons include practical enquiry?
- Are teachers effective in teaching the skills of working scientifically?
- Are pupils skilled in all types of enquiry? (Observing over time, pattern seeking, comparative tests, fair tests, research, grouping and classifying).
- How effectively are the school planning for progression in working scientifically skills?
- How regularly are children challenged to use their maths skills to answer scientific questions? (measuring, graph drawing and interpreting).

Assessment

- How do teachers assess children's level of scientific understanding?
- How do teachers assess children's level of competence in the skills of working scientifically?
- How do we track children's attainment and progress over time? How well do pupils achieve in science and what is the trend over time for achievement?
- Do different groups of pupils make equally good progress in science? If children aren't working at age related expectations in science, how is this addressed?
- How is information on children's attainment and progress in science shared as they transition to the next year group?
- How are teacher assessment judgements on science attainment made at the end of KS1 and the KS2? What information and evidence do teachers use to make these judgements? How confident are teachers in making these judgements?
- How are we quality assuring the assessment of science across the school?
- Are the science success stories promoted on the school newsletter/website?

Resources

- Do teachers have access to all the resources they need to deliver quality science learning experiences?
- What is the budget for science? Is this sufficient? How is it spent?
- Does the school receive external funding (eg through The Ogden Trust)? How far along the funding track is the school (if at all) and is there an action plan for what to do when the funding ends?
- What reference books are available to support learning in science?
- How are resources and equipment for science stored and managed?

Enrichment

- What extra-curricular science opportunities are there for pupils to engage with in and out of school?
- What national events does the school participate in? British Science Week, Great Science Share, World Space Week, etc.
- What field trips and residential learning experiences support children's learning in science?

Science capital

- How is science expertise identified within the wider school community and how is it used to best effect?
- How are parents/carers engaged in their children's learning about science?
- How does the school provide opportunities for pupils to learn about science work and careers?
- How does the school address the issue of unconscious bias?
- Do children regularly get the opportunity to talk about science in everyday life?
- How frequently do children get to meet people who have science-related roles?

Role as science lead

- How well supported is the science lead (from leadership and peers)?
- How does the science lead ensure the quality of science provision across the school?
- What does the science lead need to help perform their role?
- Are 'voice of the pupil' focus groups held for science? Do all groups of pupils enjoy and progress in science?
- If science is already well-established in the curriculum at your school, what is the succession planning – is there one key person and if so, what will happen if they leave?