# Science Subject Leader Development Meeting

Led by Naomi Hiscock, Director

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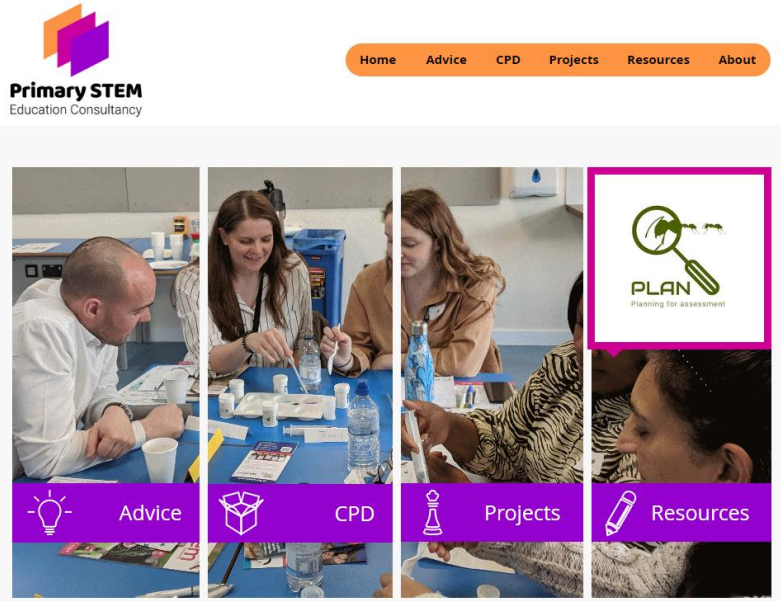
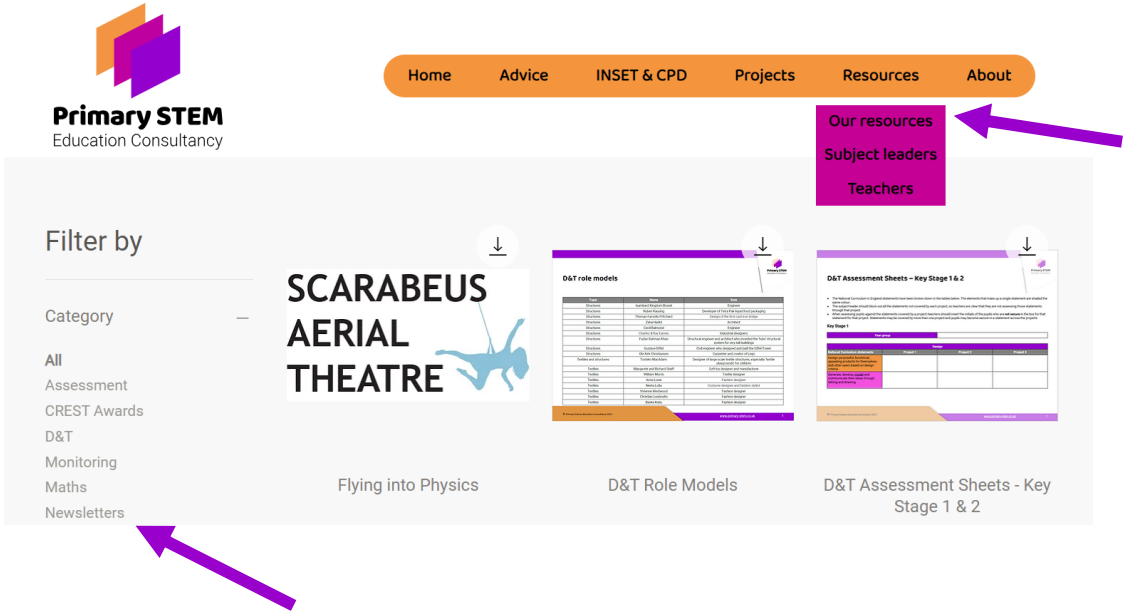
Primary STEM
Education Consultancy

# Introductions

## Director




## Sign up to our newsletter






09/10/2025



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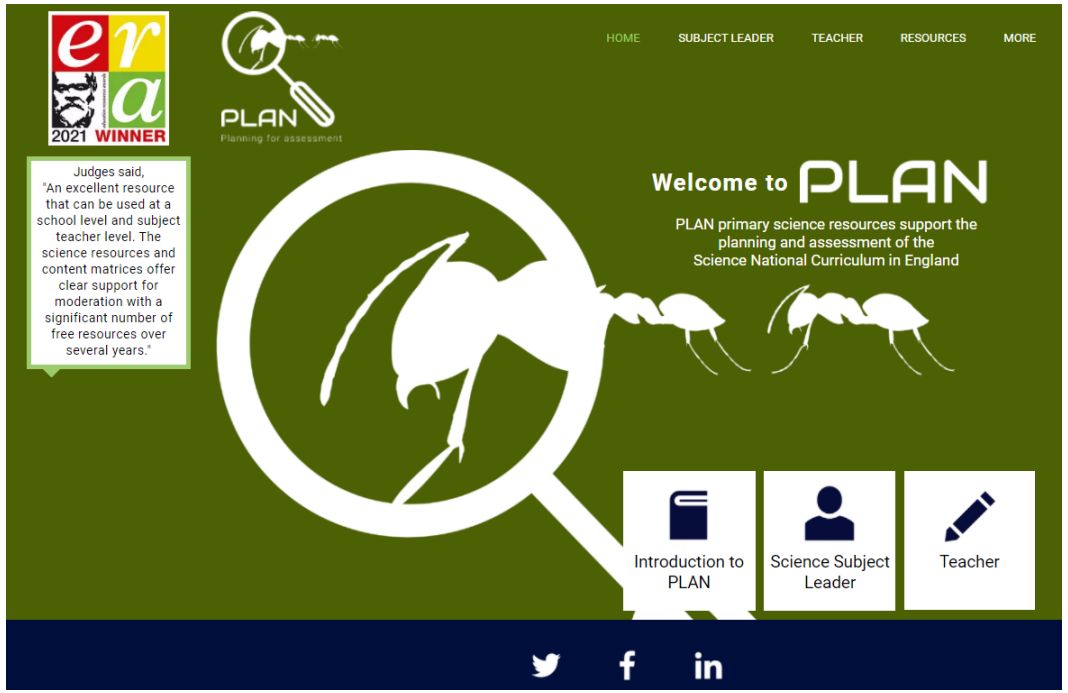
# Introductions

## Team Leader




## Regional Support Organisation

CREST AWARDS

# Introductions

## Hub Leader

PSQM
Primary Science Quality Mark
Powered by
University of Hertfordshire UH

## Primary Ambassador

CLEAPSS primary AMBASSADOR

# Agenda

- Subject updates
- Carrying out a subject review
- Ensuring good curriculum design – substantive knowledge
- New report: Review of scientific literacy and oracy in primary school education

# Subject updates

# Engage Grants

- Engage Grants are for eligible schools to run CREST Awards. There are two types of grant:
  - **Engage Grants**
    £350 of grant money, which can be spent on equipment, teacher cover etc., plus £350-worth of CREST Awards
  - **Engage Simply CREST.**
    £350-worth of CREST Awards
- The deadline for applications is 14 October. To find out more and apply, visit the CREST Awards website.

# Partnership Grants

- The Royal Society's Partnership Grants scheme funds schools and colleges up to £3,000 to work in partnership with STEM professionals from academia or industry to run an investigative STEM project. The grant scheme is open to all levels of education supporting pupils aged between 5 and 18.
- The grant work can provide an opportunity for students to develop key skills which will be invaluable for their future careers, demonstrate the range of STEM careers available, and can foster long-term working relationships between the school/college and STEM professionals.
- The deadline for applications is 1 December.
- To find out more and apply, visit The Royal Society's website.

# Ada Lovelace Day webinar – 14 October, 9–9.45am

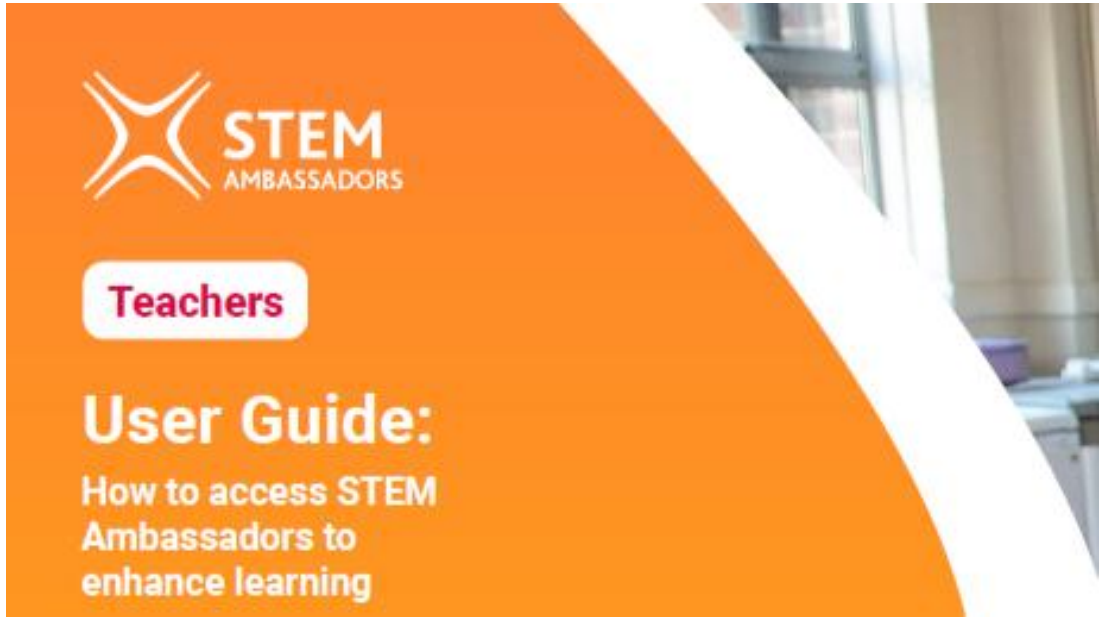
- Celebrate Ada Lovelace Day 2025 with a free 45-minute webinar in which your KS2 pupils will have the chance to meet three incredible female role-models working in a range of tech-related roles.
- Your pupils will find out what these STEM Ambassador do day-to-day, what skills they use, and how they use computing to improve our lives.
- To find out more and book for your pupils to participate, visit the Eventbrite page.

# New STEM Ambassador user guide

The new user guide for teachers provides information about:

- who STEM Ambassadors are
- the impact STEM Ambassadors can have in schools
- different ways to connect with STEM Ambassadors to support your students
- key information if you need support
- what teachers say.

To download the user guide, visit the STEM Learning LinkedIn page.



# Protecting Our Planet Day 2025

- STEM Learning organises this live-streamed event for schools each year which brings climate change pioneers and leading researchers, inspiration and activities into the classroom.
- This year it takes place on 27 November.
- To find our more and register your interest in participating, visit the STEM Learning website.

# Space competitions, challenges and activities

- Every year, the European Space Agency and ESERO-UK run school projects, funded by the UK Space Agency, that engage pupils in multi-disciplinary activities, just like in the real world of space missions. Through these projects, pupils can expand their knowledge of STEM subjects and develop new skills and competences.
- By participating in Climate Detectives, Mission X, Moon Camp and AstroPi, your pupils can learn about Earth's environment, train like astronauts, design a habitat in space, or write code that will be run by computers onboard the International Space Station.
- All the challenges launch in September for the 2025/26 school year. To find out more and sign up for your pupils to participate, visit the ESERO-UK website.

# Wonderlab+

- Wonderlab+ is a website for children and families from the Science Museum where they can play games, do quizzes, watch videos and be inspired to get hands-on with science and maths at home.
- All of the content has been designed to help parents and children discover science together in fun ways.
- The activities, games and videos should be easy and safe to use and have been risk assessed.
- To visit the website, click here.

# New CREST early years and primary challenges

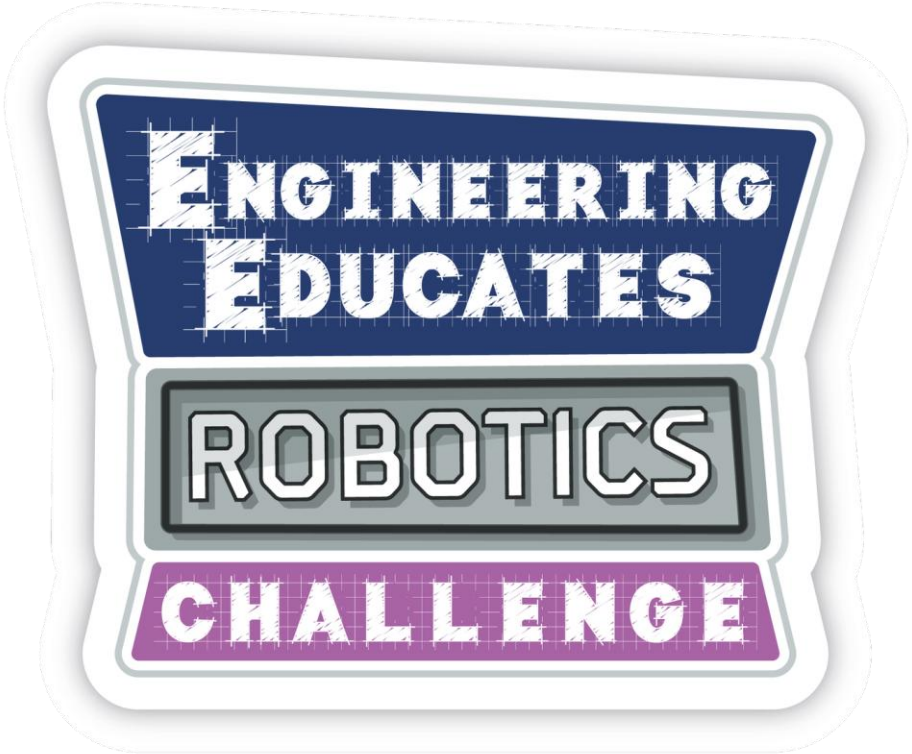
- This new collection includes 8 CREST Star challenges that have been adapted to be more accessible, making them suitable for children aged 3-7, or those working at this level.
- They come with accompanying demonstration videos and supporting slides for the classroom to help introduce the story scenarios and activities to non-readers.
- Editable versions of the Organiser and Activity Cards are also available, so the challenges can be easily adapted for individual learning needs.
- To download the new collection, visit the CREST Awards website.

# New challenges

Engineering Educates have published two new robotics challenges that use real-world contexts and are fully curriculum-linked. They are:

- ‘The Sky’s The Limit’ where pupils design a launch system, glider or landing system
- ‘Pipe Pioneers’ where pupils design and prototype a robot capable of working in underground extreme environments.

To find our more and download the resources, visit the Engineering Educates website.



# New STEM Learning resources website

The STEM Learning resources website houses a collection of over 14,000 freely available, quality-assured STEM education resources to help educators inspire young people about STEM. STEM Learning has updated the website by:

- adding a new and more powerful search to help you explore the collections in full
- refreshing the brand and style, with improved accessibility and format
- adding Explorify.

To visit the new resources website, visit the STEM Learning website.

# All PLAN working scientifically resources now available

- All the remaining year-groups (Years 2, 4 & 6) of the PLAN working scientifically resources have now been published, and all the original documents have been revised.
- The new versions of the Working Scientifically Matrices identify the 'Key learning' for each of the PLAN Working Scientifically Skills for each phase (Key Stage 1, Lower Key Stage 2 and Upper Key Stage 2), as well as the 'Expected outcomes' that a child would need to demonstrate to be secure in that skill for that phase.
- The examples of work have been removed from the original versions of the Working Scientifically Matrices and Working Scientifically Examples of Work have been created for each skill in each year-group.
- The Planning Working Scientifically documents have been updated so that they no longer just indicate which PLAN Working Scientifically Skills each working scientifically activity can most likely be used to teach but also identify the particular elements of the 'Key learning' for those skills.
- There have also been some minor amendments to the Progression in Working Scientifically Skills for Key Stages 1 & 2 and the Assessing Working Scientifically documents.

# Review of scientific literacy and oracy in primary school education

- The Royal Society has commissioned a literature review of scientific literacy and oracy in the context of primary school education in the UK, to identify challenges, gaps and opportunities for oracy-rich primary science (ages 5–11).
- The key finding from this review is that oracy, scientific literacy, and the power of utilising both together, are not made sufficiently explicit in guidance or literature. Making the link between scientific literacy and oracy clearer, will raise the profile of oracy-rich primary science and help to demonstrate how dialogue can support the development and application of scientific thinking.
- The full review is available on The Royal Society website.

# Primary science courses

We are offering a range of primary science courses that will focus in-depth on different aspects of leading and teaching the primary science curriculum. The dates and times of the courses are indicated below (click on the titles for further information about the content of each course and how to book). All the courses will be held in the dedicated training suite at Edith Neville Primary School which is a 10-minute walk from King's Cross Tube Station. Places on the half-day courses cost £100 + VAT and full-day ones cost £200 + VAT.

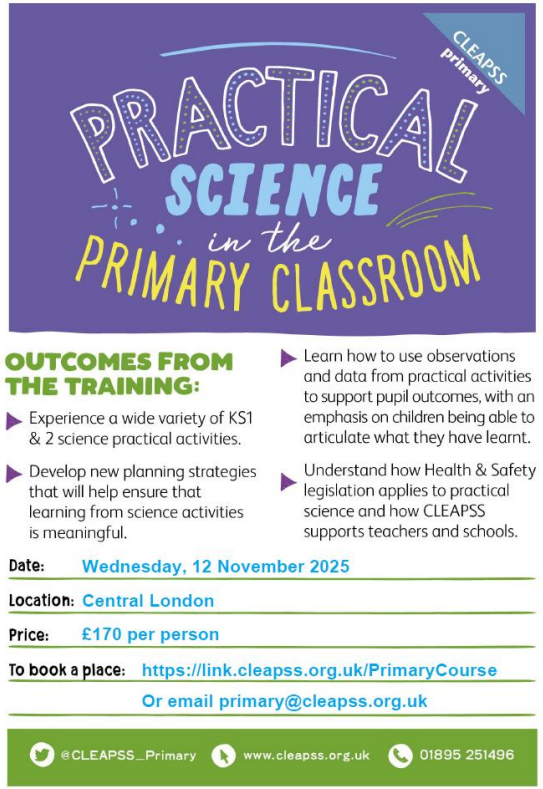
- Developing Expertise in Leading Science - 14 November 2025, 1-4pm
- Developing Expertise in Science in the EYFS - 6 February 2026, 1-4pm
- Developing Expertise in Assessing Primary Science - 20 March 2026, 9am-4pm
- Developing Expertise in Oracy in Science - 15 May 2026, 1-4pm
- Developing Expertise in Teaching the Disciplinary Knowledge in Science - 19 June 2026, 9am-4pm

# Practical science course

CLEAPSS are offering its members a practical science course on 12 Nov in central London which will provide participants with:

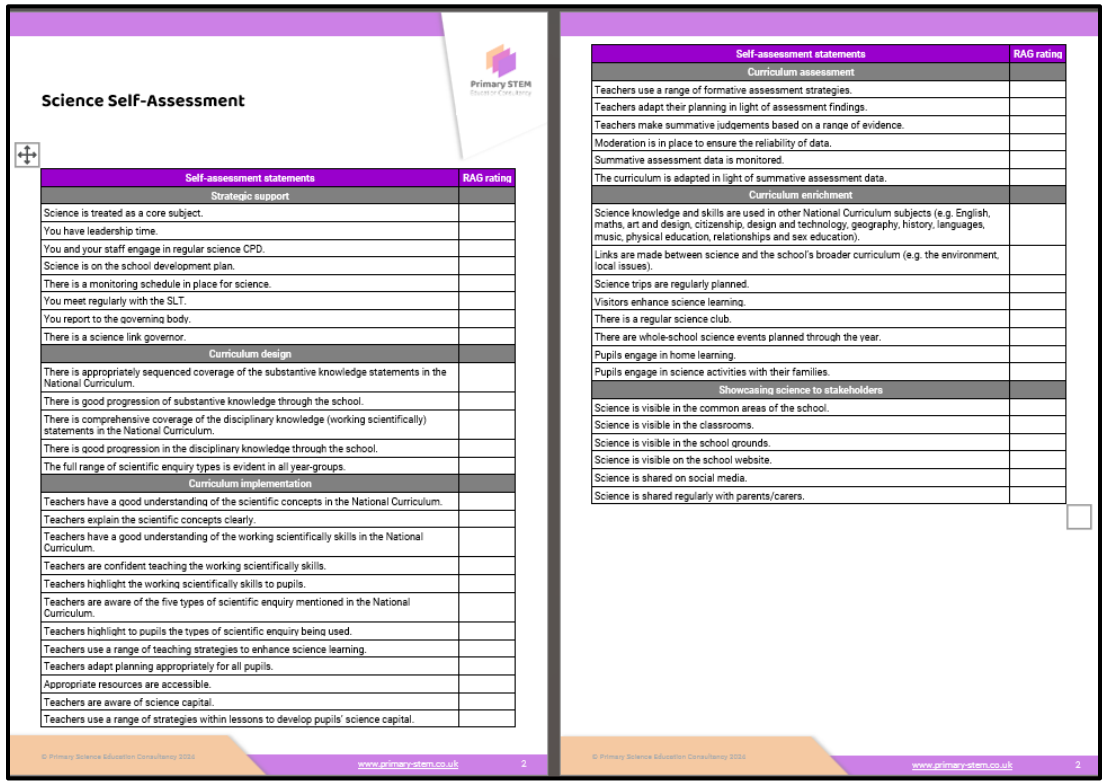
- experience of a wide variety of KS1 & 2 science practical activities
- new planning strategies that will help ensure that learning from science activities is meaningful
- the opportunity to learn how to use observations and data from practical activities to support pupil outcomes, with an emphasis on children being able to articulate what they have learnt
- understanding of how Health & Safety legislation applies to practical science and how CLEAPSS supports teachers and schools.

Places cost £170 + VAT and can be booked via the [CLEAPSS website](#).



# Carrying out a subject review

# Self assessment



Science Self-Assessment

| Self-assessment statements | RAG rating |
|---|---|
| **Strategic support** | |
| Science is treated as a core subject. | |
| You have leadership time. | |
| You and your staff engage in regular science CPD. | |
| Science is on the school development plan. | |
| There is a monitoring schedule in place for science. | |
| You meet regularly with the SLT. | |
| You report to the governing body. | |
| There is a science link governor. | |
| **Curriculum design** | |
| There is appropriately sequenced coverage of the substantive knowledge statements in the National Curriculum. | |
| There is good progression of substantive knowledge through the school. | |
| There is comprehensive coverage of the disciplinary knowledge (working scientifically) statements in the National Curriculum. | |
| There is good progression in the disciplinary knowledge through the school. | |
| The full range of scientific enquiry types is evident in all year-groups. | |
| **Curriculum implementation** | |
| Teachers have a good understanding of the scientific concepts in the National Curriculum. | |
| Teachers explain the scientific concepts clearly. | |
| Teachers have a good understanding of the working scientifically skills in the National Curriculum. | |
| Teachers are confident teaching the working scientifically skills. | |
| Teachers highlight the working scientifically skills to pupils. | |
| Teachers are aware of the five types of scientific enquiry mentioned in the National Curriculum. | |
| Teachers highlight to pupils the types of scientific enquiry being used. | |
| Teachers use a range of teaching strategies to enhance science learning. | |
| Teachers adapt planning appropriately for all pupils. | |
| Appropriate resources are accessible. | |
| Teachers are aware of science capital. | |
| Teachers use a range of strategies within lessons to develop pupils' science capital. | |

| Self-assessment statements | RAG rating |
|---|---|
| **Curriculum assessment** | |
| Teachers use a range of formative assessment strategies. | |
| Teachers adapt their planning in light of assessment findings. | |
| Teachers make summative judgements based on a range of evidence. | |
| Moderation is in place to ensure the reliability of data. | |
| Summative assessment data is monitored. | |
| The curriculum is adapted in light of summative assessment data. | |
| **Curriculum enrichment** | |
| Science knowledge and skills are used in other National Curriculum subjects (e.g. English, maths, art and design, citizenship, design and technology, geography, history, languages, music, physical education, relationships and sex education). | |
| Links are made between science and the school's broader curriculum (e.g. the environment, local issues). | |
| Science trips are regularly planned. | |
| Visitors enhance science learning. | |
| There is a regular science club. | |
| There are whole-school science events planned through the year. | |
| Pupils engage in home learning. | |
| Pupils engage in science activities with their families. | |
| **Showcasing science to stakeholders** | |
| Science is visible in the common areas of the school. | |
| Science is visible in the classrooms. | |
| Science is visible in the school grounds. | |
| Science is visible on the school website. | |
| Science is shared on social media. | |
| Science is shared regularly with parents/carers. | |

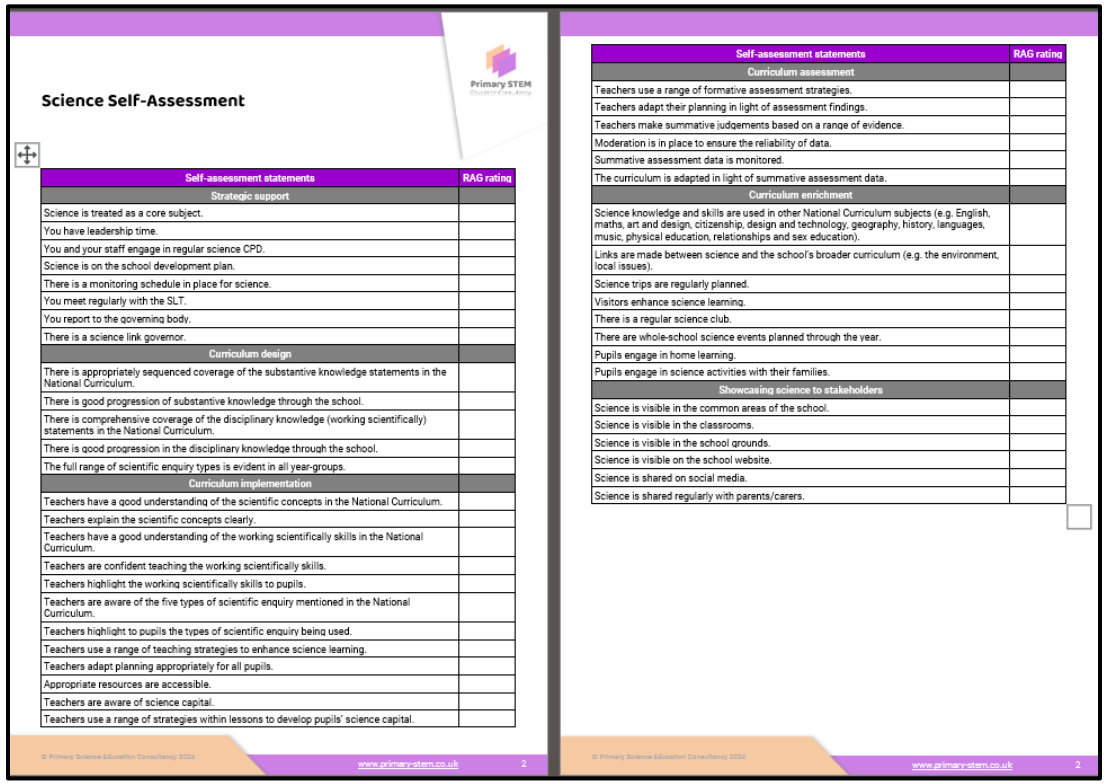
- Green – Fully embedded
- Amber – Developing
- Red – Not in place

# Sharing practice

- Strategic support
- Curriculum design
- **Curriculum implementation**
- **Curriculum assessment**
- **Curriculum enrichment**
- **Showcasing science**

- **Group A**
  Move to the table of an area that you can share what your school currently does.
- **Group B**
  Move to the table of an area that you are thinking of developing this year.

# Self assessment



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| Science is visible on the school website. | |
| Science is shared on social media. | |
| Science is shared regularly with parents/carers. | |

- Identify some development targets.
- Jot down potential actions for the year.
- Share and reflect on these.

- Take a photograph/save the document for reflection at the end of the year.

# Ensuring good curriculum design

# Curriculum design – substantive knowledge

- What do you need to have considered/have in place to ensure good curriculum design?

# Curriculum design – substantive knowledge

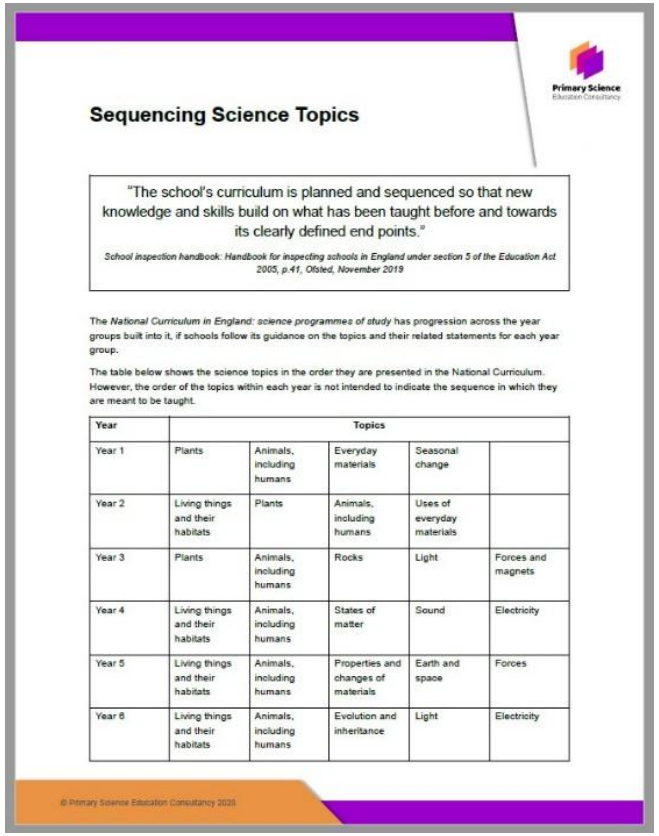
- What do you need to have considered/have in place to ensure good curriculum design?
- How have you developed your curriculum recently?
- What resources have supported you to ensure good curriculum design?

# Curriculum design – substantive knowledge

## Explaining your long-term curriculum map

1. Do some topics and statements require coverage throughout the year?
2. How complex are the concepts involved?
3. What is the relationship between topics and their related statements within a year i.e. does one topic need to be taught before another?
4. Can a topic be revisited in different contexts?
5. How long does each topic require? Should any be split?

# Curriculum design – substantive knowledge



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## Sequencing Science Topics

"The school's curriculum is planned and sequenced so that new knowledge and skills build on what has been taught before and towards its clearly defined end points."

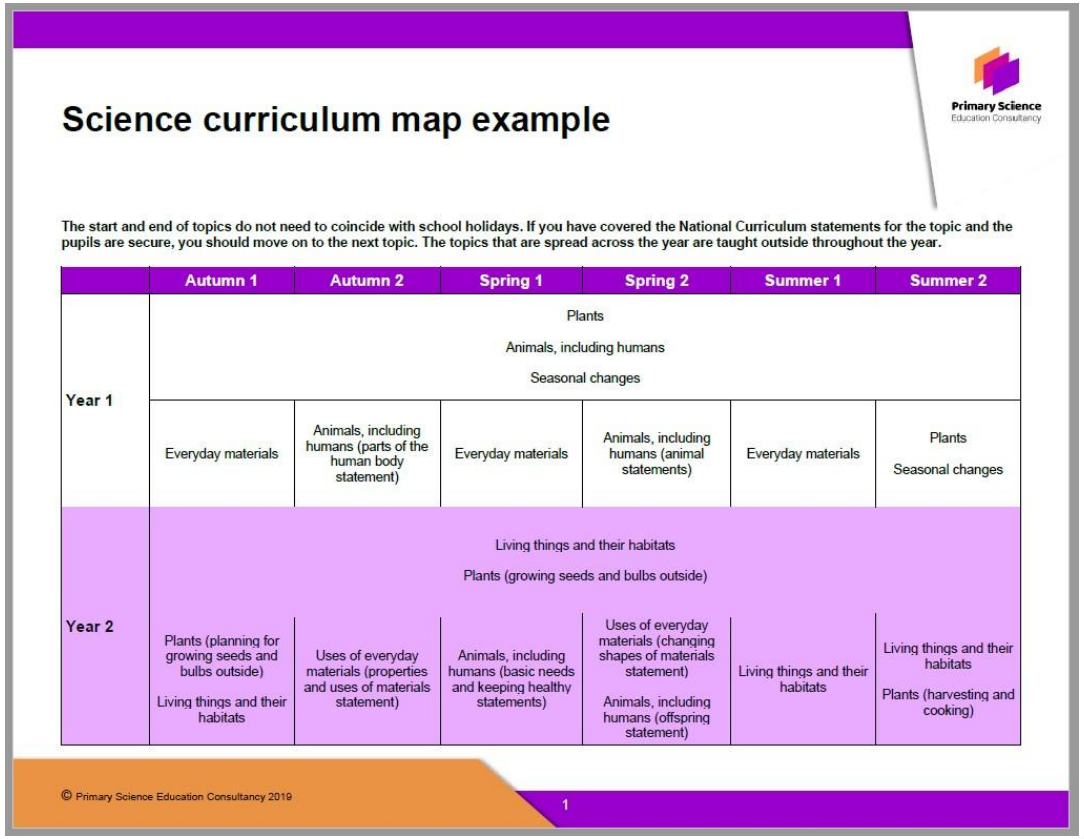
*School inspection handbook: Handbook for inspecting schools in England under section 5 of the Education Act 2005, p.41, Ofsted, November 2019*

The *National Curriculum in England: science programmes of study* has progression across the year groups built into it, if schools follow its guidance on the topics and their related statements for each year group.

The table below shows the science topics in the order they are presented in the National Curriculum. However, the order of the topics within each year is not intended to indicate the sequence in which they are meant to be taught.

| Year | Topics | | | | |
|---|---|---|---|---|---|
| Year 1 | Plants | Animals, including humans | Everyday materials | Seasonal change | |
| Year 2 | Living things and their habitats | Plants | Animals, including humans | Uses of everyday materials | |
| Year 3 | Plants | Animals, including humans | Rocks | Light | Forces and magnets |
| Year 4 | Living things and their habitats | Animals, including humans | States of matter | Sound | Electricity |
| Year 5 | Living things and their habitats | Animals, including humans | Properties and changes of materials | Earth and space | Forces |
| Year 6 | Living things and their habitats | Animals, including humans | Evolution and inheritance | Light | Electricity |





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## Science curriculum map example

The start and end of topics do not need to coincide with school holidays. If you have covered the National Curriculum statements for the topic and the pupils are secure, you should move on to the next topic. The topics that are spread across the year are taught outside throughout the year.

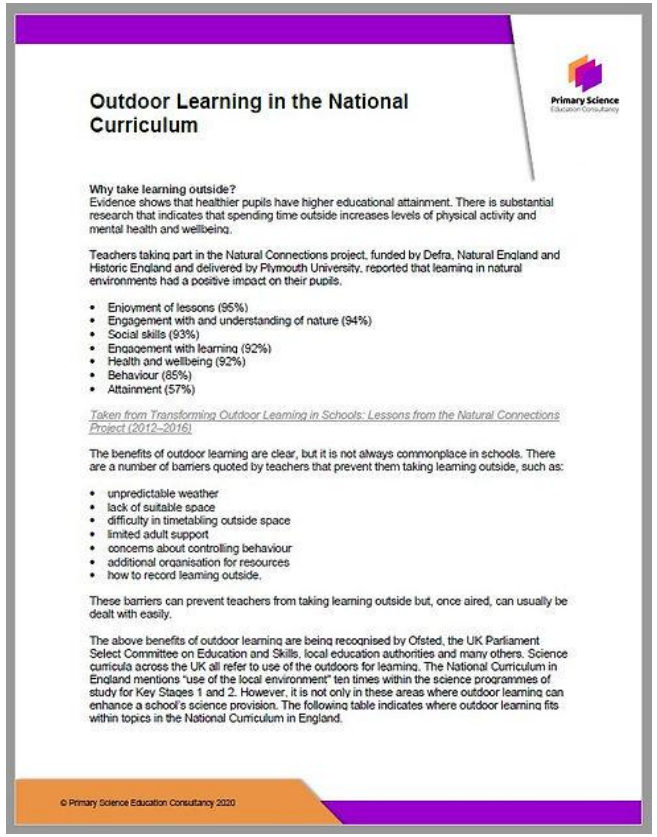
| | Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
|---|---|---|---|---|---|---|
| Year 1 | Plants<br>Animals, including humans<br>Seasonal changes | | | | | |
| | Everyday materials | Animals, including humans (parts of the human body statement) | Everyday materials | Animals, including humans (animal statements) | Everyday materials | Plants<br>Seasonal changes |
| Year 2 | Living things and their habitats<br>Plants (growing seeds and bulbs outside) | | | | | |
| | Plants (planning for growing seeds and bulbs outside)<br>Living things and their habitats | Uses of everyday materials (properties and uses of materials statement) | Animals, including humans (basic needs and keeping healthy statements) | Uses of everyday materials (changing shapes of materials statement)<br>Animals, including humans (offspring statement) | Living things and their habitats | Living things and their habitats<br>Plants (harvesting and cooking) |





[Sequencing documents]

# Outdoor learning through the year



Outdoor Learning in the National Curriculum

Why take learning outside?
Evidence shows that healthier pupils have higher educational attainment. There is substantial research that indicates that spending time outside increases levels of physical activity and mental health and wellbeing.

Teachers taking part in the Natural Connections project, funded by Defra, Natural England and Historic England and delivered by Plymouth University, reported that learning in natural environments had a positive impact on their pupils.

- Enjoyment of lessons (95%)
- Engagement with and understanding of nature (94%)
- Social skills (93%)
- Engagement with learning (92%)
- Health and wellbeing (92%)
- Behaviour (85%)
- Attainment (57%)

*Taken from Transforming Outdoor Learning in Schools: Lessons from the Natural Connections Project (2012–2016)*

The benefits of outdoor learning are clear, but it is not always commonplace in schools. There are a number of barriers quoted by teachers that prevent them taking learning outside, such as:

- unpredictable weather
- lack of suitable space
- difficulty in timetabling outside space
- limited adult support
- concerns about controlling behaviour
- additional organisation for resources
- how to record learning outside.

These barriers can prevent teachers from taking learning outside but, once aired, can usually be dealt with easily.

The above benefits of outdoor learning are being recognised by Ofsted, the UK Parliament Select Committee on Education and Skills, local education authorities and many others. Science curricula across the UK all refer to use of the outdoors for learning. The National Curriculum in England mentions "use of the local environment" ten times within the science programmes of study for Key Stages 1 and 2. However, it is not only in these areas where outdoor learning can enhance a school's science provision. The following table indicates where outdoor learning fits within topics in the National Curriculum in England.

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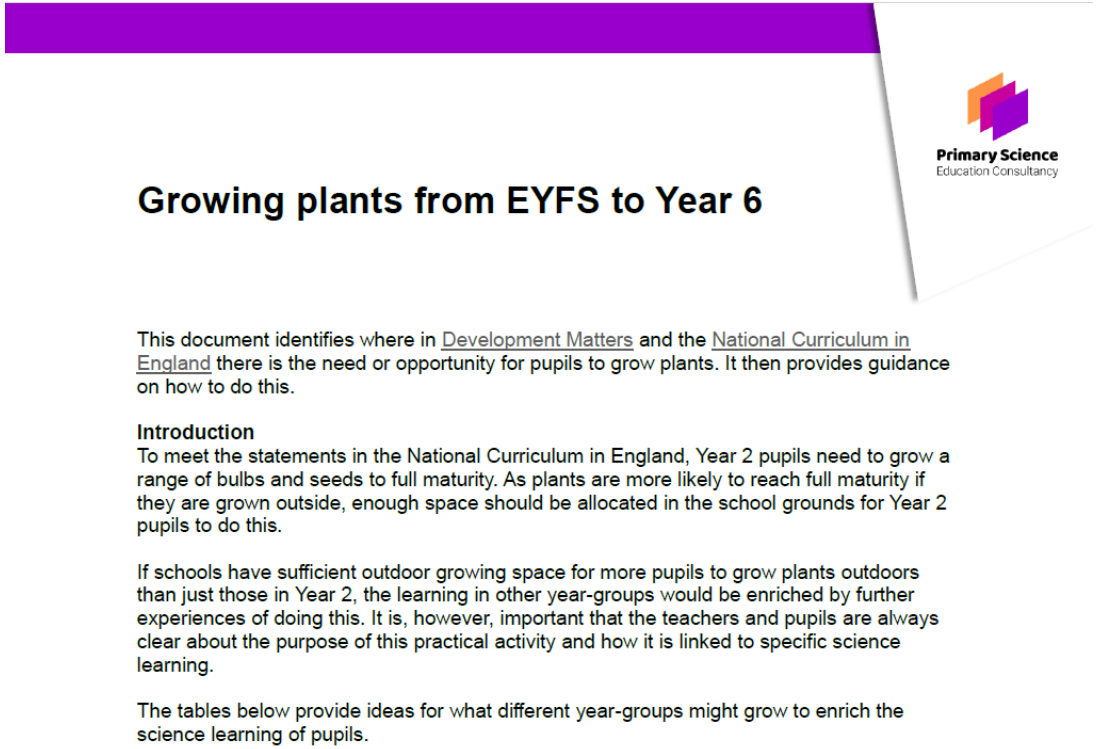
This document highlights the benefits for pupils of outdoor learning and indicates where it fits within the topics in the National Curriculum in England.

# Growing plants



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## Growing plants from EYFS to Year 6

This document identifies where in Development Matters and the National Curriculum in England there is the need or opportunity for pupils to grow plants. It then provides guidance on how to do this.

**Introduction**
To meet the statements in the National Curriculum in England, Year 2 pupils need to grow a range of bulbs and seeds to full maturity. As plants are more likely to reach full maturity if they are grown outside, enough space should be allocated in the school grounds for Year 2 pupils to do this.

If schools have sufficient outdoor growing space for more pupils to grow plants outdoors than just those in Year 2, the learning in other year-groups would be enriched by further experiences of doing this. It is, however, important that the teachers and pupils are always clear about the purpose of this practical activity and how it is linked to specific science learning.

The tables below provide ideas for what different year-groups might grow to enrich the science learning of pupils.

This document identifies where in Development Matters and the National Curriculum in England there is the need or opportunity for pupils to grow plants. It then provides guidance on how to do this.

# PLAN Progression in Knowledge

## Evolution and inheritance

| | |
|---|---|
| **Early learning goal** | • Children know about similarities and differences in relation to places, objects, materials and living things. They talk about the features of their own immediate environment and how environments might vary from one another. They make observations of animals and plants and explain why some things occur and talk about changes. |
| **Year 1** | |
| **Year 2** | • Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other. (Y2 - Living things and their habitats)<br>• Notice that animals, including humans, have offspring which grow into adults. (Y2 - Animals, including humans) |
| **Year 3** | • Describe in simple terms how fossils are formed when things that have lived are trapped within rock. (Y3 - Rocks)<br>• Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal. (Y3 - Plants) |
| **Year 4** | • Recognise that environments can change and that this can sometimes pose dangers to living things. (Y4 - Living things and their habitats) |
| **Year 5** | • Describe the life process of reproduction in some plants and animals. (Living things and their habitats - Y5) |
| **Year 6** | • Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago.<br>• Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents.<br>• Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution. |
| **KS3** | • Heredity as the process by which genetic information is transmitted from one generation to the next.<br>• A simple model of chromosomes, genes and DNA in heredity, including the part played by Watson, Crick, Wilkins and Franklin in the development of the DNA model.<br>• The variation between species and between individuals of the same species means some organisms compete more successfully, which can drive natural selection.<br>• Changes in the environment may leave individuals within a species, and some entire species, less well adapted to compete successfully and reproduce, which in turn may lead to extinction. |

# PLAN Progression in Vocabulary

## Evolution and inheritance

| Year-group(s) | Vocabulary/Statement(s) |
|---|---|
| **Birth to 3** | • Make connections between the features of their family and other families.<br>• Notice differences between people. |
| **Nursery** | natural, plant, animal, leaves, seeds, conkers, acorns, twigs, bark, shells, feathers, pebbles, stones, same, different, pattern (Nursery - Living things and their habitats) |
| **Reception** | plant, tree, bush, flower, vegetable, herb, weed, animal, names of plants and animals they see, name of a contrasting environment (e.g. beach, forest) (Reception - Living things and their habitats) |
| **Year 1** | leaf, flower, blossom, petal, fruit, berry, root, seed, trunk, branch, stem, bark, stalk, bud (Y1 - Plants) |
| **Year 2** | light, shade, Sun, warm, cool, water, space, grow, healthy, bulb, germinate, shoot, seedling (Y2 - Plants)<br><br>living, dead, never been alive, suited, suitable, basic needs, food, food chain, shelter, move, feed, water, air, survive, survival, conditions, light, dark, shady, sunny, wet, damp, dry, hot, cold (Y2 - Living things and their habitats) |
| **Year 3** | photosynthesis, pollen, insect/wind pollination, male, female, seed formation, seed dispersal (e.g. wind dispersal, animal dispersal, water dispersal), air, nutrients, minerals, soil (Y3 - Plants)<br><br>soil, fossil, bone, flesh, minerals (Y3 - Rocks) |
| **Year 4** | environment, habitat, human impact, positive, negative, migrate, hibernate (Y4 - Living things and their habitats)<br><br>herbivore, carnivore, omnivore, producer, predator, prey (Y4 - Animals, including humans) |
| **Year 5** | life cycle, reproduce, sexual, fertilises, asexual, plantlets, runners, tubers, cuttings (Y5 - Living things and their habitats) |
| **Year 6** | offspring, sexual reproduction, vary, characteristics, adapted, inherited, species, evolve, evolution |
| **Key Stage 3** | • Heredity as the process by which genetic information is transmitted from one generation to the next<br>• A simple model of chromosomes, genes and DNA in heredity, including the part played by Watson, Crick, Wilkins and Franklin in the development of the DNA model<br>• The variation between species and between individuals of the same species means some organisms compete more successfully, which can drive natural selection<br>• Changes in the environment may leave individuals within a species, and some entire species, less well adapted to compete successfully and reproduce, which in turn may lead to extinction |

# Review of scientific literacy and oracy in primary school education

Prof Sarah Earle, Dr Anne Parfitt and Dr Stuart Read, Bath Spa University,

May 2025

# What are they?

## Scientific literacy

## Oracy

# Definitions

Key definitions were collated to provide a starting point for the review, leading to the identification of the following for supporting current primary science practice:

- A new definition is proposed for primary: Scientific literacy for primary-aged children involves purposeful and active engagement with science ideas and real-world contexts, to discuss and apply scientific thinking
- An inclusive definition of oracy: ‘Articulating ideas, developing understanding and engaging with others through speaking, listening and communication’ (Oracy Education Commission, 2024).

*Review of scientific literacy and oracy in primary school education, May 2025*

# Why are they important?

## Scientific literacy

## Oracy

# From the Review

- Scientific literacy is increasingly important in modern society. The ease of access to information from a range of sources means that young people need to become critical consumers and recognise the evidence-base for their decision-making.
- Science is a social endeavour, with scientists collaboratively building evidence, together with multimodal communication of findings becoming essential for reaching target populations.
- The development of oracy in schools can be a tool for supporting engagement with science. For example, opportunities for discussion and debate around science-related issues can help scientific content to be meaningfully related to children's lives.
- Oracy can also support learning of the content of science, providing opportunities to use and apply scientific vocabulary and knowledge.

*Review of scientific literacy and oracy in primary school education, May 2025*

# National Curriculum

This review found that both scientific literacy and oracy are rarely made explicit in UK national curricula, with only Scotland naming them in objectives for Topical Science.

*Review of scientific literacy and oracy in primary school education, May 2025*

# National Curriculum

- Oracy is not explicitly discussed in the science sections of the National Curriculum for England (DfE, 2013).
- The use of ‘talk’ is noted in the introductory section, for example: 'enable pupils to develop a deeper understanding of a wide range of scientific ideas. They should do this through exploring and talking about their ideas' (Upper Key Stage 2, DfE, 2013).
- However, oracy features are rarely explicitly mentioned in National Curriculum age-related expectations for science *other than briefly in the working scientifically statements*.

*Review of scientific literacy and oracy in primary school education, May 2025*

# Supporting research evidence – oracy

**Recommendation 1**
Develop pupils' scientific vocabulary.

**Recommendation 2**
Encourage pupils to explain their thinking, whether verbally or in written form:

- 2a. Create collaborative environment.
- 2b. Capitalise on the power of dialogue.

**Recommendation 3**
Guide pupils to work scientifically… with opportunities for discussion and reflection.


EEF Improving Primary Science

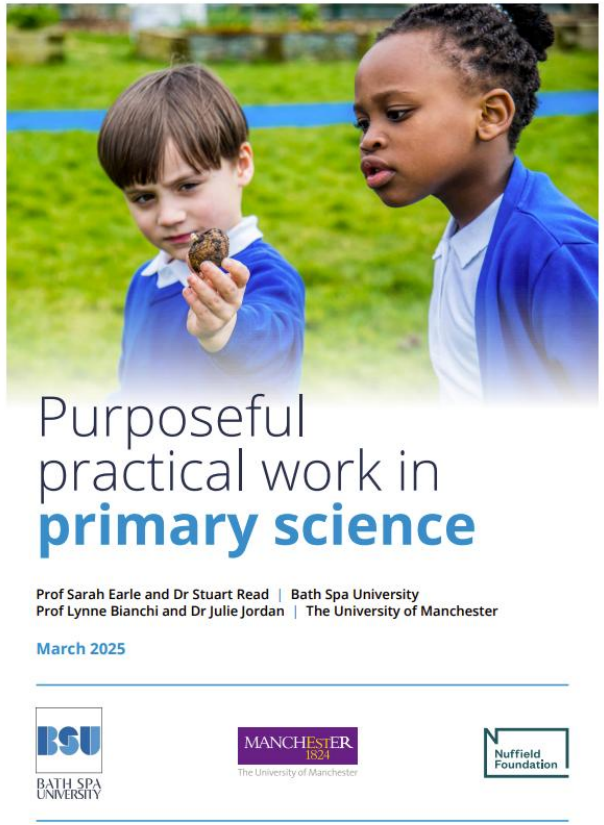
# Supporting research evidence – scientific literacy

**Recommendation 4**
Relate new learning to relevant, real-world contexts:

- 4a. Consider real-world contexts.


EEF Improving Primary Science

# Supporting research evidence - oracy




Multimodal communication is put forward as a core feature of practical work in primary science, supporting 'hands-on', 'minds-on' embodied science learning in a new report from a recent Nuffield Foundation funded study (Earle et al., 2025). It is proposed that communicating about practical work helps to develop science thinking, connecting the objects and materials that are being manipulated to science ideas and explanations.

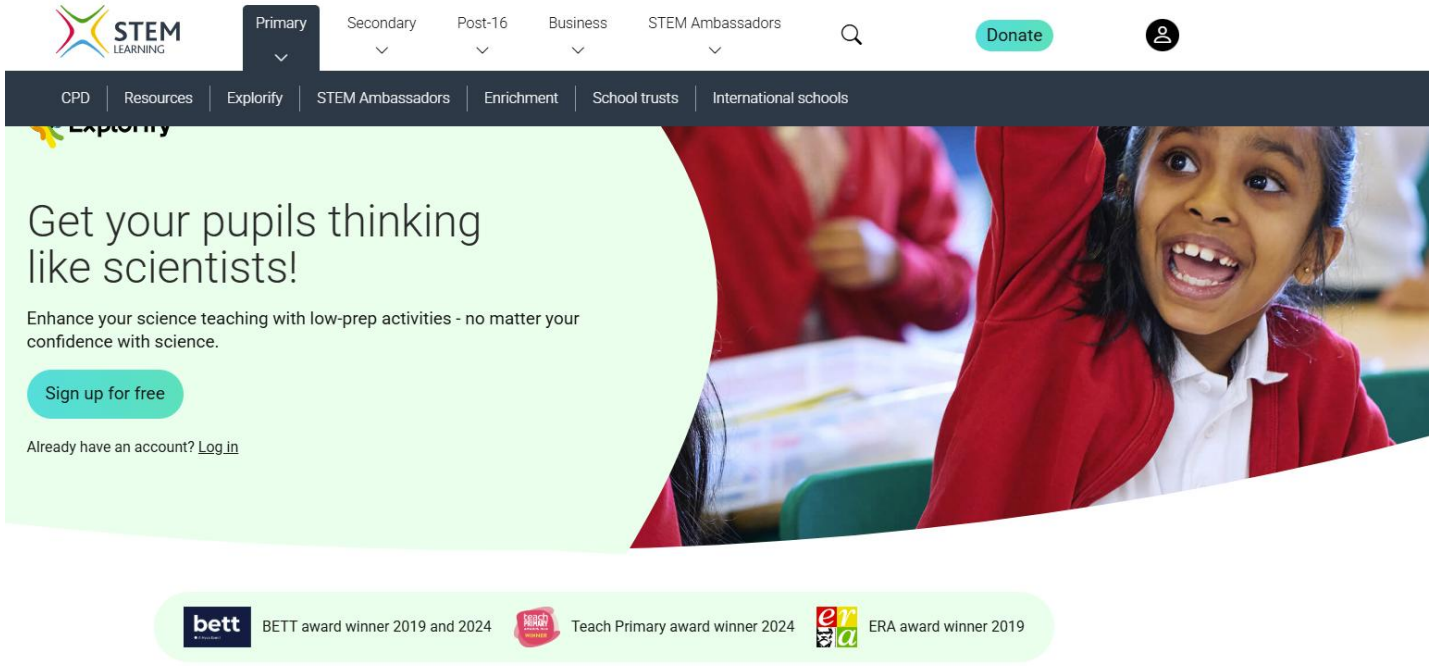
Purposeful practical work in primary science

# Supporting research evidence - oracy

An independent evaluation found teachers using Explorify resources reported increased contributions to classroom discussions leading to increased oracy e.g. use of scientific knowledge and vocabulary; confidence to contribute; inclusion of pupils who struggle with literacy (Wellcome, 2020).

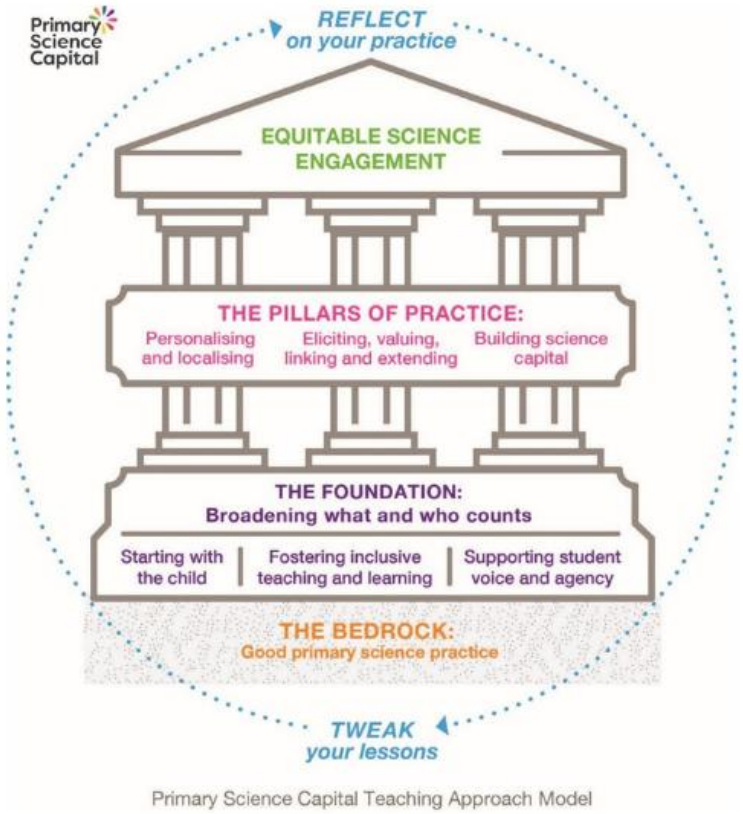

[Evaluation of primary science campaign]

# Explorify




[Explorify]

# Pedagogical strategies – scientific literacy




Primary Science Capital Teaching Approach Model

[PSCTA Teacher Handbook (PDF)]

# Pedagogical strategies

- Making space for oracy-rich primary science, in terms of both a conducive class environment and time for the children to engage in extended discussions.
- Opening out talk to build cumulative thinking, via open questions and scaffolds to encourage scientific reasoning and explanation (e.g. use of sentence stems such as: ‘This is because…’, Hackling & Sheriff, 2015).
- Prompts to spark the discussion, including teacher questioning, activities to instigate dialogue (as found in the large Explorify database), practical prompts and enquiries.

# Reflection and sharing

- How do you promote oracy and scientific literacy in your school?

# Feedback and evaluation

1. What were the main learning points for you today?
2. What impact will today have on you or your school?
3. What further support do you need?