Primary Science Teaching Trust

2023-28 Strategy summary

Excellent science education for all: Refining, targeting and focusing on impact

Vision

PSTT's long-term vision remains the same:

Excellent science teaching in every primary classroom in the UK

Strategic objectives

For this 5-year period, we have four overall objectives:

1. Strengthen primary science teaching and leadership in our priority areas, by helping schools identify and implement the approaches that best meet their needs
2. Ensure our CPD, resources and other activities meet the needs of the wider teaching population, increasing the number of confident and competent science practitioners
3. Embed high-quality science content, approaches and experiences in Initial Teacher Education and early career teaching – especially in our priority areas
4. Strengthen PSTT's position as a widely respected voice for primary science

Ethos

We will be guided by this ethos :

- Science teaching and learning should be equitable and inclusive and practise equality and diversity
- We are a learning organisation – robust monitoring and evaluation, learning from research, celebrating good practice
- We can only achieve our vision when we work with others
- Our work links to the big picture – the education landscape, workforce skills, social inequities and global challenges

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Overview of the strategy

1

To take the next steps towards PSTT's vision, we need a clearer educational mission and sustainable finances

2

We have strong achievements to build on – the College, Clusters, Regional Mentors and several impactful projects

3

Now we need to develop how we support teachers, and to measure our effectiveness better

4

Doing this will also help diversify our income, thus reducing our operational deficit to a sustainable level

5

We'll divide our work into National and Regional programmes, with research and impact evaluation driving both

6

In the Regional programme, there are key growth opportunities in our Priority Areas and Regional Mentor work

7

Nationally, we'll focus on a new CPD offer, supporting trainee teachers and integrating Fellows into workstreams

8

We'll need to restructure our team and deprioritise some work, in order to focus our efforts where we'll have most impact

9

In 3 years we'll be more financially sustainable, and we'll demonstrate impact that unlocks new funding/opportunities

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PSTT achievements in numbers

Main programmes of direct support

College and Primary Science Teacher Awards (PSTAs)

- 181 active Fellows
- Over 100 attended the most recent College Conference
- 16 PSTAs awarded in 2022 and 2023
- Area Mentors support Fellows locally
- CPD funds provided last year to 31 non-staff Fellows – covering course fees, conference attendance, supply, travel and more
- Active small and large College projects

Clusters

- 24 clusters currently funded (177 schools), plus related cluster initiatives
- 11 clusters progressed to independence, no longer funded (75 schools)
- Total of 252 schools in clusters

Regional Mentors

- 1,622 schools helped in last school year with individual/ school level CPD or support
- 638 (39%) of these new to PSTT
- RMs cover London, South-East, Midlands and further

Other activities

Resources

- 40+ resources online or with TTS
- Most popular free resources are TAPS and A Scientist Just Like Me (94 scientist profiles/videos)
- 15,000+ on mailing list receiving Why&How? magazine

PSEA (for student teachers)

- 36 ITE providers engaged
- 200 student teachers involved

In partnership

Explorify (PSTT/STEM Learning)

- Over 110,000 registered users
- 1.7 million user sessions in 1 year
- More than 160 new activities created and published by PSTT staff
- Planning support sessions attended by 500+ teachers, with 5000+ views

Partners' EEF trials

- Focus4TAPS – 140 schools over 3 years; pupils show 2 additional months' progress
- Thinking, Doing, Talking Science – 180 schools in 3rd trial
- PSQM – 155 schools; staff attributed positive outcomes to PSQM

Primary Cluster Programme (SSERC)

Strategic partnership to develop primary science support at local authority level in Scotland

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Developing a clearer educational mission

PSTT has a clear vision: to see excellent science teaching in every primary classroom in the UK.

This has been the bedrock of all our work for the past 25 years. We have delivered many good programmes and activities, and our strategic aim has been wide-angled – to find out what works.

Our strategy for the next 5 years will harness everything we've developed to move the dial more effectively towards our vision.

We aim to:

1. **Refine our approach**
   We will be clearer about what excellence in primary science teaching means, and will use this knowledge in all we do

2. **Target our efforts**
   We will give our most intensive support to schools and teachers that need the most development, and embed equity and social justice in our work

3. **Focus on impact**
   We will be more rigorous about evidence, improve how we measure the effects of what we do, and keep learning how to do it better

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To deliver this mission, we have a new operational structure within PSTT.

Cross-cutting elements

Research and development

Analysis of needs in primary science

Innovation in both programmes, shared and developed across them

Impact evaluation

Monitoring and measuring the changes we effect

Using data to drive further improvements

Communications and marketing

Engaging, celebrating, promoting, supporting

National Programme

Delivery and evolution of PSTT's national approach, including:

- National CPD offer – open-access courses, free webinars, video tasters
- College development – better integration of Primary Science Teacher Awards, College Conference/CPD opportunities, and Area Mentor support
- Commissioning and funding projects that meet teachers' needs
- Primary Science Enhancement Award for student teachers – expand and integrate into core work
- Free and paid-for resources
- Development of PSTT's voice in primary science, and our research presence (Journal of Emergent Science)

Regional Programme

Priority Areas:

- Intensive development projects (in England, Wales or Northern Ireland) using the PSTT core offer
- Related work in Scotland through SSERC

Wider regional work:

- Regional Mentors (paid services to schools, MATs and others) – coordinated, more standardised, building on our core offer
- Opportunities for Fellows to connect and share:
  - Meetings and events
  - Pathways for Fellows to become CPD deliverers
  - Support for existing clusters
- Partnership development with local authorities, STEM organisations, universities, business, funders

Underpinning elements

Sound financial management

Strong governance

Efficient and effective administration

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We'll define what we mean by excellence in primary science and will develop a PSTT 'core offer' that helps schools work towards excellence.

What is the core offer?

This means all of the components that contribute towards excellent primary science, for example:

- Development of a strong science curriculum
- Good practice in monitoring and assessment
- Children seeing themselves as scientists
- Support for all teachers to access professional development and learning opportunities

We will bring these components together as PSTT's offer to teachers and schools.

The core offer will flow through our work in both the National and Regional programmes. As well as activities delivered by PSTT staff, we'll provide opportunities for Fellows to get involved in delivering parts of the core offer throughout the country.

We'll look to standardise parts of what we offer, while still allowing scope for bespoke support, e.g. mentoring for science leaders.

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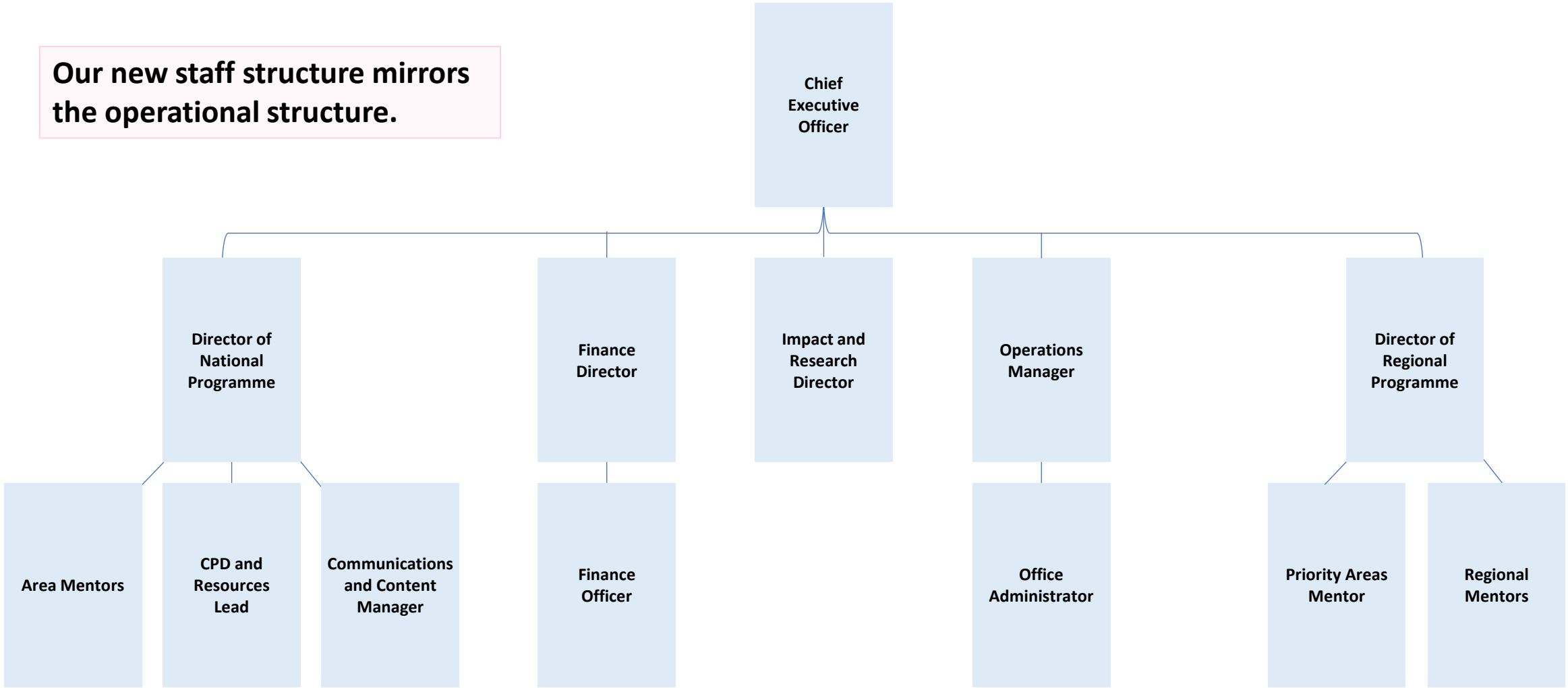
Our new staff structure mirrors the operational structure.



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A key component of our new strategy is the Priority Areas initiative.

This is about giving intensive support to areas identified – in England, Wales or Northern Ireland – as needing significant development in primary science.

Years 1 & 2

- Use various data sources (government, PSTT and partners) to map areas most likely to need development in primary science
- Establish 3 pilot Priority Areas (PAs) with 10 schools in each – these areas are now established as North Thames Estuary, Medway and Edmonton (North London)
- Schools benefit from free access to full PSTT core offer; we benefit from experimenting with our delivery model
- Priority Areas Mentor will provide:
  - 3 days CPD per year
  - Regular support and contact between CPD days
  - Up to £1,000 per school, per year for supply cover/resources

Year 3

- Establish 3 new Priority Areas in a different region, using a refined model
- Provide smaller level of support to the established PAs to help them transition to 'independence'
- Use emerging impact data to:
  - Continue to refine and develop the model
  - Develop new partnerships in different regions

Years 4 & 5

- Having secured co-funding from partners, establish further Priority Areas in current or new regions
- Expand scheme through 'bolting on' new PAs and regions as partnerships and funding are realised
- Continue to provide 3rd year support to transitioning PAs, using data from first cohort to guide effective approaches

Working in Scotland

We'll partner with SSERC on a parallel scheme – based on a revised version of their Primary Cluster Programme, working more intensively with a few local authorities. This will give helpful comparative data about the effectiveness of different approaches.

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We will refine and develop the Regional Mentor initiative.

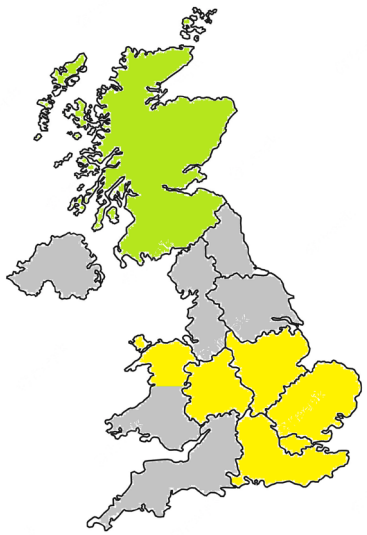
The Regional Mentor (RM) programme so far

- We've been able to provide bespoke support in the areas shown below
- We've supported over 1,500 schools each year with individual/school level CPD or support
- We've helped a similar number of additional schools through smaller interactions, e.g. mailings
- RMs have also delivered STEM Learning/SLP services and developed other projects, e.g. Science Capital, A Scientist Just Like Me
- Income from services has increased and there is further scope for developing this income stream

Regional Mentor support available

RM support available by special arrangement

Some RM-type support provided in partnership with SSERC



What we're doing next

Already in progress:

- Standardise charging model across all RMs
- Improve consistency of data collection and analysis

Next steps:

- Develop PSTT's core offer and unify RM services around this offer, while still allowing for bespoke delivery in different settings
- Build on model of working with multi-academy trusts, federations and other school groupings – increasing efficiency of delivery
- Develop our marketing, e.g. use data from Priority Area mapping exercise to target areas we know need support, but where we can't give free PA support right now
- Once new approach embedded and covering higher % of programme cost, increase number of RMs and geographical spread

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Within the National Programme, we will develop new CPD opportunities based on PSTT's core offer.

Building on what works

We have several areas of activity to build on:

- The Climate Science Symposium (2021), a popular online event with several partners
- Webinars to support teachers to use Explorify content
- Some PSTT staff already run courses for STEM Learning and for SLPs
- Three key projects – TAPS, Thinking, Doing, Talking Science (TDTS) and the Primary Science Capital Teaching Approach (PSCTA) – have 'train the trainer' programmes with PSTT staff and other Fellows already involved

New opportunities

We now have the opportunity to develop a planned approach to supporting teachers not otherwise accessing our services, e.g. through Regional Mentors. We can:

- Deliver open-access CPD sessions on key areas within our core offer – e.g. curriculum development, whole-school planning, science capital – online or regionally/face-to-face. This will be more cost-effective and efficient than supporting individual schools.
- Support more Fellows to become involved in TAPS, TDTS and PSCTA
- Produce free content – videos, webinars – that give overviews of key areas within our key offer
- Build on our relationship with STEM Learning to reach more schools through a national CPD partnership programme

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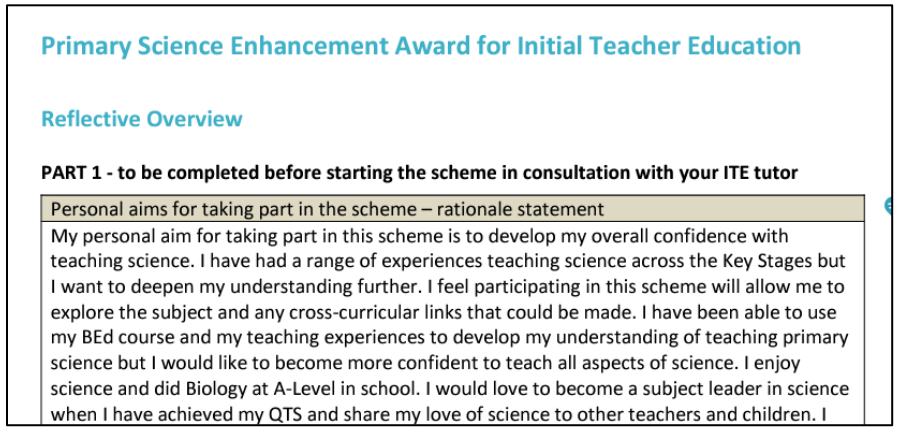
We will also develop our support for Initial Teacher Education.

- As recognised in our second objective, it's important to reach teachers early in their careers – reinforcing the importance of science both when they are training and in the early career phase
- We've already developed the **Primary Science Enhancement Award (PSEA)** – a supportive, low-intervention model to help student teachers, currently in its third year of development
- We're piloting an Early Career Teacher version of the scheme through the Ogden Trust



Primary Science Enhancement Award for Initial Teacher Education

Reflective Overview

PART 1 - to be completed before starting the scheme in consultation with your ITE tutor

Personal aims for taking part in the scheme – rationale statement
My personal aim for taking part in this scheme is to develop my overall confidence with teaching science. I have had a range of experiences teaching science across the Key Stages but I want to deepen my understanding further. I feel participating in this scheme will allow me to explore the subject and any cross-curricular links that could be made. I have been able to use my BEd course and my teaching experiences to develop my understanding of teaching primary science but I would like to become more confident to teach all aspects of science. I enjoy science and did Biology at A-Level in school. I would love to become a subject leader in science when I have achieved my QTS and share my love of science to other teachers and children. I

What next?

- Roll out PSEA further with modest additional investment
- Make links with ITE institutions in Priority Areas, so that our early-career strategy also links with this strand of work
- Track teachers from ITE through to early career in order to:
    - Gather data on how they embed science in their work
    - Keep in touch and offer additional services/support to their schools → another opening for our Regional Mentors and CPD programme

Kayleigh, student teacher from Plymouth Marjon University, talks about taking part in the Primary Science Enhancement Award for Initial Teacher Education

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Embedding Fellows and the College in our work

Currently

- Around 180 active Fellows
- PSTA nominations have slowed in last few years
- Fellows have been involved in PSTT delivery
    (a) when they become staff members
    (b) as project leaders, resource writers or cluster coordinators
    (c) delivering to other Fellows, e.g. at the College Conference

Reasons to get Fellows more involved in delivery:

- Provide more opportunities for Fellows' professional development
- Enable PSTT to be more flexible/agile in how we deliver
- Enable us to reach wider audiences, underscoring the College as a gathering place for excellent practice
- Help strengthen local and national networks

Opportunities include:

- Supporting more Fellows along their professional pathway to train and develop others – at national and local levels
- Refreshing CPD funding to emphasise how Fellows can use this to support others' practice
- Driving more, and more diverse, PSTA nominations
- Replacing College project funding with a commissioning scheme for identified gaps
- Opening up parts of the College Conference to paying non-Fellows

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Year 1 priorities (September 2023 to August 2024)

Our current priorities include:

- **Core offer** – agreeing what this offer looks like and how it will flow through all of PSTT's work
- **Monitoring and evaluation** – finalising PSTT's 'theory of change' and the evaluation framework we'll use to measure our impact
- **Priority Areas** – establishing a pilot scheme with 30 schools in 3 areas
- **CPD programme** – developing new courses and adapting existing work to meet the core offer
- **College development** – honing our offer to Fellows and planning the next College Conference around strategic priorities
- **Regional Mentor programme** – establishing refined practices and developing income generation opportunities
- **Operational changes** – settling into new staff structure, improving cross-team working and introducing a CRM

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Summary

1. During PSTT's 25+ years, we've delivered many good projects that have contributed greatly to the UK's primary science landscape.
2. With our experimental approach, we've invested millions of charitable funds in developing our knowledge of what works. Along the way, we've supported thousands of schools and nurtured strong communities of practice among teachers.
3. We're now ready to invest more purposefully in the most effective ways to improve and enrich primary science.
4. We'll develop what PSTT delivers into a coherent and consistent offer, and we'll continue to refine this offer.
5. By applying our approach intensively in Priority Areas, we'll bring about transformational change in places that most need it.
6. Outside those areas, schools will benefit from a more focused and impactful Regional Mentors programme and new programmes of CPD. These will generate valuable new business for PSTT.
7. The College will remain integral to our success, and Fellows will play a more central role in delivery of all our programmes.
8. We'll also bring student teachers and early career teachers into the heart of our planning, so that we support whole-career pathways through primary science.
9. Throughout all this, we'll strengthen our focus on delivering impact, using richer data to measure the changes we create and enable us to adapt.
10. Our tighter focus, and financial pressures, will initially mean a smaller budget and team. But with improved impact, there will be more and better opportunities to fundraise for PSTT's work – a virtuous circle of results, reputational capital and revenue.
11. Most importantly, we'll strengthen PSTT's contribution to our ultimate vision – excellent science teaching in every primary classroom in the UK.