

Good Practical Science – making it happen

Writing
a Policy



The **Association**
for **Science Education**
Promoting Excellence in Science Teaching and Learning

Supporting
Resources

Good Practical Science – making it happen

Writing a Policy

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The Gatsby Charitable Foundation supports education by strengthening science and engineering skills in the UK, by developing innovative programmes and informing national policy. The Foundation is committed to supporting practical science in schools and colleges. In 2017 Gatsby launched *Good Practical Science* by Sir John Holman. The report provides a framework for good practical science in schools. Using international visits, surveys and literature reviews, Gatsby developed a series of ten benchmarks for schools to use when planning their own approach to delivering practical science. ASE's *Making it happen* project focuses on the enabling of Benchmark 1.

The Association for Science Education (ASE) is the largest subject association in the UK. As the professional body for all those involved in science education from pre-school to higher education, the ASE provides a national network supported by a dedicated staff team. Members include teachers, technicians and advisers. The Association plays a significant role in promoting excellence in teaching and learning of science in schools and colleges. For more information go to www.ase.org.uk

Introduction

This collection of resources has been produced to support teachers, and others engaged in science education, when they plan how to use practical science in their teaching. The materials are designed to provoke discussion and reflection, and also to reach consensus with colleagues when developing a written policy for their department.

Background

Gatsby's *Good Practical Science* set out an international standard of what world-class practical science looks like. It proposed ten benchmarks of what schools and teachers should do to achieve good practical science. Key to these is Benchmark 1 'Planned Practical Science' – the production of a written policy explaining why teachers use practical science, the expected outcomes and how those outcomes will be achieved. This benchmark is a strong enabler for achieving all 10 benchmarks and should serve as a prompt for science departments to discuss and improve their practice in line with these other benchmarks. ASE's *Making It happen* project supported Benchmark 1 by producing a series of resources for use by science departments to help them consider different aspects of writing a policy for good practical science.

Resources

The resources are structured as seven modules:

1. Introduction
2. Purposes
3. Planning
4. Progression
5. Inclusion
6. Support
7. Producing a policy

Each module contains:

- Presenter's notes, for use by a subject leader or others, when using the module
- A presentation containing information, questions for reflection, links to activities and suggested next steps
- Various files containing questionnaires, activities and resources needed to complete the module.

Each module was designed to take an hour of departmental discussion time, yet could also be used flexibly if less time was available.

Purposes

The aim of these resources is to support schools in the development of a written policy on how to teach practical science effectively. We believe that the starting point in this process is to reach consensus between teachers on certain key elements, and then for the whole science department to decide on a series of principles from which their policy can be written. The resources are intended to be used flexibly. The introduction module contains an activity to help focus on priority areas, and thus which modules to use. It is recognised that, in many schools, there may be limited opportunities for whole departments to meet. A series of case studies has been produced to illustrate how different schools have addressed this problem, which activities they used, and their emerging policy documents.

The case studies:

- stimulate reflection on current practice in teaching practical science and help to identify some of the challenges experienced by learners
- provide starting points for departments that may wish to work towards greater consistency and effectiveness in teaching practical science
- illustrate different ways in which subject leaders have overcome time constraints to help move their departments towards more consistent classroom thinking and behaviours.

Good Practical Science - Making it happen Case Studies

Acknowledgements

These resources were written by the *Good Practical Science - Making it happen* project team (Marianne Cutler, Richard Needham and Ed Walsh). The authors wish to thank the contributors to the ASE's *Getting Practical* project for their wisdom and inspiration, and particularly Ian Abrahams and Robin Millar.

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