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YOU'VE BEEN WAITING FOR



DAISY CHRISTODOULOU How to spot greater depth

The secret to problem solving

# Your guide to <u>responsive</u> teaching

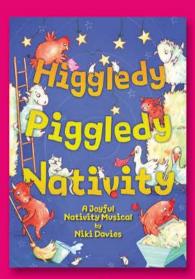


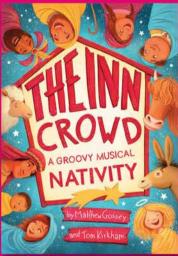
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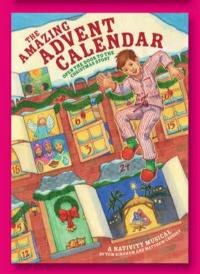
SCIENCE **BONFIRE NIGHT ACTIVITIES** 

ART **GREEK GODS & GODDESSES** 

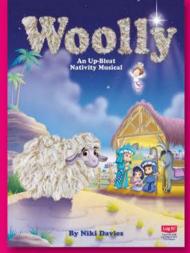
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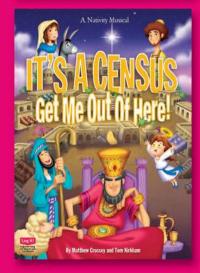


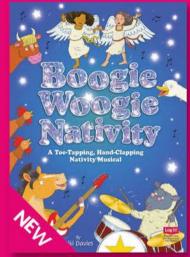


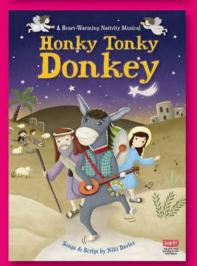


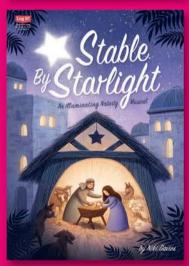














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# Hello!



t is a huge honour to guest edit this October issue. I'm currently busy touring for my new adventure series, *Which Way to Anywhere*, visiting as many schools and places as possible, talking to kids and teachers about writing, illustrating and the power of creativity.

Daisy Christodoulou's piece on greater depth in relation to primary writing chimes especially for me (p58). As a child, my handwriting was terrible, my spelling was incomprehensible but I loved writing

stories... Of course, grammar and spelling are important, but shouldn't prevent creativity. If a child starts their writing by thinking they must be perfect, they won't express themselves in the way they want to.

It was Miss Mellows in Y3 who gave me free rein to write whatever I liked – my own stories in these special books that she didn't correct. This was joyful and liberating and was the inspiration behind point eight on my Children's Laureate Charter: every child has the right to be creative for 15 minutes a week. The campaign encourages teachers to use a short period of time to allow children to free write in a notebook that's off limits to parents, teachers and the dreaded red correction pen. (It's a bonus for teachers too – less marking!)

Meanwhile, Frank Norris' opinion piece is a sad reflection on Ofsted and its devastating impact on teacher morale (p12). I have met so many dedicated, creative teachers in my 25 years of visiting schools as an author, and the pandemic showed us all that teachers are heroes – thank you for everything you do. The Times Education Commission's proposal for better collaboration with schools and more emphasis on wellbeing, culture and attendance feels like a much more human approach than the current system.

I'm inspired by Liz Hawker's advice on 'brain breaks' and their 'ignition for cognition', too (p30). Short bursts of physical activity to generate creativity and curiosity could be just the ticket for when I come to write the next book in the *Which Way to Anywhere* series!

With best wishes,

Cressida

Don't miss our next issue, on sale 17th November

# POWERED BY...



## **CLAIRE COOLIN**

on making systematic maths lessons less scary with Polya's problem-solving cycle.

"The steps have since become a classroom philosophy, and I use the vocabulary daily." p22



### DR LIZ STAFFORD

suggests recording plenty of videos and focusing on skills to bring music assessment up to snuff.

"We may now be approaching a golden age of assessment – back to its original purpose." p61



### MARC BOWEN shares a monstrously marvellous art project on 3D sculptures for Key Stage 2 art.

"The real success of this lesson relies upon sourcing high-res photos of animal eyes." p76











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Contents

**ISSUE 16.7** 





# REGULARS

- 08 BREAKTIME
- 50 SUBSCRIBE TODAY

# VOICES

12 FRANK NORRIS Ofsted needs to be less toxic...

# 15 WILL CANNOCK

Child-centred strategies should be at the heart of every SEND policy

# 21 UNDERCOVER TEACHER

Headteachers have the same ultimate goals as teachers. We promise...

# **SPECIAL SECTION**

# ASSESSMENT

### 58 WHAT IS GREATER DEPTH?

We're all looking for evidence of the holy grail for writing assessment. But how do you know when you've found it?

### 61 MARKIN' MUSIC

How to make sure your practical assessment is up to snuff



# 64 LOOKING BACK, MOVING FORWARD Whether you call it 'AfL', 'formative

assessment', or 'responsive teaching', here's how to make it work in your classroom

## 67 THE PERFECT ASSESSMENT POLICY

Avoid an impenetrable document, focus on simple explanations and use actionable examples, and you won't go far wrong...



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# FEATURES

# 11 6 WAYS

To take your learning outside

19 HOW I DO IT Self-portraits based on Ancient Greek mythological beasts

### 22 HOW DO YOU SOLVE A PROBLEM LIKE...

From groans and panic to calm curiosity – how to make systematic maths less scary

# 26 MEDIUM-TERM PLAN

Explore the Victorian era with KS2 through the development of steam trains

# 30 NO-BRAINER BREAKS

Integrating pauses into your teaching turns on the ignition for cognition – and not just for SEND pupils

# 35 REAL SCHOOLS

Engaging in the scientific method helps pupils at St Bartholomew's build confidence, gain information literacy, and grow into responsible stewards of the world

# RESOURCES

# 56 THE PLAZOOM ROOM

Activities, ideas and free resources for all your literacy needs

# LESSON PLANS

- 72 COMPUTING
- 74 SCIENCE
- **76** ART

# REVIEWS

- 80 FIVE MINUTE BOX
- 81 COLLINS



# 40 MEET THE AUTHOR

CLiPPA winner Valerie Bloom on discovering identity through poetry

# 44 CREATING MAGIC

Guest editor Cressida Cowell on the joy of writing for children, and the particular enchantment of reading for pleasure

# 47 BOOK TOPIC

Battle the Romans with Boudica and learn how historical records can reveal the past, with Tony Bradman's *Queen of Darkness* 

# 53 LIFE IN THE FAST LANE

How teaching letter sounds at pace can enhance children's reading and writing

# 54 BOOK CLUB

We review five new titles that your class will love



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# News Interviews Ideas Resources Research





# Fifteen £1/€1.50 titles have been revealed for World Book Day 2023 (Thursday 2 March), including books in Irish and Welsh. This year, for the first time, children helped with the selection and those previously described as 'reluctant readers' explored titles by potential World Book Day 2023 authors to make their recommendations. Popular authors Lenny Henry, Adam Kay, L.D Lapinski, Joe Wicks and Sophy Henn all join the line-up of World Book Day 2023 to encourage more families and young people to read.

Surveys run for World Book Day have found that as a result of WBD 2022, 50 per cent of children find reading more fun, and 48 per cent speak about books more to friends and family. In addition, a fifth (22%) of children who receive free school meals said their £1 book in 2022 was the first book they have owned.

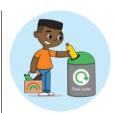
Read more and find the complete list of 2023 titles at tinyurl.com/tp-WBD2023

# 3 INSTANT LESSONS... (You're welcome)



### BLACK HISTORY MONTH

IntoFilm+ has launched a new Black History and Experiences programme, with the aim of embedding a variety of Black topics in the curriculum, not just during this month, but throughout the whole school year. Visit tinyurl.com/ tp-IntoFilmBHM



## HOW TO BE A GOOD CITIZEN

BBC Bitesize has released a new programme of easy-to-understand guides for Citizenship (Y1-Y6), which will cover topics such as 'What is a Citizen?', 'Health in the Community' and 'Money Matters'. Visit tinyurl.com/ tp-BBCcitizen for more information



## FREE MUSIC LESSONS

Want an easy way to bring more music to your class this year? **Classroom 200** helps you cover the music curriculum with confidence from KS1 to KS3. Discover 200 high-quality, ready-made lesson plans for free – it's your perfect lesson-panning companion. Sign up at **classroom200.org** 



# Get grammar sorted!

Start each day with a quick, fun helping of SPaG revision, courtesy of Plazoom's Grammar Slam collection – five-step PowerPoint activities covering key word, sentence, text and punctuation skills from Appendix 2, for all year groups. Find out more and try Grammar Slam for yourself at **Bit.ly/PlazoomGS** 

azoow

# UK not tackling inequality

A new study, published as part of the Institute for Fiscal Studies' Deaton Review of Inequalities, shows that education in the UK is not tackling inequality, reports *The Conversation*. The report uses a range of data, including national statistics published by the Department for Education, and shows that children from

disadvantaged households tend to do worse at school. Although this may not come as a surprise, the study has revealed the magnitude of the gap. For example, only 57 per cent of children who are eligible for free school meals at the age of five, are assessed as having a good level of development, compared with 74 per cent of children from better off households. What is more disturbing, is that this isn't improving. The report shows that over the past 15 years, those from wealthier backgrounds have been 27-28 per cent more likely to meet GCSE benchmarks. Read more at **tinyurl.com/tp-DisadvantageGap** 

# **Education fellowships**

A programme of new fellowships exploring global approaches to improving how children and young people learn in schools, opens from Tuesday 13 September. Run by the Churchill Fellowship in partnership with the Mercers' Charitable Foundation, these fellowships will fund up to 20 individuals to spend up to two months discovering new ideas and best practice from leading practitioners. Applications are particularly encouraged that explore ways to help children to enjoy good mental health, or that address the widening attainment gap affecting disadvantaged pupils. Find out more and apply at **tinyurl. com/tp-EducationFellowship** 

# 95% OF SCHOOLS REPORTED DIFFICULTY WITH TEACHER RECRUITMENT IN 2022\* Look ahead Book ahead

## SCHOOLS & ACADEMIES SHOW

The annual conference dedicated to effective teaching and school

management is back at the NEC in Birmingham on 17 November. Get your tickets at tinyurl.com/ tp-SA2022



### IMPROVE WELLBEING

Join an expert panel for Rewriting Your Wellbeing – the health and wellbeing event for educators, on 22 October at the Barbican, London. All proceeds go to EdSupport. See tinyurl.com/tp-RYW





# Tim Peake

### Tell us a bit about your new book

This book was inspired partly by doing a spacewalk, looking down on the planet Earth and answering questions. Because people have asked me 'does it [being in space] change your perspective?' and it made me think... We may seem tiny and insignificant, but actually we aren't. If you think about it, we are incredible. Often as humans we can detach ourselves from nature and our origins, which is the beginning of the universe. So, the *Cosmic Diary* is your diary. It's about how you got here... starting 13.8 billion years ago.

# How do you hope the book will inspire children?

I hope it will inspire children by being a fun and fact-packed book, where they can pick it up, dip into it and answer some of the big questions, or at least get the best answers that we have today. From things like the big bang, and how stars are formed, to black holes and how all the elements of our body were formed and how life evolved on planet Earth; it's packed with everything and hopefully it's really easy find bits of information.

# What advice would you give yourself as a child?

I think the best advice would be 'don't change anything' because it's worked out alright! But in seriousness, I think that, when you're younger, one of the most difficult things is lacking in confidence. We all suffer from that. I think we really need to instil in young people the confidence to grasp opportunities, because the worst thing in the world is to regret things later in life. If you grasp an opportunity, you'll never regret it because you'll always learn something from it. Even if you're not successful, the point was that you tried in the first place and you're going to learn about yourself.

The Cosmic Diary of Our Incredible Universe (£12.99 HB, Wren & Rook) is out on the 13th October

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# FEATURES OUTDOOR LEARNING



# **6 WAYS** to take your learning outside

Keen to ditch the iPads and introduce your pupils to the joys of nature-based classes, but not sure where to start? Try these ideas from the Muddy Puddle Teacher...

### **1 USE NATURAL MATERIALS**

Using natural materials is a great way to reduce plastic, and encourage the health benefits that come from being outside in nature, including the healthy bacteria the lovely mud brings along with it. There are lots of sensory benefits from touching the many different textures in nature, too – like sticks, rocks, leaves, and of course mud – and this can better support neurodiverse children accessing the curriculum, as well as those pupils who lack concentration while indoors. Furthermore, using what's out there is free! Nothing more to buy! And if that was not enough to convince you to use more natural resources to teach, this might be: it can all be left outside, with nothing to prep or put away, making outdoor learning easily manageable.

### **2 GO OUT IN ALL WEATHER**

In all the years I have been a teacher, I've only had to abandon an outside lesson due to weather once. It was a dangerously windy day, and so for safety reasons we couldn't complete our activities, but very rarely does the weather get bad enough for long periods of time. As long as the children are dressed appropriately, you can do this! Plus if you're using only natural or upcycled resources it will not matter if it has rained, as nothing will ruin. Win-win!

### **3 BAN INDOOR ITEMS**

To begin with, this one can be difficult. You may be used to your indoor apparatus such as a whiteboard or an iPad, but for you to achieve lessons that really reap the benefits of being outside, you need to ditch them. I have been there and got the t-shirt – by taking resources designed to be used inside, outside, you'll open them up to damage and make life a lot harder for yourself, thereby making you more reluctant to go outside again. Furthermore, outdoor learning is supposed to provide pupils with experiences they can't get inside... so keep the kids moving, embrace nature, and leave your digital tools behind.



Sarah Seaman is CEO of The Muddy Puddle Teacher Ltd, and author of The Playful Way to Create an Outdoor Early Years Curriculum.

### **4 | START WITH SCIENCE**

There are plenty of outdoor learning opportunities in both the EYFS and National Curriculum for outdoor learning, but if you're new to this it's useful to start with science. Many topics within this subject provide opportunities to take the children outside and get hands-on with their learning. This is vital for the children who are practical and visual learners, but also for those who like to move and explore. Topics such as habitats, animals including humans, plants, and materials can all be explored outside, and pupils might even gain greater depth than being taught inside only.

# 5 | NOT ALL LESSONS HAVE TO BE 100% OUTSIDE

You do not have to take full lessons outside. There are no rules! Try a combined approach and maybe keep intros inside with main activities outside. When I train whole schools, I always advise KS2 to work this way, as children can sit and focus at their desks to hear what they're going to be doing, but then have the chance to develop a greater depth of understanding by being outside where their senses are alive and learning experiences become memories. In particular, repeated learning like times tables and number bonds can be explored in interesting ways outside, such as allowing pupils to create their own counting ladders from sticks, for example.

### 6 | MAKE AN OUTDOOR CUPBOARD

If you do have outdoor resources that need to be stored somewhere, get creative and re-think the way you can keep your items safe (and tidy!). Try making an 'outdoor cupboard' using upcycled containers. Use barrels, steel dustbins, or even old tyres, and fill them with natural items you will use to teach. You can alter the materials depending on the season, so in autumn you might use conkers, acorns, various shades of fallen leaves, and sticks (bamboo sticks are especially useful because you can get packs of them that are equal in length and nice and straight). Just as you may have an inside cupboard of supplies, you've now got somewhere to organise your outdoor classes. Ofsted needs to do some real soul-searching to make their inspection framework less toxic and more genuinely helpful

# **Frank Norris**

@FrankWNorris
frankwnorris.co.uk

ecently I was contacted by a headteacher who reached out to me for support because the school he leads was judged as Requires Improvement by Ofsted. He was devastated and taking the judgement personally. As he spoke, he expressed concern for other leaders serving economically and socially challenging areas who were going to go through a post-pandemic inspection, because his own experience suggested that many inspectors were too rigid in their interpretation of the framework and gave little regard to the school's context.

To give you some background, last year I was invited to attend evidencegathering sessions for The Times Education Commission. An interesting range of colleagues from schools, colleges, universities, businesses, civic leadership and the third sector were present. Delegates considered the barriers to educational improvement, and there was a clear sense that Ofsted was a big part of the problem.

Senior school leaders complained about too much unpredictability in the way evidence was being gathered, and a strong belief that the inspection framework was leading HMI teams to judge particular schools more negatively than others. There was also a sense of deep frustration that many of those carrying out inspections were not drawn from the ranks of leaders serving schools in the most challenging areas, and that the career stakes around receiving the dreaded 'RI' grading were too high. I was not surprised, then, to hear many report that inspection was preventing rather than encouraging innovation.

When the Commission published its report in mid-June, I welcomed the damning statements about the inspectorate from a wide range of voices including Dame Alison Peacock, the chief executive of the Chartered College of Teaching, who compared Ofsted to a reign of terror; and Professor Tim Brighouse who felt the inspectorate had 'effectively created the equivalent of a sheepdog which is eating their own



flock'. They made me reflect on how restrained session delegates had been.

Despite modifications to the process of inspection over time, it is still largely done to schools. Any shift towards greater collaboration between the inspectorate and those it inspects would probably need to include reform of the grading and regularity. I've thought for some time that HMI undertaking short-planned visits to schools every three or four years where they share their observations in a short note would suffice. The assumption being that all schools are effective unless we find out otherwise through inspection. The short note would indicate whether a full inspection might be helpful in securing further rapid improvement. I believe that less than 10 per cent of existing inspection activity would be required under this system.

The Commission also proposed that Ofsted works more collaboratively with schools to secure sustained improvement and uses a wider range of measures such as wellbeing, school culture and attendance to determine effectiveness through a 'report score card'. This suggestion is helpful but it needs to include a sufficiently wide range of reliable data and robust information to help parents and carers understand the strengths and relative weaknesses of the school. Right now, despite slight changes this year to the DfE standards website, it remains too heavily weighted towards some factors that are not entirely in the control of the school. The new report score card, on the other hand, would enable parents to select the aspects of school life they consider to be most important, rather than largely rely on an overall grade.

So, well done to the Commission. It has produced a more ambitious and thought-provoking statement on the future of education in England than the recent White Paper. Its recommendations for improving inspection are timely but it will require some real soul searching at Ofsted to embrace them. Any review of the inspectorate needs to consider its negative impact on recruitment and retention of staff including school leaders, on the culture of 'Ofsted centric' schools, and the impact on innovation and curriculum change, and particularly the broader impact on schools facing the most challenging circumstances.

Headteachers simply want a challenging, yet supportive, fair process that is less likely to end a career. They deserve nothing less.

Frank Norris MBE is a former senior HMI, and currently education adviser to the Northern Powerhouse Partnership.



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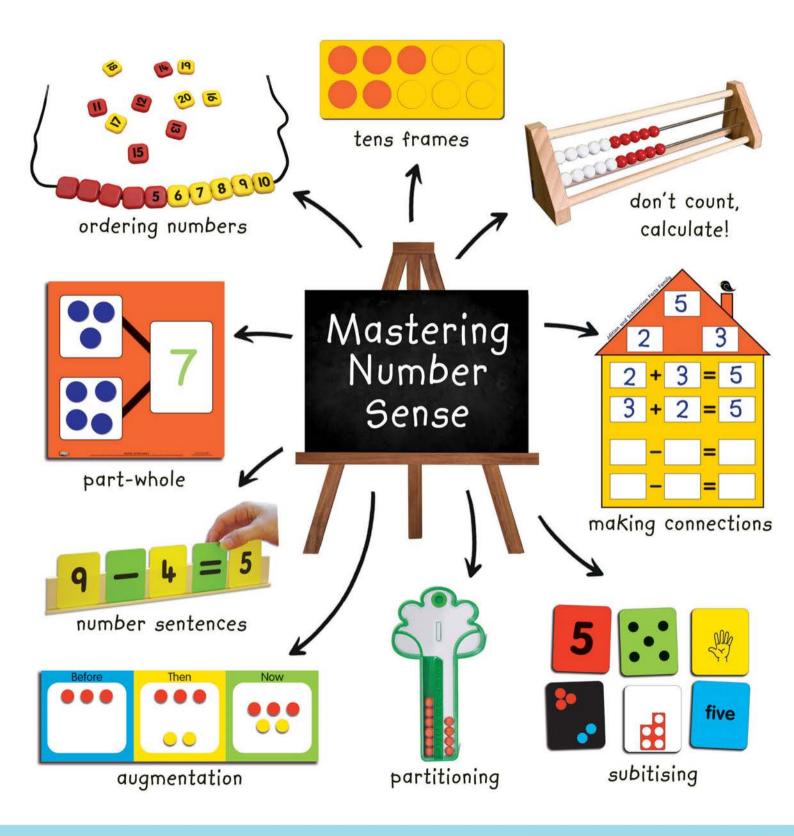
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# THREE KEY STEPS TO INCLUSIVITY

Child-centred strategies should be at the heart of every school's SEND policy, with a combination of universal and more targeted support

hether you're digesting the latest government announcement on levelling up, keeping an eye on the progress of the SEND review or even watching a national sporting event, it's highly likely that you will come across a reference to inclusion.

The desire to create a more inclusive society touches every part of our lives. For those of us working in education, nowhere is the focus more important than in our schools.

But how can we create an environment where all students feel included, valued and supported?

At Charles Dickens Primary School in Southwark, we have a higher-than-average number of pupils with SEND, so great emphasis is placed on the importance of inclusive teaching. Our approach is based on three key strategies, each of which has a role to play in helping schools to create a more inclusive learning environment for all children. Here's how I think they could work for you...

# **1. Maintain** consistency

It is probable that an effective strategy for building inclusive policies into one part of a school could be adapted and replicated more widely. For example, in our school we have introduced a range of strategies to encourage and reinforce positive behaviour... including bingo cards.

We've seen how much the children love being spotted working hard, listening carefully and being kind, and getting their cards marked off as a reward. It's a really successful initiative that has increased positive behaviour and resulted in far fewer teachers needing guidance on managing incidences in their lessons.

A key strength of the scheme is that the bingo cards can be adapted to individual pupils' needs. So there might be specific actions included to help a chatty child stay focused, or encourage a shy pupil to raise a hand to answer a question. But its real success lies mostly in the fact that children in classes across the school have the cards, which means pupils are familiar with them and they're not a novelty.

# 2. Encourage independence

Teachers can sometimes have different routines in place to help children take care of their personal belongings, get the equipment they need for each lesson, and put sporting apparatus away after PE. A more inclusive strategy is one that, as much as possible, doesn't have a group of children doing something inherently different to everyone else. Children are happier, more engaged and make better progress in school when they get the support they need to navigate the day without requiring the help of an adult. So standardising common routines can be a great way to encourage pupils to be more independent. In our school, every child has access to a visual timetable to help them see what lessons are being taught now and next, so no child with additional needs feels singled out by having information displayed visually.

# **3. Support learning**

One area where a focus on inclusion can make the greatest difference is in the way children with additional needs are supported in the classroom.

Pupils who do not yet have the vocabulary or processing skills to grasp the meaning of unfamiliar terminology used in curriculum areas such as science, English and geography can be at a disadvantage from the start and will be at increased risk of falling behind.

One of the ways we have become more inclusive is to pre-teach subject-specific vocabulary to all children a few weeks before it comes up in a lesson, helping them to build their knowledge of these terms ahead of time.

Teachers select the specialist terms they are planning to teach – e.g. *tectonic, atmospheric* and *terrestrial* – and create word banks and maps in advance of the lesson. These resources include an appropriate symbol or simple image to represent each of the words and phrases so they are immediately more accessible to children with speech, language and communication needs.

As inclusion becomes increasingly important, in education and in wider society, provision for children with and without SEND will continue to evolve. Child-centred strategies should be at the heart of this and with a combination of universal and more targeted support, schools can create a more inclusive learning environment for all. **TP** 

### Will Cannock is MAT SEND

Lead at The Charter Schools Educational Trust and previously SENDco at Charles Dickens Primary School, one of the DfE's behaviour hub schools. It uses Widgit symbols to develop resources to support its focus on inclusion.

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Make STEM learning exciting and fun with this innovative, stand-alone classroom resource, encouraging your pupils – individually, in pairs, or as a team – to design and make their own miniature racing car, then test its aerodynamic qualities using the unique roll-out race track, and finally re-evaluate their designs to produce a winning car! It's not just about winning, but seeing ideas come to life; evaluating and improving designs; and developing teamwork and sportsmanship.

ET:



当**WOW** 

FACTOR

Contact: primarystemproject.com primarystem@denford.co.uk +44 (0)1484 728000





Pupils fold a pre-cut printed chassis net to make a basic racing car, then design and make a bodyshell, following research into air resistance, gravity and air pressure, and go on to test the aerodynamic qualities of their cars by racing them down the roll-out race track, before analysing and modifying their designs.



Curriculum resources – mapped to the primary National Curriculum – are available to help you to deliver inspirational and interactive lessons for STEMrelated subjects and more. Activity sheets are also available to inspire pupils and help them to develop STEM skills through hands-on activities.



Practical learning allows pupils to develop knowledge and skills, such as science applied to the real world; the process - research, design, make, test, modify, race; teamwork and sportsmanship; speaking and listening skills; recognising personal strengths and strengths in others.

## BUILDING SKILLS BEYOND STEM

Taking part in this exciting project allows pupils to develop not only skills in STEM subjects, but also life skills in areas of creativity,

problem-solving, communication, confidence and teamwork. This stand-alone resource is also an ideal introduction to the world of F1 in Schools – the largest global STEM challenge.







# Explore, Discover and Remember

# at the National Memorial Arboretum

Refreshed for 2022/23, the Arboretum offers a wide range of opportunities for students and teachers alike, including ready prepared tours and workshops. Using our landscape as inspiration, the Arboretum's learning team has ensured both the National Curriculum and Ofsted Education Inspection Framework are central to the content delivered. <image>

For further information visit thenma.org.uk/learning

# Perfect for KS1

- Medal Explorer Day
- Act of Remembrance
- Guided Tour
- Poppy Activity

National Memorial Arboretum Part of the Royal British Legion

Alrewas, Staffordshire, DE13 7AR







Perfect for KS2

WWI & WWII Explorer Days

Activity Book Tour
 Guided Tour

Heroes of the Holocaust Explorer Day

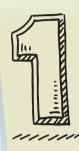


# FEATURES ART

How I do it

Create a self-portrait inspired by mythological beasts from Ancient Greece, with LKS2

MANDY BARRETT



0000>

Begin the project by reading a range of Greek mythological stories, and spending some time learning about the different characters. We used a variety of books and websites and watched videos, to find out about the myths, and there's plenty out there to choose from. Next, get children to discuss the stories and characters in small groups and brainstorm what they have learned, creating a mood board of their ideas.



e are always looking for wavs to link our creative projects with other subjects, as this is an ideal way to reinforce learning throughout the curriculum. Our Year 3 children have been learning about Ancient Greece and were also looking at a range of artists and illustrators who have been inspired by artwork from the past. We decided to base a short art project on the book *Mythologica*, written by Stephen Kershaw and illustrated by Victoria Topping. This title is full of wonderful, vibrant images that really sparked our children's imaginations.

Then, focus on the book *Mythologica*, reading the stories and looking carefully at the illustrations created by Victoria Topping. We also explored her website and studied a range of her illustrations, spending time discussing her style and wondering how she might have created her images. We all liked the bright and vivid colours that she uses in her work.



Now let the children spend time planning what type of mythological creature they would like to be. What would they look like? Would they have any special powers or a specific personality? Then ask them to work together to take photographs of each other in different poses using an iPad. How would their creature stand? How can they use the iPad to create different photographs? From which angle should they take the shot? Do they want to include full body or just head and shoulders?



////////



Print the photographs out onto either A3 or A4 paper, in colour or black and white (let the children choose).

Then get them to cut out their photographs and fix them onto background paper using glue – you can use sturdy card, or even coloured paper if desired. Again, you can let them choose their background. Provide them with paint, oils pastels, felt pens and crayons to begin working into the image to emulate Victoria Topping's style. Children should carefully consider the layout of their work and the colour choice of materials.



Once the children have finished creating the background, leave the work to dry. You can use acrylic paint pens, oil pastels and permanent markers to add the



finer details. My class added small icons and images to their creature, and different patterns into the background. These were all inspired by icons and images found within Ancient Greek artwork. Finally, let the children choose a name for their new character, e.g., God of sunlight and happiness or Goddess of laughter and mischief.



Mandy Barrett is a specialist art teacher at Gomersal Primary School, Cleckheaton, West Yorkshire

# REASONS TO TRY... Operation Ocelot with Steve Backshall

Why the campaign by the World Land Trust (WLT) Patron, where pupils go outdoors to save the rainforest, is the perfect way for schools to make a difference

# 1 SAVING A NATURAL PARADISE

Operation Ocelot will help WLT partner REGUA protect some of the last 7% of Brazil's Atlantic Forest from logging and hunting. This is one of the world's top five biodiversity hotspots and the home of hundreds of species from ocelots to tapirs, toucans, sloths and more.

# 2 A FUN, OUTDOORS PURSUIT

The Operation Ocelot process is simple: teachers take students outdoors to measure playgrounds or any other space; you use WLT's online calculator to work out how much you need to raise to protect the same size area in Brazil; and you then work, as a team, to raise your target.



# **3** PROTECT HABITATS FOR GOOD

As students discover the outdoors back home, they discover their power to protect nature abroad. Through Operation Ocelot, they join a global movement of fellow young conservationists funding reserves packed with life (and carbon) that REGUA will then safeguard and patrol – for good.

# TEACHER AWARDS

As Steve himself puts it: "If you're a teacher, this is something relatable for your students to engage with – to look at a place they can see every day, like their school, and know that they are saving the same size area of rainforest full of ocelots, toucans, sloths and more."



### Contact:

worldlandtrust.org Calculate your target, download educational material or send your questions to Steve Backshall

# At a glance

• Nature's protection is one of the most impactful actions for our climate, UN scientists confirmed recently

• Through Operation Ocelot, your students will help to safeguard one of Earth's most biodiverse places

• This project will support them to learn about curriculum subjects like species, ecosystems and environmental challenges



20 | www.teachwire.net

# UNDERCOVER TEACHER

Our anonymous educator gets something off their chest

# While there's plenty of speculation about what headteachers do all day, we have the same ultimate goals as teachers...

MPORTAN

here's often a lot of speculation about what headteachers get up to. There can be plenty of misconceptions, false assumptions and - sometimes - accurate ones, too. We might spend a lot of time in an office; not without good reason, though (usually). We might drink some tea and coffee and even get it when it's warm. Just like teaching, every day is different, every day is a challenge, and every day is rewarding. I spend a

lot of time thinking about how things are going to be, how things can be tackled, and how things can be presented. A bit like the iceberg illusion, a lot of this goes unseen and can get forgotten about or is a little bit unknown. Really though, we still feel the same way as teachers about many things, and despite what might get assumed, we do remember a bit about what it was like to be in a classroom. What comes next is a series of confessions that hopefully will show that headteachers and teachers are not too dissimilar after all...

1 Sometimes, I need a staff meeting like a hole in the head.

2 Just because you disagree with a decision I've made, or I haven't acted on your suggestion, doesn't mean I didn't listen and think about

your point of view. I have to think about everyone's perspective.

<sup>3</sup> Staff, like children, can be awesome. Staff, like children, can be challenging. 4 Don't be afraid to ask for help and support. If you really need something to happen, I'll try my hardest to do it. Helping to make your lives easier and your work more fulfilling when we can - is part of our job as leaders. 5 Giving difficult feedback is one of the hardest parts of the job. It's necessary, though. It's all in the name of giving the children the best school experience we can, and that's why I do this job. 6 Sometimes, if there are two very strong candidates for a role, it really does come down to who is a better fit for the class or team.

7 I constantly wish I could do more to support children and staff better. Sometimes it's just not possible for a number of reasons. This doesn't mean I don't want it to happen. 8 There's nothing better than watching a teacher at the top of their game being really in sync with their class.

9 I'd love to give you more release time to help you to do your job. But I can't. I know that

> time is the most precious commodity, but between budgets and availability

of cover, finding extra hours to have teachers out of class is difficult. It's frustrating that things have to come down to money rather than need.

10We might have a professional disagreement, but that doesn't alter my view of you as a person. I keep the professional and the personal separate.

11 Sometimes, I don't want "Just like teaching, every day is different, every day is a challenge, and every day is rewarding"

to come back to work after a weekend or a holiday, either. 12 It is a different job to teaching, but is just as rewarding. Watching others succeed is brilliant. 13 I like it when people tell me I am doing a good job, just as much as you do. 14 Don't underestimate how much I value the

staff I am lucky to lead. It's ridiculous how good you all are.

15 Coming to your classroom isn't always a bad sign. I like being with kids and in lessons too. 16 If you want to know what the job entails, then ask. I love people who are happy to get stuck in, shadow and help with some of the work!

Hopefully, that gives a little bit of an insight into the mind of a headteacher. We're really not trying to make your life more difficult or give you more work all the time. We both want the same thing - what's best for the children; it's just sometimes we can come at it from different viewpoints. In our hearts, headteachers are still teachers too.

The writer is a primary school headteacher in England.

<sup>@</sup>secretHT1

# How do you solve a problem like...

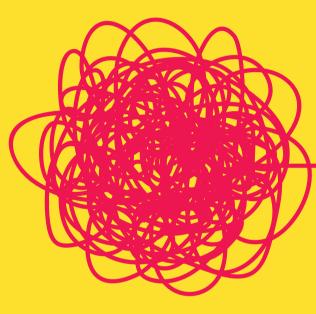
From groans and panic to calm curiosity – how **Claire Coolin** made systematic maths less scary

re you met with groans when you utter the term 'problem-solving' to your class? We all agree that it's an important aspect of the curriculum and indeed a life skill, but it remains a divisive topic of conversation with pupils, parents and colleagues. So, what is the problem with problem-solving? My Year 5 class were high

achievers. In general, they enjoyed maths but when it came to problem-solving many of them froze. They showed disinterest, nervousness and confusion, saying things like, "The information is hard to process," and "I couldn't understand the information as it was just a block of words". Interestingly, pupils found the lessons boring when the problems they solved followed the same routine and pattern, and didn't provide a level of challenge, interest or excitement. These routine problems 'took the fun' out of maths for them, and while using skills such as addition, subtraction, and so on are all part and parcel of problem-solving, is this really what we're looking to develop in this instance?

# Routine vs non-routine problems

Problem-solving can show an in-depth understanding of mathematical concepts where pupils are required



"Pupils found the lessons boring when the problems they solves followed the same routine and pattern"

to manipulate numbers in order to get to an answer. However, while routine problems might be easier for the children to solve, they are not aligned to real life. We don't live our adult lives practising budgeting for the weekly supermarket shop from Monday to Thursday, with the real deal happening on Friday. Rather, real-life problems can often be spontaneous, unexpected and at first have no obvious solution. Should we therefore be teaching pupils what to do

with the unexpected? Should we be equipping them with the skills to solve non-routine problems? I think the answer is, yes – most definitely.

# Polya's problemsolving cycle

So what can be done? Is it enough to tell the children in your class to highlight the important words in the problem? While this might have helped a few of my pupils to see a way forward, for many this just became a colouring exercise with an impressive array of fancy highlighters on show. And so I began an action research project to find answers. After poring over many academic articles, I came across Polya's problem-solving cycle: a cyclical four-step process that could be used to solve any problem, in maths or otherwise. The steps are:

- Understanding the problem
- Devising a plan
- Carrying out the plan
- Looking back and reflecting

Polya's process was something I wanted to introduce to my class, and so I taught this way of thinking about a problem over a term. The results were surprising and long-lasting, with four key takeaway points. I found that the cycle:  Developed time management skills and enhanced focus Polya's cycle automatically forced students to work through each phase in turn, slowing them down and therefore helping them explore the problem with a more thoughtful and connected approach. Instead of jumping straight into the doing, the children took time to think about their understanding of what was being asked, and would often get out a dictionary to

the problem-solving steps gave my class a framework, allowing them to think in a logical way. Straight away, students unfroze, the manic scribbling stopped, and they started from phase one and worked through the problem more systematically.

### • Allowed pupils to see the link between maths and the real world

When I asked my class why they thought we were learning about problem-solving, I was met with answers about subject is important, but having the *right level* of challenge is even more so. Routine problems can remove that challenge for many, and one of my pupils commented that, "You shouldn't do lots of the same as it gets too easy. You don't want to spoil it by knowing all the answers." Using Polya's problem-solving steps with non-routine problems gives the more able pupils enhanced scope and freedom to try out and manipulate numbers in

# HOW TO INTRODUCE POLYA'S PROCESS

• Talk about the cycle and what each phase means. Take note that it's like a roundabout, which means you can get off at any stop and go back if necessary. E.g. If you're carrying out your plan (phase three) but it's not working, you can go back to phase one: understanding the problem.

• Use subheadings. I wanted the students to really spend time thinking about each phase, so I made a very simple Performa with each phase sub-headed. The students were required to write within each subheading.

• Model how to do it. Using different non-routine problems, I modelled how I would use the problemsolving phases. I then built up to working on problems as a class, and finally asked pupils to work in pairs to solve problems using the steps.

• Make it part of your classroom vocabulary. To embed the process in my class, the language didn't just come out when doing maths problems; it was used in other subjects and day-today school life.



Claire Coolin conducted this research project while teaching

Year 5 at Oxford High Prep School, GDST with the Global Action Research Collaborative, ICGS. She is now maths specialist teacher and PSHE head of department at Summer Fields School, Oxford.

look up a word they didn't know the meaning of, or on one occasion, a child even dusted off the 'never-reallyused-before-but-every-classhas-one' maths dictionary to look up the meaning of a mathematical term.

### • Equipped all students with a strategy for tackling any maths problem

When talking to a group of pupils in my class about problem-solving, I recall them saying, "I can't work out if I should multiply or add or subtract or whatever." This is true for many students and can lead to them freezing, or in some cases, frantically adding and subtracting numbers – essentially jumping straight into phase three. They needed a strategy to help them focus. Using becoming better at maths. But after using Polya's steps, the children began to see how the skills in solving maths problems are the same ones used in solving real-world problems. For example, they realised that if a maths problem can be divided into chunks, then so could any problem. One sunny afternoon, a couple of students came to me to help solve their playground argument. You can imagine my utter surprise when one of the students said, "I think first we need to understand why we have fallen out then we can come up with a plan to put it right." Real life problem-solving in action!

• Equipped students with the necessary tools to engage with challenge Having challenge in any different ways, while giving that scaffolding to support the less able in the class.

# So what now?

What have I learned from this experience? Well, with more than 10 years teaching under my belt, delving into this action research brought me back to my roots. I started from scratch with something and didn't rely on my tried-and-tested resources. This new approach meant I had a chance to listen to my pupils, and in doing so stumbled onto a way of thinking that works not just for a maths problem, but for all problems.

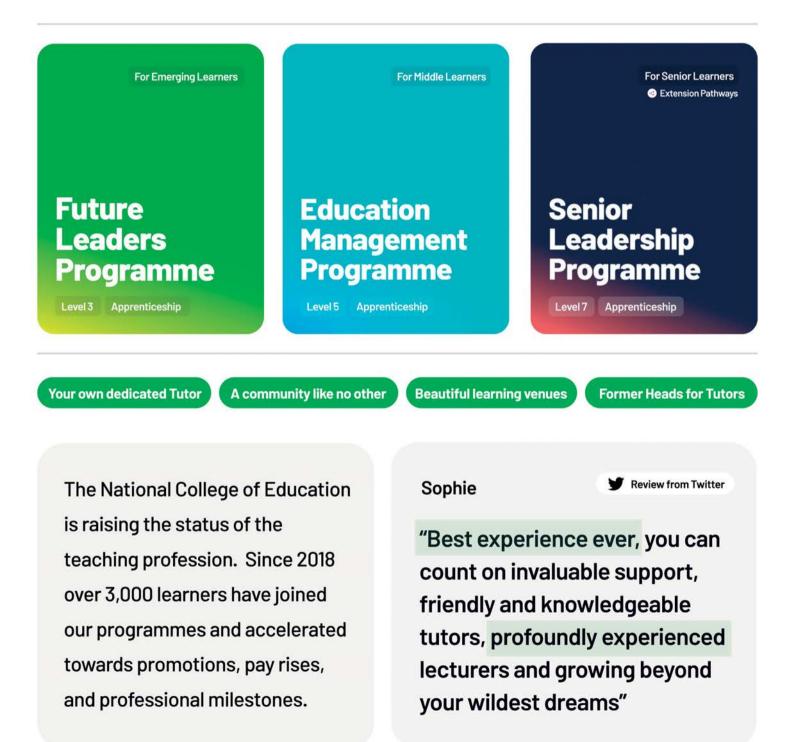
The steps have since become a classroom philosophy, and I use the vocabulary of the process daily. Trying something new can pay off! **TP** 

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# ALL ABOARD!

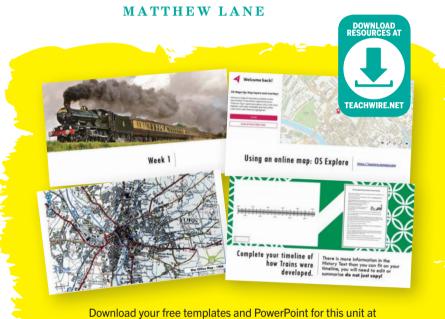
# he column coal mor eration

he chug of steaming pistons and coal smut in the air – nothing is more evocative of the Victorian era than steam trains. From rattling coal wagons grew

great behemoths that supercharged the Industrial Revolution and had a lasting impact on the lives, landscapes and economies of our local communities.

In this local study history unit, children will explore how the introduction of trains changed communities, their national impact, and the delicious changes that trains delivered to our diets. Pupils will practise using primary sources, integrating historical maps, ordering timelines and drawing conclusions from their research.

> • What has noticeably changed about where you live from 1856 to now? (This can include the addition of modern shops, removal of phone boxes, etc.)



tinyurl.com/tp-VictorianSteamTrains

# WEEK 1 Learning objectives:

• To use primary historical sources

In this first lesson, pupils will look at the history of their own house. Start by discussing where they live, asking questions like "How old is your house?" and "Can you tell when your house was built?" Then discuss maps and revise geography skills such as map symbols and scales (see PowerPoint download **slide 5**). Use resources from the Ordinance Survey (**explore.osmaps.com**) to explore a modern online map. Be aware that it might not be up to date if you have recently-built housing near you. Now it's time to interrogate historical maps. Using the Vision of Britain website (visionofbritain.org.uk), ask children to find their house (or the land their house is on) using the 1856 and 1916 maps. The website is easy to use, but it is worth modelling on the board first (slide 7). Allow time for children to look at the maps and find their house. After exploring, pupils should answer the following questions, referring to evidence from the maps. If their house was not built, they should describe what the land was like at that time:

- What was your house like in: 1856, 1916 and 2021? (For example,
- has the size or style changed much?)How has land use around your house changed?

# Assessment

Have children found their house on the maps? Are they able to distinguish between modern and historical maps?

# WEEK 2 Learning objectives:

• To compare primary historical sources

Start by recapping last lesson and sharing the land changes children found on the different maps. Then expand out to discuss the area your school is in. Has your town always looked at it does today? What was there at the start of Queen Victoria's reign in 1837? What are the oldest parts of the town? How do you know?

As a class, study the 1856 map of your area (you can take a screen shot from Visions of Britain - see slide 13 for an example). Compare this with a map from 1904 or 1916 and spot the initial differences. Focus in on an area where a train line was built after the creation of the first map, but before the second map was drawn. Many of the train lines in use today were built in the Victorian era, so focus on the line closest to your school (this may mean that your school is not on the maps used). Give children printouts of maps from 1856 and 1904/1916; colour prints in A3 are best. Allow time for exploring and pair or table discussion. Pupils may find that place names have changed, roads have been rerouted, houses demolished or lots of new buildings have been constructed.

# FEATURES PLANNING

Next, pose questions for pupils to answer to help them explore the maps. You will need to write your own (slide 15), depending on what your maps show, but here are examples I wrote for my class:

- How has the area of Middle Green changed? What lanes are now missing?
- What was removed to make way for the train line?
- What spellings have changed on the maps?
- Each black square is a building. What new buildings can be seen on the main road?

# Assessment

Can all children describe changes over time? What buildings have changed? Can some children explain how the landscape has changed?

# WEEK 3 Learning objectives: • To sequence historical events

Start by imagining a world without powered transport: what would our lives be like if our fastest mode of transport was a horse (slower than 30mph)?

The first half of this lesson is about exploring and discussing the history of steam trains as a class. Start with a short video (tinyurl. com/tp-TrainClipBBC) and then work through the history of trains slides (slides 21–29). You may wish to add to this if your local area has strong historical links to trains (such as Crewe, and Derby) to include further weight to the local study aspect of this unit.

In the second half of the lesson, ask children to create a timeline of events from the age of steam (see a template in the downloadable resources). The information available is far longer than they'd be able to fit on the timeline, so children will need to think and reflect upon which of the events is most historically important and which could be left out. This will allow reflection upon the nature of history: we are always reading an edited version of events, so some information is inevitably left out. As an extension, ask children to draw lines on their timeline in different colours to link themes they can identify. For example: the development of the steam engine; changes in society; changes in food; or changes in our local area. There is a box for a key on the timeline template.



Assessment

Can all students construct a logical timeline? Have some evaluated the events they plotted onto their timelines? Have some identified logical themes to the events?

# WEEK 4 Learning objectives:

• To reflect upon the importance of historical events

In this lesson we will explore the causes of the Industrial Revolution and the role trains played. Start by discussing the vocabulary: do children know what a *revolution* is? Do they understand what *industrial* means? (slides 33–35). Next, discuss how our country changed from a rural farming economy to one built around cities (slides 37–38). Rewatch the short video from the BBC's History of the World series (slide 20) and then discuss why cities became important to our nation (slides 39–40).

The second half of this lesson involves using Cornell Notes to summarise information (slide 41). In the left-hand column, children note key words (in this case, causes of the Industrial Revolution) and then pair them with short notes in the larger right-hand column. The principle is that their notes should be half the size of what is on the

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# ART & DESIGN SPECIAL

board. Work through slides **42–59**, allowing time for note-making. You may wish to give children these key words ahead of time at the bottom of the sheet or by pre-populating the left-hand column. Pupils can then use their notes and the pictures from slides **53–58** to create a short summary of their conclusions.

# Assessment

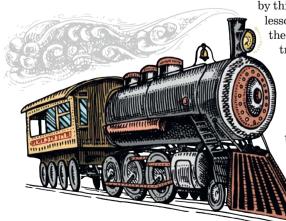
Have all children used evidence from their notes to support their conclusion? Can some children evaluate the evidence for the conclusions of other pupils?

# WEEK 5 Learning objectives:

• To investigate the impact of historical events

In this lesson we look at how the introduction of trains had a huge impact on food production in the UK; moving from localised farming with regional variations to national-level farming with counties specialising in one sort of crop. If not covered in prior learning, you may wish to discuss food security and how access to nutrition in past centuries was difficult and precarious.

For this lesson, you will need a copy of the BBC TV series Full Steam Ahead which can be purchased online or clips can be found on Youtube and at **tinyurl.com/tp-FullSteamClips**. Children will be watching and making notes from episodes three and five. We will be making use of the Cornell Notes skills from last lessons to create a new set collating information from the videos. You may wish to pre-populate some of the fields or use this as an opportunity to stretch the children's skills by giving them a blank template.





Work through the video clips, pausing in between or as needed to allow for note-taking. Most children will be able to watch and take notes at the same time as their summary requires fewer words on the page. Depending on lesson length, you may need to finish watching the video in the next lesson.



No assessment this week.

# WEEK 6 Learning objectives:

• To evaluate the significance of historical events

In this final lesson we reflect upon the impact of trains on our nation. Start by thinking about the notes made last

.....

lesson. What foods did we look at in the videos? How were they changed by trains? What do you think a regional

food is? Then allow the rest of the lesson

to write up their conclusions from the video. This could be done essay-style, or you may wish to design your own worksheet to collect answers. As children write

they should try to answer the following questions:

- How was your food made before trains arrived?
- Where in the UK would I have found it?
- What was the biggest change that trains made to your food?
- Did being able to send your food around the UK change the region it was from?
- Do we still eat this food today? Is it exactly the same? How has it changed?

If your children are not used to writing longform answers, you may wish to construct a class model example before children write independently. Another option could be for children to construct a poster or infographic about their chosen food in pairs.



# Assessment

Have all children used evidence from their notes to explain their conclusions? Have some children used information from other foods to compare their food to?



Matthew Lane is a teacher from Norfolk.

🥑 @MrMJLane

theteachinglane.co.uk



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# No-brainer BREAKS

Integrating pauses into your teaching turns on the ignition for cognition, **argues Liz Hawker** – and not just for your SEND pupils

hat's the formula for a successful day's learning? It's the million-dollar question – and one trick comes from good SEN practice.

Brain breaks. Movement breaks. Sensory breaks. Call them what you will. In the course of any primary school day, breaks are essential, not only for preventing disruption but for resetting our pupils' brains, making them more receptive to learning.

# More than a SEN tool

"But I already use learning breaks with my SEN kids!" I hear you shout. In most cases, that means individual breaks, managed by a TA... and that's where you may be missing a trick.

Learning breaks are not only critical for pupils with ADHD and autism to self-regulate – they help *all* learners engage their sensory systems, effectively turning back on the ignition for cognition. And using them with your whole class is more inclusive than restricting them for use with a few.

"Physical movement compensates for underarousal or underactivity in some areas of the brain associated with ADHD," explains Tony Lloyd, CEO of the ADHD Foundation. "By moving, the child stimulates and increases the dopaminergic activity in their brain. This then helps them to arouse their attentional system towards the task in hand and supports their ability to sustain their focus upon that activity." So, giving pupils a break re-energises them for the next chunk of learning. Good for brains, and a no brainer.

# Let's get physical

If pupils are lagging or low-level noise is building up, get pupils' attention and direct them to a sequence of short physical activities – the more creative, the better, as it generates curiosity and boosts listening.

It's not unusual for my pupils to get seemingly out-of-the-blue instructions like, "Hands in the air", "Reach for the sky", "Touch your nose", or "Stand on one leg". The element of surprise also boosts attention and concentration. Pressing the reset button in this way is quick, effective and inclusive, giving all pupils in the room a short learning break.

What's important here is that breaks do not interrupt the flow of learning – in fact, the more you do this, the more you will see that pupils approach the next stage of learning activities with more energy and enthusiasm.

The most effective physical breaks are time limited, such as two-minute

movement bursts; getting pupils to dance or run around then freeze into statues when they hear an agreed 'alarm'; or running outside and picking up as many leaves as they can in one minute. Get pupils to roll dice for numbered fitness activities on a poster – hopping, knee lifts, heel touch, star jumps. For calm, try a yoga equivalent – rag doll, frog, mountain, cobra, star or child's pose would be good ones to try.

Try creative breaks that boost language, too – if possible, make them topic-inspired. For example, a seaside-themed movement break would give pupils two minutes to wobble like a jelly fish, walk like a crab, jump like a starfish or waddle like a penguin. Studying the Victorians? Make your break a chance to walk like the Queen; crawl like a child chimney sweep; march around the classroom like a strict Victorian schoolmaster; and so on.

# Whole-class brain boosters

It's easy to think of brain breaks as being all about movement or detaching completely from any stimulus. But there are several options to keep on standby for when you feel class attention slipping. Pictures are powerful tools for this, and the more unusual, the better. Before a two-minute alarm sounds, allow pupils to ask as many questions as possible about the image on the whiteboard. Children can use mini whiteboards to 'voice' their question rather than speaking out loud.

Another no-preparation break is Word Connect. Get the children to stand up, and give the 'starting' pupil a stimulus word; they respond with any associated word then 'pass' it to the pupil next to them or behind. See if they can keep going for two, three or four minutes. To avoid pressure for pupils needing longer response times, allow 'call backs' or 'phone a friend'.

# **Preventing the pressure cooker effect**

Extra breaks for individual pupils with SEN should be encouraged and guided. This enables children to ward off the build-up of anxiety and sensory overload that causes a meltdown.

Introduce preventative break cards for pupils with greater need: not only those with ADHD and autism, but also oppositional defiance disorder (ODD), pathological demand avoidance (PDA) and any anxiety-based disorder. The break card is a non-verbal sign that the child shows the teacher or TA whenever they feel that they are beginning to struggle. With parameters agreed in advance and a shortlist of their own effective strategies, pupils can then access the type of break and  $\mbox{re-regulate}-\mbox{in class, in the corridor}$  outside, or in a nearby outside space.

Solo preventative break strategies can be as simple as counting up and down or closing your eyes and going into an imaginary world. My favourites include: rolling yourself up tight in a blanket for compression; arm push-ups against the wall; walking along coloured tape on the floor or a line on the playground; rolling on a peanut ball; and sitting under a table with blanket, weighted vest or familiar high-interest toys.

According to Professor Tony Attwood, author, clinical psychologist and autism expert, the benefits of preventative sensory breaks cannot be overplayed: "Sensory overload for autistic children does not just cause discomfort – it is exceedingly painful. They need sensory breaks in tranquillity and preferably, solitude. Only after recovery will the child be able to focus on learning."

# **Desk breaks**

A learning break does not necessarily mean getting away from your desk, either. If pupils are beginning to feel dysregulated, give them a menu of desk-based strategies they can turn to. Many use a universally available resource: the pupil's own hands. For example, Palm Presses (face your palms together and push them for five to 10 seconds), Scrunch It (crumple up paper or tissue to make it as small as possible), Finger Pulls or Hand Crawls (move your fingers like a spider or octopus across the desk).

For fantastic sensory adjustment, encourage Bear Hugs – remaining on your chair, wrap your arms around your chest or knees and give yourself a firm hug for as long as possible. 'Chewelry' (bracelets or necklaces that safely provide sensory input) or chewable pencil toppers are also great for giving pupils a sensory regulation break. And don't forget the power of music through headphones: the right kind of calming classical piece on a tablet can slow the heartbeat and restore regulation in minutes. **TP** 



Liz Hawker is a SEN specialist, BPS-accredited assessor and parent in Kent.

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Daniel Meyer, head, and Sara Sanbrook - Davies, former head

# "We want our children to build up a constellation of connections"

Engaging in the scientific method helps children at St Bartholomew's build confidence, gain information literacy, and grow into responsible stewards of the world, finds Charley Rogers

www.teachwire.net | 35

hen you think of a Christian school, your first instinct may not be to think of it as a science-led institution. Well, in the case of St Bartholomew's, you'd be entirely wrong. Grounded in the tenets of the Church of England, this two-form entry primary in Lewisham is about as far from a religious stereotype as you can get. The scientific approach is, at St Bart's, as integral as the Christian one, and both are imbued with curiosity.

# **RESPONSIBLE STEWARDS**

This curiosity is an essential part of everything that happens at the school. "One of the key drivers for the Church of England is how children experience the world," explains headteacher Daniel Meyer, who is new in post this year, though he has been at the school for a while. "We want our children to be responsible stewards of the Earth, to be good human beings and to be passionate about understanding what's around them, and developing it." Equipping pupils with the skills and knowledge to enter into that world is something that St Bartholomew's is very keen on doing. "Children need to be prepared to make a difference," says Daniel, "and that's part of our identity as a Church school. Many people think of science as something that's almost *allowed* to constantly move and adapt, and that the Church of England is, has been, and always will be the same. But that's simply not true. What we've been seeing, and hopefully what we'll continue to see, is the Church adapting and moving forward to reflect its congregations, which in themselves are incredibly diverse."

So, lots of threads have come together to help the school achieve things like the Primary Science Quality Mark Gilt Award (which they got in 2020), an achievement of which all the staff are very proud. One of those threads is the work and passion of former headteacher Sara Sanbrook-Davies – who retired at the end of last year – and of science leads Sue Smith and Maria Lucas-Williams.

"As a school, we had a passion for science," says Sara, "and we decided we needed to gain more focus in our curriculum. So we engaged the Primary Science Quality Mark and the Space Quality Mark. We used the latter as a hook across the curriculum – when Tim Peake went to space, we capitalised on that interest and ran with it to improve our science provision." Again, this came back to curiosity. And not just the curiosity of the pupils, but of all staff. "The most important thing about the Quality Mark



is that it wasn't just myself, Sue and Maria saying we needed to do it," adds Sara, "but it involved auditing the entire school, from resources, to the children's progress, to staff training and CPD - it had to be holistic," she says. As part of the whole-school audit, Sara and her team created questionnaires for the children, to gauge their views, but also made sure that staff were on board. "As Daniel has termed it, we wanted our pupils to be able to build this 'constellation of connections'," says Sara, "and for that to work, we needed a sense of connectivity across the staff, and in the way that we operate." The idea was that everyone would work together, she explains, and understand that it would be a long journey - not only for science, but for the entire curriculum. Because the way that St Bart's engages in science isn't only through subject knowledge, but by embodying its spirit of investigation and iteration.

St Bartholomew's is also very lucky to have an engaged parent cohort, many of whom are professionals working in the sciences. "There's a level of outreach and enrichment

# Pupil voice



I like doing lots of experiments in science. Every year we celebrate Science Week, and one of my favourite things we did was build bridges only using things on our table.



When we're learning about history, we get to go on field trips and actually see the artefacts. Recently we learned about bronzes, and got to see them for real at the Horniman Museum.



At home I learned that everything is made up of atoms. They're absolutely everywhere – in the biggest things and in the littlest things. I bet you're sitting on one right now!



My favourite thing about school is maths, because there are so many things you can do. But I also play tennis, do swimming, athletics and play piano – I like to be busy!



that is a very important part of being a Church school," explains Daniel. "We have always been very lucky to have involved parents, and many teachers who were particularly interested in science, but as Sara said, the idea was to make sure everything was consistent, and delve into those pockets of excellence to bring up the entire curriculum." This didn't just mean focusing on science knowledge, Daniel says, but tapping into the soft skills that come with the subject – questioning, evaluating evidence, and, yes, curiosity – to improve every single subject, and enhance the entire school's approach to teaching and learning.

A key element here was not standing still. "It's a journey," says Daniel. "We're constantly circling back around, revising the curriculum and adding to it – thinking of ways to enrich the experience." The school's London location has also played a huge part in the development of its ethos. "We have fantastic access to museums and research institutes," Daniel explains, "and we've done projects with UCL, for example. Also, because we're so close to central London, we have a lot of parents who are working in academia and science, so not only do we get to have fascinating parent visitors, but the kids learn a lot at home, too. For us, it's all about tapping into these opportunities that we're so lucky to have, and that might not exist so readily elsewhere in the country."

## CULTURAL CAPITAL

But it's not only children with professional parents who bring a lot to the school. All of the staff are keen to point out that any child entering St Bart's brings with them all sorts of cultural capital, whether knowledge-based or otherwise. "During lockdown, one child was living with her grandparents outside the city, on a farm," says Maria, "and so I would have the whole class on the Zoom lesson, and the girl brought a lamb up to show everyone." This small gesture opened up a huge discussion amongst pupils, Maria explains, talking about what it was like to live on a working farm – especially in contrast to London – and

## FEATURES REAL SCHOOLS

about the life of the lamb. "This kind of thing is integral to the Primary Science Quality Mark," says Sara. "It's about developing pupils' interest, and their questioning, and using our community's particular assets to do so." Another important consideration for all staff is to allow children to see that their teachers don't have the answers to everything. "Being able to say, 'I don't know; let's Google it,' is really important," Sara says. "We're very keen to imbue children with the skills to find the facts, and trust the sources they're hearing from. Part of that is transparency – they need to know they don't have to believe something just because they hear it from a grown-up, or see it on a website. Information literacy is a cornerstone of our scientific approach."

Again, this also ties into Church teachings, says Daniel. "There's a lot of work being done in the Church of

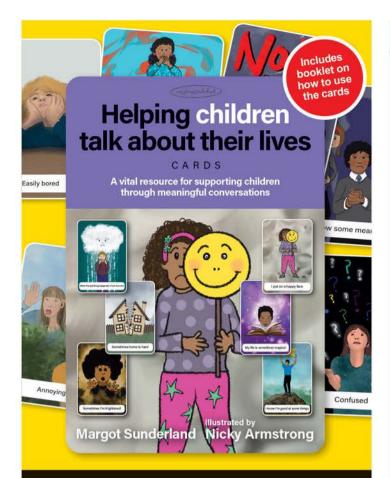
## TO THEIR CREDIT

In 2016, St Bartholomew's was a pilot school for the LifeSavers programme, all about financial education. The programme was inspired by the Archbishop of Canterbury, Justin Welby, and his task group on responsible credit and saving (called To Your Credit). The values-based approach explores what it means to be wise, generous, just, and thankful with money, recognising that attitudes are as important as knowledge and skills in shaping financial behaviour – an ethos that chimes well with St Bartholomew's focus on the way children move through the world. The school is now a Centre for Excellence for Financial Education, and has focused on financial sustainability. "From the Church School perspective, we were keen to help children understand that we have been given this world, and that now it's up to us to nurture it," says Sara. "A large part of this was arming them with real-world, relevant facts, and making sure they're informed, rather than relying on speculation."

After visiting the school as part of the pilot programme back in 2016, Archbishop Justin Welby said: "The children I spent [the] morning with weren't just going through the motions. This wasn't just another thing to sit through in class. They were inspired. It was really sinking in. Another great thing

to see was how the teacher was using the programme to bring in lots of other parts of the curriculum – basic numeracy, of course, but also emotional intelligence, and the whole idea of service, of doing things for other people. It's a really rounded educational process."

et | **37** 



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# FEATURES REAL SCHOOLS

England on race equality and diversity," he explains. "And that's feeding into our source interrogation, too – for instance, historically a lot of the scientific knowledge we have has apparently come from white, male figures. But we've been working with the children to uncover the hidden voices in history – those from women, people of colour, people with disabilities. They all have a story to tell, and it's important to us as a community to ensure everyone has the chance to see themselves in the curriculum, and understand that we might not have been told the whole story."

A recent project saw teachers learning alongside pupils, too. "Tving in finding new sources with the idea that teachers don't know everything, I asked my class to do some research and find the name of a scientist they'd never heard of," Daniel explains. "I'd never heard of many of them, either, so we learned together." This idea of lifelong learning is also embedded in St Bartholomew's ethos of curiosity - iteration is essential and inevitable. Just like the scientific method, the school doesn't stand still. Everything is up for interrogation, reiteration, change and improvement. Another major consideration in ensuring that teachers, as well as pupils, are always learning, is the access that kids have these days to information, says Daniel, but sometimes the biggest challenge is finding out what they don't know. "Sometimes, the curriculum can limit our children," he explains, "it can be difficult to pick up on what they've learned at home, because if we don't know that a parent is a heart surgeon, or a microbiologist, there's no way we can ask the right questions to figure it out. And the children don't necessarily bring it up often they assume everyone knows this stuff!"

## COMMUNITY RELEVANCE

However, rather than children with too much curiosity being a problem at St Bartholomew's, Daniel and his team are just keen to ensure that staff can share ideas and insights as much as possible with one another, so that learning can be consistent across the curriculum. "We want all our content to be



# Meet the staff



BERNADINE WILLIAMS-ADEBAYO YEAR 1 TEACHER AND MATHS LEAD

The whole school is really supportive, and the leadership are always thinking about how to be innovative in terms of teaching and learning, making sure to back it up with research. It's a great place to work.



ALEX MILES LEARNING MENTOR The school is constantly evolving. Daniel is the third head I've worked with in my time here, and it's always been very children-centred, but there is more of an emphasis now on the idea that as long as the child is happy, they're much more likely to be able to learn, and to enjoy that.



MARIA LUCAS-WILLIAMS ASSISTANT HEADTEACHER AND CO-SCIENCE LEAD

Over the past 10 or 11 years, I've seen a real development here, and there's a passion for science that's evident in both the staff and the children.For me, it's all about opening up minds and hearts to the opportunities available to them.

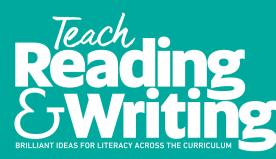


**STEPHANIE LAGUDA** EYFS TEACHER AND PE LEAD

I actually attended St Bart's as a child, so I was nervous to come back as a teacher, but it's been brilliant The community here is phenomenal, and we're encouraged to maintain a healthy work-life balance. Everyone is welcome, too, whether you're a part of the Church or not. relevant to our pupils," Daniel explains, "and that means for these pupils that are right here, right now; not last year's cohort, or those from 2014, or whenever the curriculum you're using was written. Diversity is a big part of that."

So, what's the next stage for this consistently evolving programme? For science, at least, it's outreach. "We would like to share what we love, and what we know, with our community," says Sara. "This is very important in the eyes of the Church, but we're also passionate about our area, and giving back to it as much as we get out of it." A key part of this whole conversation is moving away from science as blocks of information, adds Daniel. "Our outreach is never going to be about teaching others how to teach science, or how to love science; it's going to be encouraging them to get excited about the opportunities available, and run with ideas themselves. As the Church says, we want to be a light in the community - our doors are open, and people can come in and get as close to the welcoming, warm fire as they like."

And that warm fire? That's the spirit of St Bart's – a place where everyone is welcome, where the light of curiosity burns, and where each success and mistake is celebrated as a step in the journey – and opportunities are seized at every turn. **TP** 



## **INSIDE THIS SECTION**



Cressida Cowell on the joy of writing for children, and the particular enchantment of reading for pleasure...



Battle the Romans with Boudica and learn how historical records can reveal the past, with Tony Bradman's semi-fictional tale...



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# Meet the AUTHOR

Reading poetry in my mother tongue helped me understand my identity, says **Valerie Bloom**. Here's how to help your pupils value their diversity, too...

started reading aged about four or five, and I began writing more or less at the same time. What I wrote was very heavily influenced by what I read, so I'd create poems that were pastiches of Wordsworth, Yeats and Keats. These were the poets we were reading in school, because despite the fact that I was living in Jamaica, we would get books sent over to us from America or England, and as far as I was concerned. that was what life was about.

One of the things I used to do to try and link myself to these Western views was pick little yellow flowers that were growing all around the school. To me, they were the daffodils from Wordsworth's poem I Wandered Lonely as a Cloud. But I had never seen a real daffodil and, in fact, these were nothing like them! I was, of course, trying to make sense of what I was reading by drawing on my own experience and what was around me, but it just wasn't authentic. As hard as I tried, the poems didn't reflect my experiences, and it showed. Later on in school, I was accused of copying an essay by a teacher, rather than composing it myself. I was indignant. I'd been inspired by things I'd read, but I hadn't copied! The problem was, I'd written about snow and barns, and

the teacher knew we didn't have these in Jamaica, so she assumed I must have copied it. It just wasn't my voice. It wasn't my experience.

Then, I heard about the poet Louise Bennett. She was the first person to write in Jamaican, properly, and her poetry showed me that I could actually write about the things around me in my own language. That got rid of my identity crisis and helped me to form my voice. Bennett often talked about the fact she wasn't allowed to speak Jamaican in school; it was fine to speak it at home, but not in public. For many years, as Jamaicans we'd believed the lie promulgated by our oppressors: that what we spoke was not in fact a language but broken English. Bennett showed that this wasn't the case, and that we could be proud of the

# TEACH READING & WRITING

language we had developed in dire circumstances. She rebelled in her work, recognising that Jamaican was the language everybody she loved spoke, and therefore shouldn't be seen as bad language.

## **Finding my identity**

Bennett started a revolution which saw national acceptance of and pride in the language. She was on the radio every lunchtime and all work would stop as people gathered around to listen to her poems and monologues. When you went into schools in Jamaica, you'd hear children reciting many of her poems in the playground; they'd learn them without being prompted. You wouldn't get that with other poets. confidence in themselves, which helps them to learn everything else. When they know

else. When they know that their language (and therefore their identity) is valued, they are able to appreciate their own experiences, making them better people. It also helps develop listening skills,

breaks down barriers and develops healthy relationships between those who speak the language and those who don't. Whatever the language may be, it's at the heart of getting to know and understanding one another.

# **Cultural capital**

I still see this when I go into schools now. I perform many of my poems in Jamaican, and before I start, I always ask if any of the children speak the language.

"There are so many dialects spoken in this country, and it would help us all to share in them"

Thanks to Bennett, I learned that your language is part of who you are; it's part of your culture. When there is stigma attached to it, it reflects on your whole persona, impacts on your self-esteem, and stops you reaching your full potential. That's what we have to realise when we talk to children, even now. There are so many different dialects spoken in this country, and it would help us all if we could hear them, understand them and share in them. This can help give children the all-important Sometimes nobody puts their hand up, but then, when I've read a poem like *Sandwich* or *Haircut Rap*, I'm surrounded by kids who tell me about mothers, fathers, aunties and cousins from Jamaica. As I go on to read more poems, their friends start to turn to them, asking them what words mean and so on. Afterwards, you see them talking about the sounds and phrases they recognise and telling their friends how to say different things in Jamaican. Suddenly, these 'othered' children have status; something to teach and share with their peers.

Sadly, as children get older they can become switched off from language and poetry. When they're young, many enjoy and respond to the form, but as they move through school, they're at great risk of being turned off because of the way it's presented – often as a rigid and old-fashioned style of writing that we must memorise and recite. One of the things that's stuck with me for a long time was an experience I had at a poetry workshop in a school. After introducing me to

a class, the teacher pointed out a particular pupil and said, "Oh that one over there, you won't get anything from her. She doesn't do any writing." Undeterred, I read my poems in Jamaican and lo and behold the child wrote a beautiful poem in response. The teacher was so shocked. It turned out the pupil came from a Jamaican background. This was her language and she was able to both write and perform it. All she needed was that spark. I write what I've learned through my life experiences, as most writers do. That's what this girl had been given licence to do by hearing her voice and her experiences reflected in my work, just as I had experienced with Louise Bennett.

# **Relate and respect**

It's important for children to hear different voices. It helps them relate to other people and it shares that we are all part of one global family. Each of us brings something different to the table and we can all share in and appreciate what's there to enrich our own lives, no matter what our mother tongue is.

If you're interested in broadening the language horizons in your own classroom, the poet videos on the CLPE website offer children the chance to hear work from range of voices and backgrounds, showing the universality of poetry and offering children the chance to see that they all have the potential to share their experiences through poetry, too. As you write, you bring up the memories that you have, the emotions that vou've gone through. You learn a lot more about yourself. And I find that with poetry, even now I continue to learn a lot about who I am. TP



Valerie Bloom MBE is the author of several volumes of poetry for adults and children. Her latest collection *Stars With Flaming Tails* (£6.99,

Otter-Barry Books) won the CLiPPA, CLPE's Poetry Prize, in 2022.



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# CREATING MAGIC

**Cressida Cowell** on the joy of writing for children, and the particular enchantment of reading for pleasure

have spent 20 years writing the *How to Train Your Dragon* and *Wizards of Once* books, and over those two decades I have lost count of the times people have asked me, "Have you ever thought of writing for adults?"

But for me, writing for children is the greatest privilege on earth, and my quest as a writer is to play some small part in trying to get the children of today to read books with the same excitement and wonder that I read them when I was a kid.

## **Books = happiness**

There's a wealth of research to show that the two key factors in a child's later economic success (let alone their happiness) are parental involvement in education, and reading for *pleasure*.

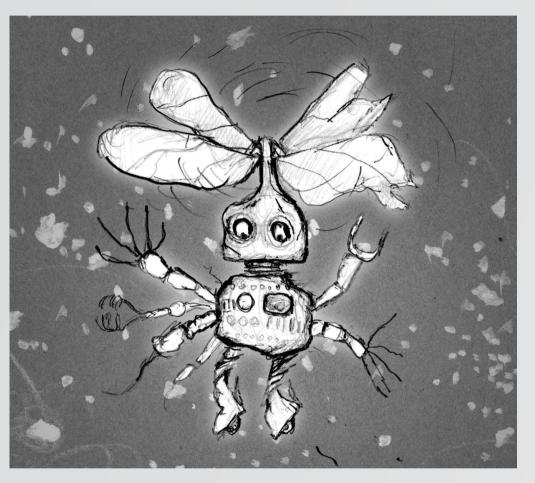
However, making a book that a child of today will read with the same amount of pleasure that I read books when I was a kid is rather trickier than it sounds. When I was a child, the telly was terrible, there was no internet, no PlayStation. Now the telly is glorious and incessant, and it is magically 'beamed' into children's heads without them having to do anything, whereas books can only be accessed by a laborious act of de-coding. Even if a child doesn't have a learning difficulty, books can become associated with school and hard work, but if a child has dyslexia, it can be worse

So I have to work very, very hard to overturn that impression, and make sure that the stories are worth the effort the child has to put in to access them. Children of today are very visual (all that screen time), and they have shorter attention spans than when I was a child (again, all that screen time) and you do have to bear that in mind when you are writing, and make sure that the story whips along at a cracking pace.

However, that doesn't mean you have to 'dumb down' the content. That would be boring. Children may be more impatient than they were when I was a kid, but they certainly aren't less intelligent. So as long as the plot is exciting and scary and funny enough, and the child cares about the characters, you can get away with challenging content and complicated language – indeed, children *want* that. They are natural linguists, natural philosophers, naturally curious, naturally iconoclastic and they are always asking questions. It makes for a fascinating writing challenge.

# **Reading aloud**

I write about the things that interest children, and they tend to be the truly important things in life: heroism, bullying, wilderness, our relationship with the natural world,



## **TEACH READING & WRITING**

death, love, spirituality and adventure.

I write the books to be read aloud, and that is a key factor in getting a child to read for pleasure. Books read to you in your parents' voice live with you all your life. So I think about the books as a performance, and the mouth-feel of the words, the loudness or softness, or bellow-v ness of the characters. It's why I gave Toothless a stammer, and Squeezjoos and the sprites a bit of a his-s-sylis-s-sp, and Horizabel in my new series an accent "so posh it sounded like she was making a radio broadcast from the 1950s," ... so that they make a joyous acting performance. The language varies wildly in tone, which keeps everything lively.

The plots are wildly unexpected, and they rattle along with a roller-coaster energy that is barely in control. This makes things exciting, for the reader does not know what will happen next, and you have to make them feel that they might be in the hands of an author who is prepared to give the story a sad ending if necessary. The changes of direction in emotional mood, the breaking up of the text, the anarchic style and the surprises along the way, all serve a purpose in making the child feel that this is a joyous, modern play-object to be read for pleasure, not a school-y, laborious task that has to be done.

# A long time coming

I wrote the first lines of my new series Which Way to Anywhere 25 years ago, before I'd even started writing How to Train Your Dragon. It's been living and growing with me all that time, for this is a BIG story, set in not just one world but many, not just about one person, but an entire family, and it needed time to develop. You see, I think that stories have a life of their own. They find YOU, just as much as you find THEM. For 25 years they can lie quiet in your shed, until the story flies up, like a bird, finding you at just

 $the \ right \ moment.$ 

This story found me at a very difficult time, just after my father died, and at the start of the pandemic. It came flying towards me on a sort-of rescue mission, at a time when we were all suddenly, in our little family units, facing something larger than all of us. It felt like the right time

# "Children may be more impatient than they were when I was a kid, but they certainly aren't less intelligent"

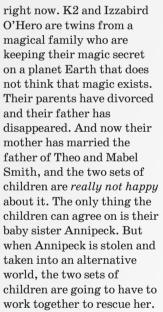
to be writing a book about some children searching for their lost father, and an entire family trying to rebuild itself, the great challenges facing the whole of humanity, and to be celebrating the power of human creativity in facing those challenges.

Which Way to Anywhere started with a very simple idea. As a child I used to draw and re-draw maps of strange places and imaginary worlds – what if those imaginary worlds were real, and what if there was a child like me who had the gift of showing the crossing points between the worlds, in a sort of Alternative Atlas?

Because a piece of paper has two sides, doesn't it? On one side you draw a map of your imaginary world, an island maybe, or a mountainous country, and on the other you draw a map of somewhere you know well, the airing cupboard in your house, for instance, or the muddy bit at the bottom of your garden. And then you draw a cross where the line between the two worlds is so thin that you can just

> cut through. But this isn't just a story about the kid who has that 'Atlas' gift, it's a story about the whole family. And it takes place, in a first for me, not way back in Viking times or in

Viking times or in the Bronze Ages, but right here and



Every book I write is like Hiccup from *How to Train Your Dragon's* boat, The Hopeful Puffin, setting out into a stormy world, with an optimistic heart and a head full of an equal measure of wisdom and of nonsense, and Hiccup's good sword Endeavour held in one inventive hand, and an invisible Giant beside me, cheering me on. **TP** 



Cressida Cowell's brand-new series, Which Way to Anywhere (Hodder

Children's, HB £12.99), was launched on 15 September.

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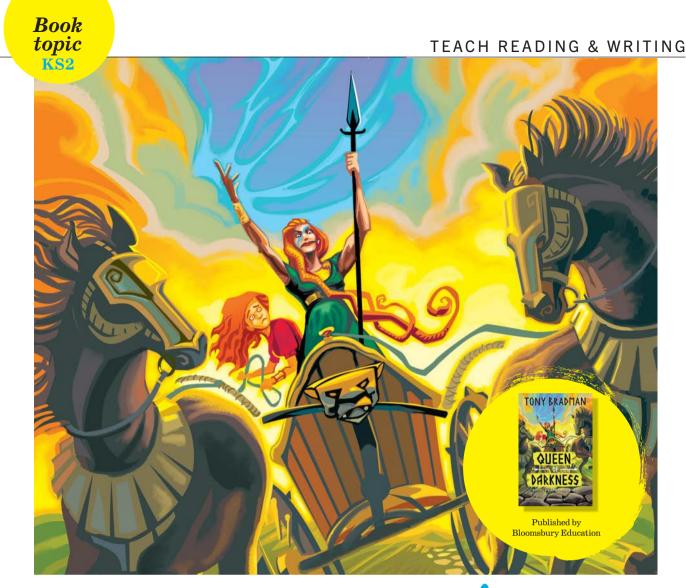
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REVISE





Queen of Darkness

Battle the Romans with Boudica and learn how historical records can reveal the past, with Tony Bradman's semi-fictional take on the famous queen

## CHRISTINE CHEN AND LINDSAY PICKTON

ony Bradman's *Queen of Darkness* is an imagining of the story of Boudica, the 'queen' of the Iceni (roughly located in what we now call Norfolk). It describes her revolt against the Roman invaders in the first century AD.

Although the story is told in the third person, we view the characters and events through the experiences of Rhianna, an orphan who is taken under Boudica's wing, which helps enormously with understanding and engagement.

There are vivid descriptions of fierce battles and acts of violence – including references to sacrifices – throughout this story, but Bradman is highly skilled at avoiding gore and keeping it KS2-appropriate. However, as always, it's vital that we pre-read and consider whether some pupils may require some extra sensitivity with certain scenes, depending on their own experiences. Real understanding of this story will be greatly advanced if you've already studied the Roman empire and the invasion of Britain a bit, so we recommend beginning this novel a few weeks into an historical study of the Romans. Then the novel will, in turn, enhance understanding of the historical concepts of invasion and settlement, as well as providing many opportunities to consider viewpoint and interpretation of historical tales.

# Book topic

We suggest that teachers read the author's note at the end of the book before embarking on the tale with children, as it helps to clarify what is historically known and what Bradman has invented. It's also important to view historical records with care: the Iceni didn't leave written records, so whatever we do have is from the Romans - one side in this struggle. Bradman infers, speculates and interprets from the known facts to create a gripping short novel full of danger, vengeance, courage and kindness.

# Activities Get some facts straight

Ideally, you'd do this before starting

the novel. Create a timeline together using historical sources, beginning with Caesar's aborted invasions in 55 and 54BC, through to Claudius' successful invasion in 43AD, and concluding with the end of Roman rule in Britain between 388 and 400AD. Note Boudica's lifespan -25AD to 60 or 61AD – and how this relates to the span of the Roman occupation.

Use a map of Britain to mark the key locations in the story: the Iceni home (now Norfolk), the towns of Camulodunum (now Colchester), Londinium (London) and Verulamium (St Albans), and the area Paulinus is attacking with the bulk of the Roman army, now known as Anglesey.

Emphasise the importance of these distances when encountering the locations in the story: everyone travelled by foot or with horses, and communications were almost unimaginably slow by modern standards. Armies had to fight after days or weeks of walking, and spies and scouts would have to travel to share information.

## **Key characters**

There are quite a number of important characters in the story, as well as some minor ones that nonetheless recur. Make a list or even create distinct character portrait cards, leaving space for notes so that words and details may be added as they are (re) encountered. Besides the obvious - Boudica, Rhianna, Eleri, Garwen, Viducos and Paulinus - there are minor players such as Segovax and Magunna who are key to the story.

# **Rhianna's journey**

Be clear with the children that Tony Bradman created Rhianna so that we could experience Boudica's rebellion through her eves. Therefore, understanding her point of view is crucial. To really develop this, write a few sentences in-role as Rhianna, as if writing her diary, at the end of each chapter.

It may be a good idea to use freezeframe to explore Rhianna's feelings (e.g. clutching her stomach, protecting Eleri, staring in horror) and follow-up with hot-seating in-role as Rhianna. This should help children be more able to describe both her fortune and struggles (Boudica taking her in, to the events of the final chapter), Rhianna's changing view of Boudica, her thoughts and feelings towards the sacrifices and the terrible things she witnesses on the battlefield, etc. Encourage exploration of her protection of her sister Eleri, her relationship with and admiration of Garwen (Boudica's body servant), and her acts of courage and kindness.

# Valuable vocabulary

Queen of Darkness is not an overtly challenging read at KS2, but there are many words that will be useful to study for both story comprehension and general use.

Wherever possible, model how at least a degree of meaning can be inferred from context (e.g. a 'legion' is clearly a large number of Roman soldiers, a section of the overall army). Where necessary, provide explanations and/or pictures.

It's almost impossible to provide an exhaustive list of words to explore, as different schools, classes and children have different prior experiences and exposure, but as a

# Take it further $\Rightarrow \Rightarrow \Rightarrow$

## **Boudica's legacy**

Why do we remember Boudica, when, actually, so little is known about her?

Share a photograph of the statue of her proudly displayed in Westminster, in the heart of the government of the UK. Why might this be? Have children discuss how the statue represents her and how this relates with the story. What did she leave behind, and why is she remembered to this day? Consider the role of women, the legend of defiance against

wrong-doing, the impact on the Celtic population and their settlements. Invite discussion, and if appropriate,

develop this into a reflective piece of writing. Should we be celebrating Boudica?

# The role of women

The fact that Boudica is female is key to what happens in the story: the Roman lack of acknowledgement, let alone respect, for female leaders starts the cycle of violence

and destruction.

The underestimation of women is illustrated further through the strong fictional character of Garwen, who repeatedly bests men in duels, while showing loyalty and compassion.

Invite discussion about the roles of and attitudes to men and women in the story. Focus in on, for example, the scenes and dialogue involving Segovax and Garwen, as well as Viducos and Boudica / Garwen.

As appropriate, relate to more modern

starting point, consider: *chariot*, *cavalry*, *column* (of soldiers), *flank*, *crests*, *mounted*, *scout*. These are military terms but are often used outside of this context. Also consider: *vengeance*, *flinched*, *rebellion*, *abreast* (as in, four abreast), *reined*, *sacrifice*, *province*, and *valley*.

# Boudica's speech – frozen in time

Revisit chapter five, in particular the scene following Boudica's revival after three days of recovery, and her furious command to summon the tribe that night. Ensure children are aware of the state of the clothing in which she stands before her people: not the wealthy gowns they are used to seeing. Note that there are groans at her appearance as well as cheers. Re-read the scene and take thoughts on the crowd's responses, and also notice the description of Viducos at the end.

Next, have pupils work in groups of around five to create a still moment from the speech. One child should be Boudica, another Viducos, and those remaining can be other Iceni. Have everyone observe one/ two groups, and lead the class in the contribution of suggestions on how the scene could be made more vivid, through facial expression and body language; then ask the children to return to their freeze frames and make them even better.

Finally, have the groups consider and discuss what their character would be thinking at that exact moment; they should write this thought on their own mini-whiteboard or piece of paper, then return to their freezeframe holding their 'thought-bubble' above their head for others to see (and

and even contemporary issues, such as the 20th Century struggle for women's suffrage and even professional football for women, and, to this day, equal pay.

## Good leader – poor leader spectrum

Leadership is a theme explored throughout the story. As the children progress through the novel, have them note and discuss Boudica's actions as a leader of people. Draw a line to represent a spectrum of good to poor leadership, with 'Good leader' at one end and 'Poor leader' at the other. In their evaluate). This process can of course be repeated for other key scenes, such as the Roman mother pleading with Rhianna before the final battle.

# Visualise and visuals

Tony Bradman offers detailed descriptions of characters' clothing, the appearance of buildings, the formation of armies, and so on. Very often, he is describing things that are well-documented, and so reliable images can be sourced online and in books (Collins Big Cat's Boudica reference book is an excellent source of pictures, and the perfect non-fiction companion to Queen of Darkness). But before exploring these, ask children to re-read or listen again to the written description and support them with visualisation; share thoughts on what they can



opinion, does each of her actions show her to be a good or poor leader of the Iceni people (or somewhere in between)? Encourage discussion and debate.

Key actions may, as a starting point, include the following:

- welcomes two orphan girls into her care;
- takes sole command when the king,
- Prasutagus, dies;
- refuses to accept Roman command;
- inspires the Iceni tribe to rise up
- and rebel;
- raises a powerful army from more than

# Loved this? Try these...

Eagle of the Ninth by Rosemary Sutcliff
Revolt Against the Romans by Tony Bradman
Boudica's Army (I was there) by Hilary McKay
How to be a Roman and Boudica in the Collins Big Cat range
A Roman Story by Leila Rasheed

'see'. Only after talking about the descriptions should you reveal the images, and then discuss similarities and differences.

# **Parallel worlds**

Throughout the story, we encounter certain things in the Iceni world, and their equivalents in the Roman sphere. Comparing them can help us get a better view of how the two groups differed (or indeed, their similarities).

Using details from the novel (and, potentially, research undertaken in history lessons), create a table listing different elements (such as leaders, clothing, building, military tactics, etc) and a column for Romans and Iceni. Add information to this table as a class, to graphically contrast the lifestyles of the Celtic tribe and the invaders.



Christine Chen and Lindsay Pickton are primary education advisers (primaryeducationadvisers. co.uk) supporting English development nationally.

one tribe;

- makes sacrifices to the goddess Morrigan;
- commands an army that is victorious in its
- first battle against the Romans;
  leads an army that destroys Roman homes and cities;
- executes hundreds of defenceless people.

Invite children to retrieve other important actions that might be considered here. Be clear that her actions must be viewed in the context of this historical period, and of course, that some of the actions described are fictional. BSCRIBE • SUBSCRIBE • SUBSCRIBE • SUBSCRIBE • SUBSCRIBE • SUBSCRIBE •

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# "Managing money is a key skill"

**Russell Winnard**, from national charity Young Enterprise, explains why we must help young people become financially capable

## Why is financial education so important?

Managing money is a key skill that is essential for adult life. Providing financial education helps children develop the knowledge and attitudes they need to make informed financial decisions and achieve their goals. Research tells us that children develop their mindset around money from seven years old, and yet only one in three currently receive any form of financial education at primary school.

# OUNG

EXPERT PROFILE Name: Russell Winnard

Job title: Chief Operating Officer, Young Enterprise Area of expertise: Real-world learning

Best part of my job: Working with such passionate colleagues, teachers, parents and carers

# Can parents get involved?

Absolutely! We know parents are the biggest influencer on their children's mindset around money, closely followed by teachers. That's why we think it's really important that parents are encouraged to get involved, and is one reason why we launched the free Money Heroes programme as a way for schools, parents and wider communities to work in partnership to help children learn about money using a variety of resources.

# Where can I find resources to help me teach financial education?

In our conversations with teachers, many of them tell us that they lack the confidence, skills, knowledge, and time to help their pupils learn about money. That's why Young Enterprise offers a range of free opportunities designed to enable you to deliver fun and engaging lessons to your pupils. These include teacher training sessions, planning frameworks, access to quality-assured resources and lesson plans, and impactful programmes and events, all designed to help children become financially capable.

# ASK ME ABOUT

**PROGRAMMES:** Register for the free Money Heroes programme that brings learning about money to life in school and at home.

**CPD:** Take part in one of our free financial education teacher training sessions to build your confidence, knowledge and skills.

**SUPPORT:** Contact our free advisory service for information and resources that will help you deliver financial education in your classroom.

W: young-enterprise.org.uk T: 020 4526 6389 E: advisory@y-e.org.uk

Why is it necessary to be financially capable?

Children are exposed to money at a young age, with most accessing a smartphone at age 10 and using a debit card by age 11. In an increasingly cashless society, they face challenges that their parents and teachers didn't. That's why we need to build financially capable young people who are ready to thrive in today's society and who can unlock opportunities, make more sustainable financial decisions and enjoy financial and mental wellbeing.

# How can I make financial education fun and engaging?

By making conversations about money more relatable and practical, we help children better engage with their learning – a view confirmed in a recent teacher survey which found that 96 per cent agree that being able to apply learning using real-world contexts is important. We also recommend trying to embed financial education within other subjects to help bring it to life, and using topics that resonate with young people.

# PARTNER CONTENT



Resources and activities to bring fresh inspiration into your classroom



# **Exciting STEM!**

Sow the seeds of STEM learning at an early age with the Denford Primary STEM Project, an innovative, stand-alone classroom resource, encouraging primary pupils to develop STEM knowledge and skills through practical hands-on activities. Children will design and make a miniature paper racing car, testing its aerodynamic qualities using the launch system and unique roll-out race track, before re-evaluating their designs to produce a winning car! Complete with free, downloadable curriculum resources, mapped to the primary National Curriculum, this project brings real-life applications to the classroom, developing STEM knowledge along with life skills such as creativity, problem-solving, communication and teamwork. See **primarystemproject.com** 



# **Book-based learning**

Used by over 40,000 teachers, the Literary Curriculum from Literacy Tree is a comprehensive and cohesive award-winning, book-based approach to primary English. Written by teachers for teachers and using expertly chosen, high-quality texts, children are immersed in fictional worlds to heighten engagement and provide meaningful contexts for writing. School members have access to over 300 book-based resources for writing, reading comprehension and spelling as well as resources for catch-up and home-learning. Learn more at literarycurriculum.co.uk

# Become a maths ninja

Following the huge success of the Ninja literacy resources, the Arithmetic Ninja series is the perfect addition to any primary classroom. From Andrew Jennings (@VocabularyNinja), the creator of Vocabulary Ninja, Comprehension Ninja and Write Like a Ninja, these photocopiable books include over 680 flashcard activities per title (one for each week of the school year) and are fully aligned to the primary National Curriculum for mathematics. This series is ideal for busy primary teachers who only want to visit the photocopier once a week and are looking for flexible, high-quality resources that will ensure all pupils are maths ninias by the end of the year.

## tinyurl.com/tp-ArithmeticNinja





# Connect & network with peers

The Schools & Academies Show will return to NEC, Birmingham, on 17th November, bringing the education community together to connect, network with like-minded peers and discuss the latest sector developments. As the UK's leading

education policy event, this is a fantastic opportunity for attendees to source solutions for their schools, gain best practice insights, meet innovative education suppliers and hear directly from the most influential policy and decision-makers in education. Visit schoolsandacademiesshow.co.uk

for more info.



# Number sense

Getting to know the numbers to 10 is a significant part of every child's journey towards numeracy. This set of 60 cards from Autopress Education presents children with different representations of each number, and helps to develop a deeper understanding. The carefully selected images support a relational understanding, too, helping pupils to see how one number compares to another. The ability to order numbers and to subitise small quantities is also a key part of number sense, as well as the ability to recognise number digits and words. Find out more at autopresseducation.co.uk

## TEACH READING & WRITING

# Life in the fast lane

Teaching letter sounds at a fast pace enables higher achievement in children, says **Sara Wernham** 

ystematically introducing and building up children's knowledge of letter sounds is a basic tenet of any systematic synthetic phonics (SSP) programme the clue is in the name, after all. However, the pace at which we introduce the letter sounds can in fact, have a dramatic effect on children's rate of learning, and the confidence and fluency when reading. While it is indeed an achievement for young children to learn 42+ letter sounds, the thing to remember is that this is only the first step in a process, which will eventually lead to pupils being independent readers and writers. Once the letter sounds have been taught, we don't sit back, say 'Phew!' and leave it at that (believe it or not I frequently have to point this out!).

Rather, the reason for learning the letter sounds is to blend and segment words with them, and the children should start this as soon as the first few are known.

It does seem a lovely idea to spend a lot of time introducing a sound, doing lots of craft activities making letters out of playdough etc. – but if this means it takes almost a year just to introduce all the letter sounds, then the children will be missing out on using any words that contain them. Because of course, until the letter sounds have been learned they cannot be used for reading and writing words.

I add an addendum here – that it does of course depend on the age of the children. For pre-school and nursery children, a slow approach with lots of stories and practising phonological awareness is absolutely right. However, once the children are of school age and start on a programme, then moving them through the sounds at a pace means they are given all the knowledge they need to read and write as many interesting words as possible. Obviously if children struggle with the pace of introduction and are not keeping up, then slow it down for them. Give them the letter sounds they know plus one or

two others they don't, and build up from there. Keep them with the class for flashcard work as they will be building up an awareness of all the sounds, and it will make it easier for them later, but individually only give them what they can cope with.

I expect my Reception children to be starting to write sentences using whatever words they want by the end of the first term and writing a page (or more) by the end of the year. The key bit of this sentence is 'using whatever words they want'. OK, some of the words will be spelled phonetically, but they will be decipherable and they will be the words the children want to use, not just words they happen to know how to spell or are on the board. They cannot do this independently if they are still only just learning, or do not know, some of the letter sounds! How can they write about the Queen's Platinum Jubilee if they haven't covered /qu/, or /ee/? By mastering the letter sounds as soon as possible, pupils have more time to move onto learning and refining the other skills they need to master,

before moving up into Y1.**TP** 

"The pace at which we introduce letter sounds can have a dramatic effect on children's rate of learning"

### 6 STEPS TO TEACHING AT PACE

• The letter sounds should be revised every day, and the best way to do this is with flashcards. To blend fluently, children need to say the sounds as soon as they see the letters. Even for CVC words, e.g. *dog*, if they have to struggle to recall each sound, they will have forgotten the first one when they reach the last.

• Make sure the cards for the newest letter sounds are first, as these are the ones that need most practice at that time.

• Make sure any sounds the children find hard are also at the top of the pile. This could be sounds they are not familiar with if English isn't their first language.

• If you have a few spare minutes, go through just these.

 If they get one wrong or seem unsure, put it aside and show it again (and possibly again) as you go through the cards.

• Have a 'sound basket' and put sounds you want pupils to practise inside; make the basket available for the children to practise by

themselves, or with a 'sound buddy'.



Sara Wernham is co-author of the popular Jolly Phonic

programme, and has over 20 years classroom teaching experience.

# Book CIUB

# We review five new titles that your class will love

KS1



Sometimes I'm a Baby Bear by Moira Butterfield, ill. Gwen Millward (£12.99 HB, Welbeck)

.....

Changing emotions can be tricky to handle at any age, but it's something that our little ones can particularly struggle with. Enter this sweet picturebook, explaining the idea that feelings aren't permanent, using animal comparisons. Bright, painted illustrations accompany the light-hearted nature of the rhyming text, and represent a variety of different children, making this title perfect for adding to your inclusive book collection. As a bonus, the final pages include ideas for how to use the concepts outlined in the book in your classroom, including considering use of the word 'shy', and alternatives for hugging when showing emotion, such as fist bumps or high-fives. A great starting point for discussions about empathy and respect, whether you've got a class of bouncing puppies or tiny, timid mice.



Art is Everywhere by Ellie Chan, ill. Liv Bargman (£12.99 HB, Big Picture Books)

Join Keith, famed art historian (and ostrich), and her esteemed research assistant Marmaduke the cat as they seek to prove that "art is everywhere and for everyone to enjoy". From the Mona Lisa to Duchamp's Fountain and everything in between, Keith and Marmaduke travel through the history of art together, thinking about what it means, why we make it, and how we can create our own masterpieces. The blend of non-fictional art facts and a loose, fictional narrative structure means that the book doesn't get stale, and children can play at spotting the real-life masterpieces printed throughout, merged with Bargman's joyous original illustrations. Covering topics from who decides what is Art (with a capital A) and what isn't, to the meanings of different 'gestures' used within the works, this is a great introduction to any creative project.



.....

The Circles in the Sky by Karl James Mountford (£12.99 HB, Walker Books)

Working with young people comes with all sorts of responsibilities, not least answering their myriad questions. You might get asked everything from "Where to babies come from?" to "Why are there no dinosaurs anymore?", but one enduring enquiry that's often the hardest to answer is "What happens when we die?". In Mountford's glorious new book, you may find the perfect starting point for this tricky talk. First of all, it is beautiful: the illustrations ooze calm and comfort, the autumnal spreads inviting pause. But it's the story that really captures your heart. As Fox is walking through the woods, he comes across a small, still bird... but Fox can't understand why Bird doesn't eat, sing, or even startle when he tries to scare it. It's only when Moth starts to explain the story of the circles in the sky that Fox begins to understand what's happened to Bird, and where it leaves him...







Do you love starting conversations with 'Did you know...'? Do you have a class full of fact-hungry, curious scientists? If the answer to either or both of those questions is 'yes', you need this book. Packed with fascinating titbits about everything from the first ever cell to the rise of plastic and the climate crisis, Earth Clock whizzes through the history of our planet in 24 hours. It's a great resource for learning in all sorts of subjects, including science, geography and history, and the small blocks of text combined with colourful, full-page illustrations means the information isn't too overwhelming. The content is digestible enough for UKS2, but doesn't talk down to its audience, including scientific terms like *Homo habilis* and *magma* – a boon for subject-specific vocabulary. Use for your foundation lessons, or dip in and out for a fact a day.

**Space Blasters** By Katie and Kevin Tsang (£6.99, Farshore)

-----

KATIE & KEVIN TSAN

CS2

Suzie Wen loves dumplings ... and inventing things. Most of the time, her inventions don't go to plan exactly (like the Automatic Dumpling Maker that exploded), but that doesn't stop her from trying. While looking around the garage to see what parts she has available for her next project, Suzie finds everything she needs for the Super 3D TV Gizmo, which will turn her normal telly into a virtual reality-like experience, so she can feel as if she's really in her favourite show, Space Blasters. But while she's connecting the Gizmo, something unexpected happens and before she knows it, Suzie *really is* in Space Blasters, though it's not VR... Join Suzie while she explores new planets, meets a lot of aliens, and (spoiler alert) SAVES THE UNIVERSE. This is the perfect story for all the future adventurers, inventors, and creatives in your class. Not for the faint of heart...

# Meet the author

## **KATIE & KEVIN TSANG ON COOL INVENTIONS.** JUPITER'S MOONS, AND **READING ALOUD**



If you could invent anything, what would it be? If we really could invent anything, well, of course

first we would want to invent an incredible machine that could solve the global energy crisis as well as tackle things like world hunger. If we are just thinking about ourselves, we would invent a room or a giant bubble we can go in where time stops all around us so we can have all the time we need to work on our books - and catch up on our sleep! (We have two voung children, and we mostly write at night, and there are never enough hours in the day to do all the things!) We would also really love to invent a teleporting machine so we can easily visit our family and friends all over the world. Since we aren't super inventors in real life, the next best thing is being authors who have the ability to invent characters and entire worlds in our books.

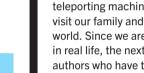
## What's your favourite 'fun fact' from the book?

There are so many fun facts in the book, it is hard to choose just one! Katie was delighted to learn that rabbits aren't rodents, like she thought, but lagomorphs. And Kevin likes the fact that Jupiter has 79 moons

## How would you like teachers to use Space Blasters in the classroom?

We would love for teachers to read it out loud to their class, and use it as a way to combine stories and science. Our heroine Suzie also explains the Scientific Method (she uses it to solve the mystery of the missing moons) and we hope this is a good introduction to the concept for students. Our publisher Farshore has put together some really fantastic resources to use alongside the book (available at bit.ly/PlazoomSB), so we hope teachers make the most of those too.

Space Blasters: Suzie Saves the Universe by Katie and Kevin Tsang (£6.99, Farshore) is out now.





Sue says ...

Got a classroom question? Our resident literacy expert is here to help...



**Q**How can I get more of my 'at expectations' pupils to 'greater depth' in writing? H.P, Year 6 teacher

Moving children from expected to greater depth standard can be tricky. It requires more than just a firm grasp on the vocabulary, grammar and punctuation taught; they also need an understanding of how the choices they make with these affect the reader, thinking about the writing's purpose and audience, and making conscious decisions about the techniques they use. Choices should be consistent within a piece of writing, and the final article should be effective across a range of purposes and audiences, as set out in the Teacher Assessment Frameworks for writing at the end of KS1 and KS2.

So, how can we support pupils to achieve greater depth? As a teacher, there are a variety of things you can do. For example:

### Read a range of high-quality texts

These could be as part of English lessons, in shared reading time, or extracts that are explored to investigate the vocabulary, grammar or punctuation that the author has chosen to use. Always discuss the effect that this has on the reader.

## Have language rich-texts available

This is especially important in KS2, where pupils are expected to draw upon ideas independently. You might guide children to a particular book where the author uses language in a certain way and discuss this with them.

### Encourage risk-taking when writing

Greater Depth requires pupils to try things that do not necessarily follow the text that you are using to model writing. Encourage them to experiment with ideas from their wider reading. Some will work, others won't, but these are all discussion and learning points around what is effective and suitable for different audiences and purposes. You can also use this experimentation to help pupils develop editing and proofreading skills – another KS1 TAF requirement.

Sue is literacy lead at plazoom.com, with over 20 years' teaching and mentoring experience. Ideas, techniques and resources for all your literacy needs

The azoom

# Celebrate Diwali

Taking place at the end of October into November, Diwali is a wonderfully joyful festival, and perfect to explore and celebrate in the primary classroom as the days become darker. Of course, like all religious events, it will be part of a lived experience for many pupils (and teachers!) and it is important to recognise this in any lessons that are planned. This Key Stage 1 resource pack introduces some of the traditions and stories connected with Diwali using an engaging PowerPoint presentation, combined with striking images and vocabulary cards, clarifying language that may need additional explanation. Activities linked to the celebrations are included to support pupils' understanding of the festival, with opportunities for children to demonstrate their understanding through writing/drawing, or discussion with their peers.

# FREE RESOURCE Download it at bit.lyPlazoomFreeDiwali





• Diwali is most widely associated with Hinduism but is also celebrated by Sikhs, Buddhists and Jains.

The festival takes place in the month of Kartik – the holiest month in the Hindu calendar, marking the end of harvest.
Diwali includes the festival

of Annakut, held on the fourth day, when 'mountains' of food show gratitude for the generosity of Krishna.



 EYFS Diwali

 resources:

 rangoli patterns

 bit.ly/PlazoomDiwali1

Diwali resources: LKS2 – the Story of Rama and Sita bit.ly/PlazoomDiwali2

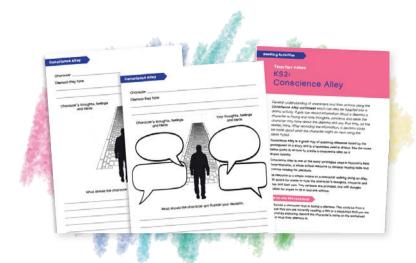
3 UKS2 Diwali resources: comprehension worksheets bit.ly/PlazoomDiwali3





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# TEACHING RESOURCES



# Print your own...

...Conscience Alley worksheets! Develop pupils' understanding of characters' motivations in your classroom using this simple but powerful strategy, which can work as a written exercise or a drama activity. Full teaching notes are included – follow the link below to download and print your pack, for FREE.

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Real Grammar's comprehensive and flexible five-step TEACH, PRACTISE, **REVISIT, APPLY, REVISE** approach has been designed to support teachers to deliver quality-first lessons and ensure consistent progress for all pupils, with plenty of opportunity to identify gaps in knowledge, and close them, through spacing and interleaving. What's more, in order to establish really deep understanding, Real Grammar puts each objective in context, with original model texts demonstrating usage, and creative writing tasks that allow children to put their learning into practice. Find all 109 Real Grammar units at bit.ly/PlazoomRG

For additional resources focused on particularly tricky concepts, take a look at Plazoom's Grammar Burst collection, which offers five fully resourced, 15-minute lessons per objective, leading to an extended writing outcome. Find the collection at **bit.ly/PlazoomGB** 



Struan Murray has a PhD in genetics and is a lecturer in biochemistry at the University of Oxford.

He grew up in Edinburgh.



Inspire KS2 children to create their own suspense-packed story, taking inspiration from Struan Murray, scientist and author of the wonderful 'Orphans of the Tide' trilogy. In episode 4 of the *Author in Your Classroom* podcast, he shares some great advice for young writers about how to keep readers gripped from page one, as well as an interesting take on the worlds of 'art' and 'science', and how they're not actually so different after all; with the accompanying resources pack supporting pupils to put his words into action.

Listen to this episode and download your free teaching resources at **bit.ly/PlazoomStruan** 

# Hack your class!



Read the book first Always do this! I have lost count of the number of times a teacher has recounted tales of stumbling across inappropriate content or themes when reading aloud to a class.



Chocolate boxes in maths Confectionary arranged in columns and rows (Toffifees were my fave!) is great for investigating arrays and exploring the link between repeated addition and multiplication.



Plan in a 'night off' Have at least one weekday evening without work. Leave early, go to the gym, watch a film, or spend time with family or friends to help your work-life balance.

# Assessment SPECIAL

## **INSIDE THIS SECTION**



What does 'teaching responsively' really mean, and how can you implement it in your classroom?



How to make assessment for learning (or formative assessment) work for you...



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# How to spot greater depth

The holy grail for writing assessment, we're all looking for evidence of GDS. But what is it, exactly, and how do you know when you've found it?

## DAISY CHRISTODOULOU

t can't be greater depth - the spelling isn't good enough." "This isn't greater depth because it lacks control." These are the conversations we are used to having when it comes to primary writing and whether it reaches the greater depth standard (GDS) or not. On the surface, these three statements seem straightforward. The primary writing framework requires students to spell most words correctly, to exercise an assured and conscious control of their writing, and to use verb tenses consistently. If a piece of writing doesn't meet one of these standards, it cannot be considered as meeting greater depth.

# One man's greater depth...

Except, of course, it isn't that simple. Take the statement 'exercise an assured and conscious control over levels of formality, particularly through manipulating grammar and vocabulary to achieve this'. Reasonable people could clearly disagree about what that means. Consider the following sentence: 'The devious spirit towered over the dead corpse.' One teacher on Twitter said a moderator used this sentence as evidence of a student lacking control, because a corpse is obviously dead. But another moderator might argue that one small tautology should not affect the judgement of a piece of writing that does broadly display control.

What about statements to do with spelling most words correctly and using tense consistently? Surely these are more objective and easier to interpret? Not necessarily. What if a student repeatedly spells a very difficult word incorrectly? Does that disgualify them from getting greater depth? Does it mean that a student who spells everything correctly but uses much more basic vocabulary is more deserving of greater depth? What if a student writes a story about time travel that requires very complex manipulation of different tenses?

It could be argued that I am being pedantic, splitting hairs and coming up with hard cases that are not typical of most student writing. To see if I am, let's look at the data. If the primary writing framework really is easy for teachers to understand and interpret consistently, then we would expect to see most teachers who use it agreeing in their judgements. The evidence we have suggests that this is not the case.

# Agree to disagree

At No More Marking, we carried out a study where several experienced markers independently assessed a set of 349 Year 6 scripts. Seven per cent were graded as greater depth by at least one marker, but only one percent were graded as GDS by both markers.

This is not just a problem with the primary writing frameworks, either. There is a large amount of international research literature on the consistency of mark schemes, which shows that no scheme in history has produced precise agreement on open tasks like writing. Hardworking, honest, experienced and well-intentioned markers will not always agree on the mark a piece of writing deserves.

So why do experienced markers disagree in this way? A lot of the time, we think that disagreement is down to more-or-less lenient interpretations of the mark scheme. For example, we can assume that someone has a harsher interpretation of the mark scheme, and someone else a more generous one. We then think that the challenge is to decide which marker is correct, or whether the correct judgement is somewhere in between the two.

Levels of generosity are certainly an important factor. But another important and overlooked factor is inconsistency. Markers disagree with each other, certainly. But very often, *they disagree with themselves*.

In one study exploring inconsistency, markers were given a certain batch of essays one year, and another batch the following year. What they didn't know is that two of the essays in the first batch were also included in the second batch.

Did the markers give those two essays the same mark the second time round as they did the first? Eighty per cent of the time they did not.

# Aggregation and exemplification

Markers are inconsistent and they make errors. This is not because they are bad or stupid or lazy: it is because they are human! Human judgement in all kinds of different fields is subject to inconsistency. This is nothing to be ashamed of. It's better to be honest about our limitations than to pretend they don't exist. It's important

to acknowledge the inconsistency of

## **COMPARING RESULTS**

In July, the KS2 SATs results were published: the first set of government assessment results in England to be published since the pandemic. Reading scores had improved slightly, and maths, science and grammar had fallen slightly. Writing showed the biggest decline in attainment.

However, as we have seen, the method used to assess writing is less reliable than in these other assessments, which makes comparing results across time trickier. It's striking that out of the five subjects being assessed, the one that shows the biggest fall is the one that features the least reliable assessment.

It's also quite hard to make sense of these results without having some idea of what happened in the intervening three years.

While there were no government assessments in this time, external organisations have been monitoring attainment throughout the pandemic. In the case of reading and maths, evidence suggests that there were bigger falls earlier in the pandemic and since then attainment has recovered.

At No More Marking, we've been carrying out writing assessments throughout this time, and our results show something similar. We saw a big fall in scores in late 2020, but since then, students have rebounded. The pandemic had a huge negative impact on writing attainment, but students and schools have made up a lot of the losses.

markers, because we need to move away from the idea that somewhere out there is a marker or moderator who 'owns' greater depth. There isn't. Some people may think their judgements about greater depth are always correct, but in order to believe this, they'd have to pass an empirical test: mark 100 portfolios one day, and then come back a month later and mark them all again, and give them all the same mark both times.

> If mark schemes and human judgement are so imprecise, what should we do instead? Two important principles can help improve the situation. The first is aggregation. Individual human judgements are subject to error, but if we aggregate together lots and lots of independent judgements, the errors cancel each other out. The

second is exemplification. As we've seen, the kind of prose statements you get on a mark scheme are quite vague and often provoke disagreement. By using actual examples of writing that is and is not at the greater depth standard, we are more likely to get agreement.

At No More Marking, we use a technique called Comparative Judgement to assess writing with much greater consistency than the traditional framework approach. Every single piece of writing is assessed at least 20 times, and the process provides a powerful bank of exemplars at every standard. You can see 349 of our Y6 scripts from 2020 at tinyurl.com/tp-Year6GD. TP



Daisy Christodoulou is former head of assessment at Ark Schools, and currently

director of education at No More Marking, a provider of online comparative judgement.



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# MARKIN' MUSIC

Record plenty of videos and focus on skills to make sure your practical assessment is up to snuff, says **Dr Liz Stafford** 

ssessment in practical subjects such as music is always a thorny issue. What should you assess when there is no written work to mark? What standard should pupils be aiming for in a subject that has no external benchmarks like SATs? And how do you even recognise progress in music if you're not

music if you're n a confident musician yourself? The good news is that assessment in music is as much a matter for debate for music specialists as it is for non-specialists, so if you're a generalist class teacher, then you shouldn't feel at too much of a disadvantage. Although specialists and non-specialists are likely to experience different challenges with music assessment, it's not plain sailing for anyone!

## What?

Music is ephemeral and vague at best, and as an art and a form of expression some people might suggest that it should not be judged or assessed in any way. However, we clearly do need to make sure that children are progressing with the music they take part in at school.

The most important thing to remember is that music is a predominantly skills-based subject. In their recent Music Subject Research Review, Ofsted (2021) split it into declarative (fact-based), procedural (skills-based), and tacit (experiential) knowledge. It is crucial to bear in mind that it is the procedural or skills-based knowledge that is the mainstay of your curriculum. delivered through tacit and experiential learning, and the declarative fact-based knowledge is only a very small part of what you do. Therefore, if you are assessing progress solely through the use of knowledge grabbers and organisers, vocabulary lists, and testing or written work, then you

will be missing most of the point of music! The National Curriculums from the various

devolved nations of the UK all require pupils to listen to, perform, and compose music. All of these criteria involve taking part in different musical experiences that develop children's skills, and for which they may sometimes – but not always require some factual knowledge. It's therefore vital to make sure that your assessments cover the full range of knowledge types across all these areas. For example, you may want pupils to be able to draw on the experience of listening to different types of music (tacit knowledge), so that they can analyse the stylistic features of the pieces they hear (procedural knowledge). and discuss and draw conclusions about them using musical vocabularv (declarative knowledge). You will only know that they have developed across all these different types of knowledge if you assess them all.

# How?

As a music teacher, you're naturally assessing all of the time; if you hear a wrong note, you point it out and have the pupil correct it. Because this doesn't feel the same, or as 'official' as collecting books, marking them and writing feedback in different coloured pens, you can sometimes forget this is a perfectly legitimate form of assessment; some might say, the most useful kind! You will also be making a mental (or sometimes written) note of anything you need to remember for the

"The most important thing to remember is that music is predominantly skills-based subject"

next lesson – things to go over, children who need more support or challenge, resources that worked well or poorly, and so forth. All of this is assessment. Looking at the National Curriculum for your country will help you to decide what you need to assess (and if your school's curriculum is well designed this will have been built in seamlessly from the outset). For example, the Curriculum for Wales provides a really useful progression framework for the Expressive Arts Curriculum (including music) broken down into clear progression steps, which show how children should develop in their learning over time.

You'll also need to collect evidence of assessment, and in England the suggestion from Ofsted is that you do so via audio and video files. On a practical note, I would advise that video is the best format, since it is much easier to match a face to a name than a sound to a name when files get mixed up! But Ofsted purposes aside, if you're going to go to the trouble of collecting video or audio evidence. then you may as well get maximum value out of it. This means not just dumping it in a data folder somewhere waiting for the day that someone official wants to look at it, but using it as a teaching and learning tool. Playing a video of

vour class's performance back to them can be a really powerful tool for learning; having the opportunity to see and hear exactly what happened can help pupils to understand where improvements could be made. You get extra bonus points if you can share the same video with parents so they can see what their children have been up to in school. That's three outcomes for the price of one video!

## When?

Music very rarely dovetails well with formal whole-school assessment schedules. If you are asked to assess each subject half-termly, then you may only have taught five or six hours of music, if that, compared to 40+ hours of English or maths. Luckily for teachers in England, Ofsted have recognised this and stated that schools should be careful of applying one-size-fits-all policies to all subjects because it makes assessment the driver of the curriculum.

The ideal scenario is for teachers to set their own formal assessment schedules for music, but it can be tricky to know when to do it. I approach it this way: whenever we start something new, I take a quick video of it, and once we come to the end (however many weeks that takes) I take a video of the final outcome, which more often than not is a performance of a piece of music – our own, or someone else's. In addition, if I see anything noteworthy happening in an individual lesson, I will take a quick video of that

too. This means that I have everything I need recorded, but it hasn't taken away from too much of my teaching time, and I haven't had to artificially manufacture assessment opportunities.

## Why?

The idea of assessment has been hijacked over time. What was once simply a teaching technique to help pupils do better has now become more about creating evidence to prove how well teachers and schools are doing their jobs. This is one of the reasons that levels were abolished by the DfE

## RECOMMENDED READING

• Teaching Primary Music by Alison Daubney (Sage, 2017)

• Assessment in Music Education by Martin Fautley (Oxford, 2010)

• The Primary Music Leader's Handbook by Dr Elizabeth Stafford (HarperCollins 2021)

in England in 2014, as they had become 'meaningless' to pupils and parents. Of course, what then happened is that schools and resource providers created their own systems which were basically Fortunately though, of late the message seems to be getting though across the UK that we need to rethink our approach to assessment. The new Ofsted Inspection Framework in England requires inspectors to look at 'assessment evidence' rather than internal data, and the new Curriculum for Wales calls for a significant overhaul of assessment procedures to ensure that they are used to support learner progress and teacher reflection. We may now be approaching a golden age of assessment where we go back to its original purpose, to help pupils learn and progress, and teachers teach more effectively. **TP** 



Dr Liz Stafford is the director of Music Education Solutions®, a global music

education consultancy company, and Author of The Primary Music Leader's Handbook published by HarperCollins.

@DrLizStafford







# **Constantly reassess** with live data'

**Emma Ringe** explains how continuous assessments facilitate superior maths progress for every student

## What evidence is there for the impact of 'real-time assessment' on maths progress?

We know there are gaps in learning. The data provided by Whizz Education enables maths coordinators and class teachers to continually assess, identify and target lessons. The virtual tutor automatically focuses on weaker areas for individual students. Schools can also use the real-time data to 'course correct' to ensure they are addressing all areas of crucial knowledge.

# How should the continuous formative assessment be implemented?

Continuous assessment should not be tackled as a standalone but as a whole, within a larger consultancy process, to reinforce, consolidate and improve fluency for specific learning objectives. This analysis will heighten what part of the learning objective the student is struggling with, which will empower the teachers to course correct in the most effective way.

# How does the continuous assessment work?

Our virtual tutor, Maths-Whizz, starts with a low-pressure online maths assessment to understand every child's ability level. Following that, every moment spent on Maths-Whizz supports formative assessment. The virtual tool uses adaptive technology to present scaffolded maths objects to ensure knowledge is retained. It will use the live data to consistently reassess and move students around the curriculum to ensure



EXPERT PROFILE Name: Emma Ringe, global partnerships director, Whizz Education

Area of expertise: Working strategically with educational leaders to achieve superior results

Best part of my job: Removing barriers to learning and increasing equal access to educational opportunity they are being presented with accurate learning material to suit their ability.

# What positive impacts of using continuous assessment have you seen?

The Roskear Primary and Nursery School assesses standardised age scores every half term, and has seen accelerated progress. For example, the most recent assessments identified the Y2 pupils who were below age-related expectations (ARE) in the autumn. Following the after-school interventions, where children used the Maths-Whizz virtual tutor for two hours per week, each one of those pupils had reached ARE within six weeks.

# How is effective reporting facilitated?

Maths-Whizz can isolate specific cohorts of students, e.g SEND, at a click of a button, for targeted reporting, so that impact analysis and maths learning outcomes can be easily identified by senior leaders. The reporting identifies trends across a class or group of students, which can be used to provide effective data for their Ofsted inspections.

# **ASK ME ABOUT**

**IMPACT:** Keep it simple. Focus on prioritisation and what creates the greatest impact on learning crucial knowledge.

**CPD:** Upskill and empower staff to become the experts in EdTech, ensure everyone drives a key area.

**IMPROVEMENT:** Every aspect of the school needs to be working towards improving learning outcomes. If not, change it!

W: whizz.com

# *Looking back,* MOVING FORWARD

Whether you call it 'assessment for learning', 'formative assessment', or 'responsive teaching', here's how to make it work in your classroom, says **Naomi Barker** 

ou have taught what you perceived to be an outstanding lesson. Pupils were well behaved, engaged with the activities and worked in silence when asked. To end, you ask some questions to consolidate understanding (and to give yourself that well-deserved pat on the back). You are met with resounding silence... As the children struggle to answer you begin to challenge your perception of what has really happened this lesson and how you can determine what the next step should be.

If you have experienced a similar scenario, then rest assured that it's not just you! Frequently, false indicators or 'poor proxies' can mislead to what extent pupils have a true understanding of the taught material. It is this which is addressed by Harry Fletcher-Wood's book Responsive Teaching (2018). At its crux is understanding how the fundamental principles of what is also called 'assessment for learning' can be deployed to help ascertain what children have learned, which in turn informs teaching and planning. This can be particularly challenging when students themselves are not always aware of what they do and don't know, or will not volunteer this information.

# What is responsive teaching?

Fletcher-Wood's concept of 'responsive teaching' draws on the ideological basis of formative assessment – it involves finding meaningful strategies for checking pupils' understanding and then reacting accordingly. Not only will this help you to fulfil your professional capacity as the teacher, but it is equally empowering for your class as they are guided to reflect on their learning with the confidence that they will be not a series of techniques or strategies. By understanding the concepts that underlie these terms, you are then able to translate this knowledge into classroom technique, tailored to the requirements of your pupils' circumstances. For example, he flags the need to be hesitant of the claim that you can ascertain 'learning' at the end of a lesson, defined as "a permanent change in behaviour or knowledge" and how this should not be understood to equate to 'performance' - "a temporary fluctuation in

"Whichever term you use, it needs to be understood as a principle, not a series of techniques"

supported in making progress. The book covers a range of areas and is well worth a read, but for the purpose of this discussion, let's focus on checking for learning and thinking in the lesson.

Firstly, Fletcher-Wood offers some essential clarification that whichever term you select – assessment for learning, formative assessment, responsive teaching – it needs to be understood as a principle, behaviour or knowledge". However, you still need to have a sense of students' knowledge or misunderstandings at the end of each lesson so that you can then plan to respond accordingly next lesson; this is a key principle of responsive teaching – alongside the importance of tracking student understanding during lessons.

# **Classroom ideas**

So, what could the implementation of these

principles look like in the classroom? Fletcher-Wood gives a range of examples. Below is a summary of four that may be of particular interest for further exploration.

1) To gauge all pupils' understanding within a lesson, you might want to consider using a multiple-choice quiz (MCQ). To ensure these are meaningful they need to be well-designed so that each possible answer is plausible, and to elicit any erroneous understandings including planning in for possible misconceptions.

Answers can be shared via hands, whiteboards or where technology allows, an online platform such as Kahoot. The latter has the benefit of self-marking providing instant feedback to students and immediate opportunities for re-teaching or clarification. Some platforms will provide a 'post-quiz' report for you to analyse, too. However, do be mindful of anything that requires pupils having a public profile in class. Learners need to feel comfortable at 'having a go' without the risk of being judged by others -

in the state

they need to feel reassured that this is genuinely a diagnostic learning tool not an additional competition or 'ranking'. Assigning all children a number for their online 'name' that only you and they know can be one route to alleviating this.

- 2) An 'exit ticket' can be an effective strategy for an end-of-lesson activity. These need to be designed to ensure they cover the key knowledge points of the lesson (usually linked to your goals or learning objective), and should provide an insight into the varying learning responses, including gauging any misunderstandings general questions such as 'Do you understand...' are unlikely to be as effective. The ticket could include open questions on taught content but also lends itself to an MCQ format.
- 3) Asking questions that require pupils to justify their responses - either written or verbal - is also important for eliciting misunderstandings. You can then respond to any misconceptions in this lesson or the next, withholding the correct answer so that students can learn what it is through a new exploration of the material.

4) Constantly look for opportunities for retrieval practice and assessing prior knowledge and understanding. Exit tickets can be structured as 'two-part' - the opportunity to answer a question from both this lesson and a revision question. The constant re-visiting of content is essential for consolidating knowledge and understanding - the

oft-quoted expression 'practice makes perfect' pedagogically does hold some legitimacy! Diagnostically, retrieval practice also allows you as a teacher to maintain an understanding of students' recall of prior knowledge, necessary in your curriculum sequencing, particularly where content might need to be revisited again before the introduction of new material..

## But what if...

With all this in mind, what happens when you realise that pupils actually haven't understood the lesson? First of all, don't panic or berate yourself! This is a great opportunity to reflect and respond, so you can meet your children's learning needs. Moving forward, a well-designed exit ticket at the end of the lesson can help provide a crucial insight into where there are gaps and misunderstandings which need to be addressed in future planning. Embedding meaningful whole-class feedback techniques such as MCQs within the body of the lesson will help provide feedback on students thinking/reasoning/ misconceptions so that patterns can be identified. Again, in-class teaching can then be responsive

in addressing this.

So, is it assessment for learning? Formative assessment? Responsive teaching? Ultimately the terminology can be a matter of personal choice, but understanding the underlying theories behind these is professionally developmental. When these principles are implemented correctly it empowers both you and your pupils through a collaborative process of knowledge building and, over time, progress with learning and understanding. TP



Naomi Barker is the author of The Teacher Journal (Bloomsbury). She is assistant

at a school in London and has previously been head of sixth form and lead on PSHCEe, designing an award-winning relationships programme.



## WHAT NEXT?

· Ideas: The Learning Scientists website is an excellent starting point to learn more about cognitive science and its place in the classroom. It contains a range of accessible information and resources for teachers, designed by psychological cognitive scientists: learningscientists.org

### • Discussion:

Throughout Fletcher-Wood's book, he repeatedly cites the benefits of shared planning with colleagues. For example, designing multiple-choice questions (MCQs) departmentally allows for a myriad of perspectives on subject-specific knowledge and advance understanding of possible misconceptions which need to be clarified. Looking ahead, is there an opportunity to meet with a colleague/s regularly during a PPA to plan exit tickets and MCQs?

• Practice: Want to have a go? Download an activity and reflection sheet at tinyurl.com/tp-Responsive and use it to help structure how you can implement the principles of responsive teaching in the classroom.



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# How to write the perfect ASSESSMENT POLICY

Avoid creating an impenetrable document, focus on simple explanations and use actionable examples, and you won't go far wrong, says **Joshua Perry** 

ssessment is a fiendishly complex topic. It's also a vital component of teaching and learning. Many schools therefore sensibly choose to codify their approach in a policy document. However, in my experience those documents can become long and impenetrable, which undermines their purpose. So, having seen oodles of examples over the past decade, here are my top tips for writing an assessment policy that sets your school up for success.

## 1. Know your audience

I would suggest that the most important purpose of a school assessment policy is to communicate a school's expectations to teachers. So a good policy should achieve this goal in clear, actionable language. There are other audiences of course: parents, Ofsted, and so on, but if you write for them primarily you'll spend ages explaining your logic and not enough time telling teachers what to do.

# **2. Define actions**

It's amazing how many policies don't explain what will be done with assessment data! There is very little point gathering data if you don't use it to identify gaps and weaknesses, and then (crucially) allow time for reteaching priority areas. Equally, when you aggregate data for senior leaders, think about why you do that, and whether it adds value. Assessment isn't about creating an abstract archive of performance; it's about providing high-quality information to those who need it, to improve educational outcomes.

# 3. Cover assessments separately

Formative and summative assessments are different things, and not everyone understands (or agrees on) the difference. What's more, primary tracking systems have in the past unhelpfully elided the two by encouraging teachers to make thousands of teacher-assessed 'formative' judgments and used them to calculate a magical 'summative' grade. So explain what these concepts mean to you, and set out your plans in each area.

# 4. Give actionable examples

I've seen tons of policies that say 'formative assessment is really important', without elaborating further. That doesn't help a teacher embed it in their class, so say what you mean: *Is there a difference between the strategies you like to see used daily, versus those employed at the end of a unit? Do you want teachers to employ retrieval practice? If so, should this involve spaced repetition, with questions repeated at intervals after learning takes place?* 

When should a teacher use multiple choice questions and when is free-text quizzing more appropriate? Of course, you may not want to be too prescriptive, but without any exemplification then you leave space for unintentional misinterpretation.

# 5. Align the curriculum

Lots of schools now use standardised assessments every term to track attainment in a national context. That has real value, but it gets undermined if you're using an autumn assessment, for example, that tests topics you haven't covered yet! Popular curriculum providers such as White Rose Maths and Mathematics Mastery now standardise their termly assessments (working with Smartgrade), so it may be easier than you think to get your summative assessments and your curriculum in sync.

# 6. Do less!

Schools used to gather assessment data half-termly; now termly seems more common. But even that may be overkill. Perhaps you could pick just two points in the year? Indeed, I've come across schools and MATs that are now collecting summative data just once per year, and focusing on more structured formative assessment the rest of the time. So fewer higher quality assessments that get analysed properly may hold more value than a treadmill of more regular assessments.

# 7. Let tech be your friend

Systems like No More Marking help schools to assess writing reliably. Online platforms like Carousel Learning and Learning by Questions offer flexible quizzing and retrieval practice. And you don't necessarily need a device in every classroom to make the most of technology – at Carousel for example, we allow you to create whiteboard quizzes from high quality question banks so that you can quiz in a quick, low-tech way. TP



Joshua Perry is the co-founder of two assessment platforms: Smartgrade and Carousel Learning. Previously he oversaw systems and data for a large MAT.

🥤 @bringmoredata



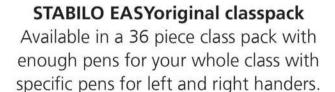


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# What's on offer?

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- STABILO power felt tip pens can last up to eight weeks without their caps

For more information visit stabilo.com/uk

# Enter now at teachwire.net/giveaways

\*Competition closes at 5pm on 30th November 2022. Winner will be notified within 21 days. Full terms and conditions available at teachwire.net



A new, free, easy to use one-stop online resource for teachers, home learners and parents that will encourage young people to explore and discover the great outdoors.



### Bringing the outdoors to life

Time spent outdoors is a fantastic way to change pace, boost energy levels and bring a subject to life. Across the curriculum, the outdoors has many applications: from learning maths by measuring and counting trees, history from forgotten landscapes to science through buddying-up with bugs.

### **Many different landscapes**

The **Land of the Fanns** area bordering Essex and London hosts many different landscapes for young learners to explore and connect with, from woodlands to meadows, to lost eighteenth century marvels to rivers: All offering materials. It covers each key stage, marks curriculum links and pulls together resources from different providers in one place. It includes both managed and unmanaged sites and highlights where an on-site education officer or ranger may be available to lead a visit.

## www.landofthefannslearning.org



**Pay what you can**: To enable more people to learn British Sign Language we are asking people to pay what they can for this course (minimum contribution of  $\pounds$ 3).



A hub website hosting FREE learning resources from arts, cultural and heritage organisations

- National curriculum linked
- Real stories, real people, real objects
- No fees, no marketing

Dive into a world of learning resources at MyLearning.org

The LEGO Group and The Day are bringing sustainability education to the classroom in a brand-new way. Build the Change Tuesday is a free weekly sustainability worksheet for eight–11-year-olds that

**30 SECOND BRIEFING** 

uses the news as an anchor for reading comprehension, debate, critical thinking and

creative design.

# 5 REASONS TO TRY... Build the Change Tuesday

Engage your pupils with sustainability, through easy-toinclude, purpose-built lesson resources

## 1 BUILDING SUSTAINABILITY SKILLS

Have you ever thought about how sustainability affects your pupils' lives? From heatwaves to veganism, it's a topic they encounter almost every day, so children need to understand the issues and solutions. Build the Change Tuesday brings these into the classroom for debate and discussion. Through the lens of a news article, it takes the issues happening in the world around your pupils, and challenges them to use LEGO bricks or other creative materials to build innovative solutions that make a real difference.

# 2 FIT YOUR SCHEDULE

Often pushed for time, educators need a way to fit sustainability into the school day. Build the Change Tuesday can be used flexibly, with the ability to pick and choose activities whenever it makes sense, whether it's first thing in the morning or after lunch. With bite-sized activities like 'Spot the fake' and 'Picture puzzle', pupils can be empowered with engaging tasks that fit right into your timetable, making sustainability education work for even the most jam-packed Tuesdays.

## 3 A NO-PREP, CROSS-CURRICULAR TOOL 83.1 per cent\* of teachers wish



sustainability education was more broadly implemented across the curriculum. Build the Change Tuesday provides your class with a different topic to discuss each week, and to dive deeper if you wish. It supports children to embed 'sticky knowledge' they can then apply with confidence across the curriculum.

\*A survey conducted by The Day in 2022 with 1,115 total respondents comprising of a mixture of primary and secondary teachers as well as other educational professionals.



Find out more: https://bit.ly/BTC-teachprimary enquiries@theday.co.uk +44 (0) 203 981 8080

## 4 EMPOWERING THE FUTURE AGENTS OF CHANGE

Your pupils are the future of the planet, so they need to be empowered to want to make a change. Build the Change Tuesday connects children as young as eight years old with sustainability issues in a hands-on way. Using LEGO bricks or craft materials connects pupils' interests and creativity with critical thinking, engaging them with big ideas that can make a real change in the world. Through debate and our upcoming competition, their voices can be heard, too.

## 5 BUILD THE CHANGE IN YOUR CLASSROOM FOR FREE

Part of the News Detectives programme - a new daily dip into the most fascinating topics in current affairs – Build the Change Tuesday is the only free resource from the week's collection, allowing educators to try out News Detectives and bring the news into the classroom, ready to engage with pupils. With Build the Change Tuesday, educators can access all sorts of resources - including a brandnew exciting sustainability article, puzzles, debate questions and the creative challenge - every single week for absolutely no cost. You can bring sustainability education to life with our Build the Change Tuesday: LIVE Lesson on 4th October 2022 at 13:30.

Enter the Build the Change Tuesday competition (coming soon!), where winning creations will be showcased to real-life decision makers. It hits many curriculum areas in a real and easy way: children can develop reading; comprehension and discussion skills along the way.

# **KEY POINTS**

Join our no-prep Build the Change Tuesday: LIVE lesson on 4th October at 13:30, featuring David Pallash from the LEGO Group. Sign up at bit.ly/BTC-teach-primary A 20-minute activity can fit manageably into a busy day, for example during registration, or after a playtime or lunchtime, meaning you don't need to carve out extra time. KS1 LESSON PLAN

## Computing





• To explain how information technology helps us

- To recognise common types of technology
- To demonstrate how IT devices work together
- To say why we use IT

# How does digital technology help all of us?



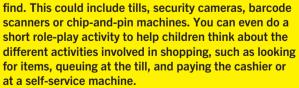
Encourage pupils to move beyond simply recognising tech, and towards asking 'why?', says **Sway Grantham** 

🗸 @SwayGrantham 🛛 🛄 ncce.io/tcc

Speaking to any Y2 child about what they know about the world is fascinating. They have started to gain some knowledge from their experiences, and have inferred other information – often in amusing ways. Exploring the IT around us opens up these conversations – *What stops shops running out of beans? How does this supply affect us?* – and offers children a chance to see the world differently. To know its secrets. And even better, to begin to question the technology that is all around them.

# START HERE

Using their understanding of a shop, ask pupils what examples of information technology they would expect to



Next, ask the class what common examples of information technology they think would not usually be seen in a shop, and lead them towards answers such as traffic lights, speed cameras or ATMs. After this, children will experience how different elements of IT work together, and can use this exploration to consider the benefits of digital technology in this context.

# MAIN LESSON

## 1 BARCODES

Narrow down the IT that pupils have recognised to a barcode, a barcode scanner and a till. Ask them how they think these items work together? Have they ever seen someone use them? Where have they seen them used? Use these conversations to begin a discussion related to the children's experiences of being in a shop. Next, ask pupils to describe the process of purchasing items: barcodes are scanned at the till, then a beep sounds, and the price appears on a till display. Explain to the children



that barcodes are found on lots of products and that computers can read them very quickly. Each barcode represents a number — sometimes this number is shown underneath the barcode. The number corresponds to one specific product.

In this lesson, we are going to use our own made-up barcodes, which you can find in the lesson resources at ncce. io/ITbenefits. These barcodes are simplified to be easier for young children to recognise and work even better if you can wrap them around tins (or add them to toy shop products) to make them look like packaging! There are also other resources such as a product list and price list for you to use?

### "Exploring the IT around us opens up conversations and offers children a chance to see the world differently."



Remind the class that although they have been pretending to be the IT that we find in shops, usually when someone works in a shop, they don't have to look at the barcode, work out the product or check the price because the computer does it for them. Ask them to consider what it was like being the computer. Did anvone make mistakes? Did they feel like they had to rush? Did they find it difficult looking up a large number of products someone wanted to buy?

Lead the conversation, suggesting some benefits to using computers instead of people. Things could include their speed at looking things up or at calculating the total, and the accuracy of identifying the correct product or cost. You might also want to explain that in our shop we only had a small number of products, but in other shops there are thousands. That would be a very long list for a person to look at! This can lead to conclusions that technology helps us to manage large amounts of information. which a human would probably forget.

#### Sway Grantham works for the Raspberry Pi Foundation developing free computing resources and online training for primary

online training for primary teachers. Follow Sway on Twitter @SwayGrantham and see more work from the Raspberry Pi Foundation at @RaspberryPi\_org

### EXTENDING THE LESSON

Encourage pupils to consider other places that they could role-play using IT, such as a cafe or restaurant. Here, learners would type on a till what was ordered, the till would look up the price of each item and then calculate the total to display or print on a receipt. Another example is how an ATM works. Learners would post their cash card into the machine. and enter their secret pin number. The person being the ATM would check the pin was correct and then ask them what money they wanted.To add challenge, they could also check how much money was in the account. This roleplay could be made more complicated or simplified based on the experiences of your class. After recognising the

IT around us (ncce.io/ ITaroundUs) and its benefits, it is important to discuss how to use IT safely and responsibly. This could include when and when not to use it (like at bedtime!) or how rules like secret pin codes keep us all safe.

### USEFUL QUESTIONS

- Were you able to complete the jobs quickly?
  Were you able to work well with the other parts of the till?
- Do you think a real till would be quicker than you were?
- How does having barcodes help shops and shoppers?

### 2 BEING A SHOP TILL

Now that pupils know what barcodes are for, they are going to explore the process that happens when someone buys something from a shop by roleplaying in groups of three. Give the children the following roles:

- $\cdot$  The customer
- The till (including the scanner)
- $\boldsymbol{\cdot}$  The price-finder and adder

Get the pupil acting as a customer to select a number of tins with the special barcodes on them, and take them to the till. Next, the child acting as the till should make a "beep" sound to demonstrate they have scanned the item and then looks up the item from the barcode. Then, the pupil acting as the price finder can looks up the price of the item and add it to a till receipt. Finally, once all the items have been scanned, the price finder can calculate the total. Each group can then repeat this roleplay several times, buying different items and with the children having the opportunity to try different roles.

This process demonstrates to your learners that a scanner reads a barcode to determine which items are being purchased, so that the system can look up how much they cost and what total the customer needs to pay. Science Design & Technology



### WHAT THEY'LL LEARN

- How a firework works
- How the force of thrust works

• That air resistance slows down the speed of flight

 How gravity pulls things towards the ground

 That air can be used as propulsion or thrust

 To design and make their own fireworks following instructions



#### KS2 LESSON PLAN

## Have your own Bonfire Night bonanza



Spark your pupils' enthusiasm and explore the educational opportunities of fireworks, with **Laura Cross** 

🗾 @InventorsM 🛛 🛄 inventorsandmakers.com/schools

Fireworks on Bonfire Night is always an enjoyable event come November 5th, and the learning opportunities go beyond your typical history links, too.

In this lesson you can get pupils doing some fireworks-themed making, while also learning about several scientific concepts – it's the perfect opportunity for a focus on forces, and for incorporating D&T skills.

You won't need many materials for this activity, and can use the printable resources and image provided in the download link to make it even easier to set up. So fire away!

### START HERE

Watch a video of a fireworks display (e.g. tinyurl.com/ tp-FireworksJapan) and talk about Bonfire Night displays pupils might be attending. Explain how a firework

functions, perhaps drawing a diagram on the board: 1. A firework is placed on the ground with its fuse at the bottom, which is then carefully lit.

2. The fuse burns up to the firework which is filled with explosives. When it reaches the firework, it causes an explosion which launches it up into the air.

3. A second fuse has a time delay, and after the initial launch, this fuse burns towards a second part of the firework that then explodes in the sky. Different compounds cause the colours we see.

### MAIN LESSON

#### FOR THIS LESSON YOU'LL NEED:

• A printable firework template (find one in the download for this lesson, or draw your own)

• printable instructions (also available in the resource download)

• forces image ready to show on the board

 $\cdot$  one regular straw for each pupil

• half a jumbo straw per pupil (make sure the regular straw fits inside)

- tape and scissors
- ${\scriptstyle \bullet \, felt-tips \, or \, coloured}$
- pencils/crayons
- optional: a small piece of tissue paper for flair!



#### 1 EXPLANATION OF FORCES

Explain to pupils that they will be making their own (non-explosive!) fireworks to launch, and that they'll be learning about the forces involved in a firework's journey from the ground into the sky and back down again. You could use the forces image on the board (from the starter activity) while you talk through the explanations below, perhaps with the names of each force hidden until you discuss them.

Thrust: When a firework is launched, the explosives create a pressure that pushes the firework up into the sky. This launch force is called thrust. For example, thrust in a plane is what moves it forward and



this comes from its engines. When you throw a ball, the thrust comes from your arm. The thrust for our fireworks will come from blowing into a straw! Gravity: Ask what force acts on the firework when it starts to slow down and eventually falls back to Earth. Pupils will probably know this as gravity and you can show it by labelling your firework image with an arrow pointing down. You might extend this by explaining that at the start of the firework's journey when it travels upward, thrust is stronger than gravity. But this force then decreases over time. The point at which the force of gravity becomes greater

than the thrust is when the firework is pulled back down.

Air resistance: Ask pupils if they know why the front of a firework or rocket has a cone shape and then introduce the concept of air resistance, perhaps comparing running with your arms spread out, to running with your arms tucked in to your body. You might discuss how air resistance is acting on the firework both on the way up and on the way down, but in opposite directions.

#### 2 MAKE FIREWORKS

Ideally have one firework already made to show the class first. Explain how they will be:

### "This is the perfect opportunity for a focus on forces, and for incorporating D&T skills."

• using air to give their fireworks enough thrust to launch

• creating a shape to minimise air resistance

• observing how after traveling into the air, gravity will bring their firework back down. Go through the steps of making a firework, using the firework instructions printed out or on the board. You could give out the firework templates, or have pupils design their own shapes that they think will minimise air resistance.

#### 3 TEST AND ITERATE

Now it's time to test!. Tell pupils to think about the forces in action as they do so. Encourage investigation of who can blow their firework the highest or the furthest and what works well (for example, how does nose cone shape, or blowing harder impact distance? What does this tell you about the interaction of forces?). They could make changes or improvements to iterate and improve their designs. Finish with a launch competition if you like. Troubleshooting: If the children's firework launches are experiencing problems, try checking these things: Make sure pupils are blowing hard enough, and that their mouth is sealed around the firework, to stop air escaping.

• Check the long straw isn't sticking on something inside the wider straw, e.g. bits of straw curled out or bits of tape.

Laura Cross runs Inventors & Makers, running in-person and online STEM workshops and clubs.

## EXTENDING THE LESSON

 Have pupils design their own rocket shapes, perhaps using a rolled-up cylinder of paper with the end pressed into a cone and wings stuck on. Test and compare the different shapes and how well they travel.

• Have a competition of who can launch their rocket the furthest, thinking about the greatest thrust and the angle of launch in improving performance.

• Try repeating the lesson, but with paper planes, again considering thrust, air resistance (horizontally this time) and gravity. Then introduce the concept of lift whereby the shape of the plane's wings help it to stay in the air longer.



template and instructions at tinyurl.com/tp-Fireworks

### USEFUL QUESTIONS

- What is giving your firework thrust?
- What gives a real
- firework thrust?
- What is making your
- firework fall back to the ground?
  - Why does the shape of
- your firework matter?
- How could you improve how high your firework goes?

#### KS2 LESSON PLAN





• How to complete detailed, observational sketches of the intricate details within an eye

• How to create a 3D relief sculpture

• How to combine different materials to achieve a variety of colour and texture effects within a 3D sculpture

## Create your own amazing 3D relief sculpture



Transform observational sketches into monstrously marvellous dragon eyes, with **Marc Bowen** 

#### 🄰 @raglanvcprimary

"The real voyage of discovery consists not in seeking new landscapes, but in seeking new eyes." – Marcel Proust

This unit of work emerged, almost by accident, following our study of the wonderful picture book *Black Dog* by Levi Pinfold. The book features a monstrous, scary dog prowling around the exterior of a house, and one potent illustration depicts a huge amber eye peering in through the bathroom window. It was this scene that captured the imagination of my class and inspired us all to complete our own artistic studies of eyes.

### START HERE

The real success of this project relies upon sourcing high-resolution photographs of the eyes of different animal species. These are essential to focus the children on the incredible



variation of textures and colours within the structure of an eye, and is instrumental in moving them away from the typical 'black dot and white circle' forms they may have used in their past artwork. A quick Google search will provide numerous results, but I would strongly suggest looking for the photography of the artist Suren Manvelyan (tinyurl.com/tp-SMeyes). The images are truly stunning and had my class hooked!

### **MAIN LESSON**

#### 1 SKETCH

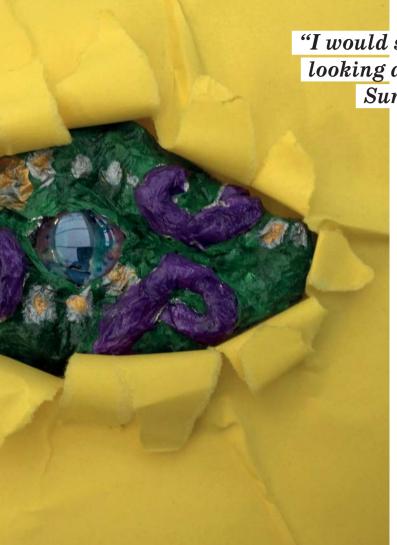
With multiple copies of the eve photographs available to the children, simply start by viewing each one, trying to guess which animal it comes from (which is great fun!) and then discussing the features that surprise or intrigue you. At this point, ask the children to choose their favourite eve photograph with the goal of producing a detailed, observational sketch. Prior to the children picking up their sketching pencils, it's important to model the process of sketching, i.e. not drawing a circular outline to fill



in. We chose to all start at the same focal point: the canthus (the corner of the eye where the upper and lower lids meet - or the equivalent point on lidless eves). Next, demonstrate working outwards from the point and using small, rectangular card viewfinders to help keep your focus on the unique features and structures of the chosen eye. When the initial sketches are completed, pupils can experiment with coloured pencils and watercolour pencils to layer and blend shades to achieve the realistic colourings from the photographs.

#### 2 PLAN

Having completed their sketches, introduce the challenge of making eye



sculptures to recreate the bathroom scene from Black Dog. The twist for our project was that we would try to create dragon eyes, as these would then be featured in our annual Eisteddfod celebrations, but you can choose any animal – real or imagined! With their new-found sketching skills tucked under their belts, ask pupils to start scouring books, images and the internet to collect ideas for their eye designs. Once they have collected a range of 'mood board' sketches, ask the children to produce a design sketch from which they will construct their 3D sculpture. Again, emphasise including fine details and careful colour

choices, with reference to your first observational pencil sketches.

#### 3 SCULPT

Now that their heads are buzzing with animal eves, and their fingers are keen to start sculpting (hopefully!), introduce the modelling process. This is a universally helpful process which I have used with many sculpture tasks in the past; it is both easy and quick to complete, so no lengthy days of waiting for papier mâché to dry! Give all the children a thick card base board to sculpt upon. They should then take short strips of aluminium foil and roll them into silvery worm sections. Attach these sections to the card base

### "I would strongly suggest looking at the artwork of Suren Malvenyan."

with PVA glue and layer them up to gradually build the profile of the eve. Once the basic structure is complete, it's time to really inject the magic into the project. Give each child a transparent bead (I found some cheap ones online) along with a black permanent marker. Each bead we used had a flat side, onto which we drew a pupil design with the marker, so if you can find similar beads, they work really well. Next, glue the bead into position – my children audibly gasped as they could now see their dragon eye coming to life!

Over a matter of hours, get pupils to continually build up the contours of their eyes, after which they can glue on layers of different coloured tissue paper. They'll soon discover that if they apply thin layers, they can achieve a variety of colour effects which closely match their original sketches. I found it was wonderful to see my class's creativity really blossoming at this stage, as some children then chose to add further 'foil snakes' and other shapes to the surface of the sculpture to enhance the textures and features of the eye. Again, they then layered up further tissue paper to integrate these new elements.

Marc Bowen is a deputy head and primary teacher in South Wales, and is always keen to engage in professional dialogue. Contact him at marc.bowen@raglan. schoolsedu.org.uk

### EXTENDING The lesson

To create a really effective display of the finished sculptures:

Cut the eye sculpture out from the cardboard base Glue this base into the centre of coloured A3 card Glue a piece of A3 paper the same colour as the card over the top of the whole sculpture, without applying any glue to the portions actually over/touching the eye sculpture itself Use a craft knife or your fingers to tear the paper over the eye sculpture, pulling the paper outwards to achieve an effect of the eye bursting through a wall Hang up and admire!



• Could this project be integrated into a cross-curricular unit linked to a more scientific study of the human eye?

• Do the children now have skills that could be transferred to other sculpture projects, such as clay or mod-roc, later in the school year?

• Have you acknowledged the source of any images you have used? This is the perfect opportunity to cover ICT usage rights with the children, including the demonstration of how to filter Google Images by usage rights. **W** teachwire

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#### PARTNER CONTENT

### *Combine education and adventure for an unforgettable experience*

How unique residentials can enhance pupils' learning, while leaving them with memories to last a lifetime



With four locations across North Wales and Cheshire, Conway Centres is the perfect location for children to come together and make life-long memories. Located in beautiful, natural surroundings, we offer courses that combine true life adventure and immersive cultural celebrations

### What does Conway Centres have to offer?

At Conway Centres, education is at the heart of everything we do. Our high-quality outdoor adventure & cultural residential courses are a powerful development experience that will empower, inspire, challenge & develop young people, making an educational and life-changing difference. From kayaking on our private dock with the Snowdonia Mountain range as a backdrop at our Anglesey centre, to learning all about the Iron Age in our round house at Burwardsley – we have activities to suit every child, no matter their level of experience or needs.

### What makes Conway Centres different?

Our schools bring year groups back to Conway Centres year after year with the confidence that their children have an entirely new experience each time! From visiting in Year 2 for their first ever residential at our cosy Delamere centre through to enjoying their last residential in Year 6 at our Anglesey centre which is home of high adventure – children enjoy progressing through our different centres and experiencing new activities, with the comfort that they know our centres, our experienced staff and how we work.

#### Great, when should we visit?

We will let you into a secret... at Conway Centres, autumn and winter



is our favourite time of year! We are open all year round for young people to enjoy life-changing experiences. We know that a winter or autumn residential brings more challenging weather, but what better way to encourage young people to thrive in the natural environment? Children leave our centres learning something new and by visiting in the autumn and winter months you will fully reap the benefits for the rest of the academic year.

### What are the benefits of visiting Conway Centres?

When children visit, they take away far more than just fantastic memories...our residential visits offer young people diverse and high-quality



Nick McCavish is the head of centres

### **O**ConwayCentres

Contact:

conwaycentres.co.uk conwaycentres@ edsential.co.uk 01248714501 experiences to enhance their classroom learning and open opportunities they may not otherwise receive. Whether you choose to bring your Year 2s to our Delamere centre to support with the geography curriculum, your Year 5s to Tattenhall to celebrate Christmas, or your Year 6s to prepare for their SATs – all of our programmes have clear learning outcomes.

### What do schools love about Conway Centres?

Each time schools visit they are welcomed back by the same familiar faces - they tell us that our staff are a significant highlight of their stay, being supportive, friendly, and professional; no child gets left behind. We only employ the highest calibre of very qualified and experienced staff who are industry leaders in outdoor education. From competing in sailing championships to ice climbing down frozen cliffs - our staff live and breathe adventure!

What's the difference?

- + Conway Centres' progression journey is perfect for schools and MATs to enjoy the same shared experiences year after year.
- + Your residential will be led by the most experienced staff who are industry leaders in outdoor education.
- + Whether you want a ready-made or tailored programme our experienced bookings team will support with your school's budget, goals and focus.

### LITERACY

## Ten Minute Box

A little suitcase that packs a punch for bite-size but effective literacy learning

### AT A GLANCE

A multisensory phonics intervention for teaching digraphs to pupils of any age
Contains instructions, assessments, lesson plans, activities, games and resources
Dedicated and designed for children who struggle with progress in literacy
Teaches 50 digraphs and 300 curriculum words through fun multisensory phonics games

#### **REVIEWED BY: JOHN DABELL**

If you are looking for a systematic and individualised intervention programme for maximising learning potential that can be used alongside any phonics scheme, then Ten Minute Box offers a structured and cumulative curriculum with multisensory support second to none.

This adaptable and flexible resource uses a simple but effective approach for helping children needing further support with their reading and spelling, by using carefully thought through activities for just a few minutes a day that make a positive impact.

Ten Minute Box is basically a mini-suitcase of learning that uses a systematic sequence of teaching and comes with a whole host of supporting materials, record of achievement booklets and an illustrated teaching guide with really clear planning. To make the learning fun, children take on the role of Digraph Detective and their tutor assumes the persona of Inspector.

Teachers and Teaching Assistants will find this resource particularly useful because everything you need can be found inside the box which saves valuable time.

For something so small, this colourful case really does pack a lot of quality materials inside and includes an instruction manual, activities book, sentence list and sentence isolator, record of achievement and record of work bundles, nine digraph panels, nine sets of digraph cards, A5 whiteboard, two coloured pens and eraser cloth, blank game board, Beginning, Middle and End flags and End board,



two shoelaces, round and long beads, timer, six-sided die and four coloured cubes and treasury tags.

The idea of the Ten Minute Box is to regularly support the learning of digraphs through quality one-to-one input so that gaps in understanding can be addressed, targeted and plugged. Children follow their own individual programme and still access whole-class provision so they are getting the best of both worlds.

The box is ideal for TA use but is very much for children to 'own' so they don't fall into learned helplessness and they are encouraged to unpack and select what they need for each session.

Each child has a record of achievement booklet so they can see the progress they make by working on skills in small steps. Comments can easily be added to the booklets and these show what children have grappled with and mastered over time.

A highly supportive teaching manual is provided written by SEND experts, and there is also online training available in how to get the best out of the Ten Minute Box to suit every setting.

What makes this resource so powerful is that lessons are short, snappy and focused, tuning into attention spans for long enough to make a difference. It reduces cognitive load so all pupils can feel a sense of progress, and it can be used from Year 2 upwards. This is an excellent classroom investment for a wide range of learners.



VERDICT

 Highly inclusive and especially useful for children with specific learning difficulties
 Allows teachers and TAs to diagnose and address areas of strength and weakness
 Perfect for teaching in bite-sized chunks

minute

✓ Ideal for one-to-one support or small group interventions to help children 'crack the code'

✓ Allows children to take ownership of their own learning and encourages independence

✓ Provides a range of strategies for pupils to access

✓ Recognises learning anxiety and tackles self-esteem problems

### UPGRADE IF...

You are looking to purchase a portable, professional and unique toolkit for teaching digraphs packed with literacy materials for reading and spelling.

### HANDWRITING

## **Collins Happy Handwriting**

Help children master this essential skill, with all the resources you need ready-made



### AT A GLANCE

A whole-school handwriting course to help children from Foundation to Y6 become confident and fluent writers
Consists of teacher guides, practice books, whiteboard slides and downloadable content
Provides clear plans for frequent and discrete direct teaching

Quality materials that focus on effective joining and developing automaticity
Penned by experienced literacy consultants

#### **REVIEWED BY: JOHN DABELL**

The digitally-savvy are always having a swipe at handwriting, bemoaning it as a redundant language skill. But it is still hugely relevant, and learning to write the specific English orthographic patterns plays a critical role in composition and the generation of creative and well-structured text.

The ability to write legibly and quickly continues to be a basic and essential skill and it also has a significant impact on the ability of children to recognise letters and activate their reading circuits.

The bottom-line of any handwriting scheme is to help children generate legible writing that can be produced comfortably, at speed and with little conscious effort, so they can attend to the higher-level aspects of writing composition and content.

This is what Collins Happy Handwriting helps to do, and supports teachers to implement and integrate effective, evidence-based teaching strategies using a cumulative programme of skills. It strikes a healthy balance between practice and explicit instruction of a simple, modern cursive font.

Children's write-in practice books are full of colourful and engaging activities that provide short, 'little and often' practice of letter formations and letter joining for successful hand habits and movement.

These 32-page user-friendly books feature focused activities to teach





different aspects of handwriting that concentrate on legibility, consistency and quality. They focus on the correct movements to form lower-case letters, followed by their capital formations.

The teacher handbooks contain gallons of gold-standard guidance and support, too. They have clear and practical advice for writing a whole-school handwriting policy, and feature the latest research and expert tips regarding the best practices to implement. The handbooks also address the needs of left-handed children and have helpful notes on handwriting teaching routines. Each week of content is presented as detailed, grid-based lesson outlines for easy reference and flexible planning. A range of activities are also included, which support children in their writing skills such as note taking, writing with a time limit, writing neatly and proofreading.

The course also includes a licence for the Collins Handwriting font so that teachers can create their own activities and displays, as well as resource sheets and home practice sheets to support all children in meeting ambitious handwriting goals. For regular review and assessment there are structured diagnostic activities to identify handwriting needs with recording sheets to evaluate each family of letter movements, joins, letter formation and alphabet knowledge.



#### VERDICT

 Promotes automaticity of letter production to facilitate higher order composing processes
 Contributes towards independence and

- confidence in written composition
- Improves handwriting efficiency, stamina, resiliency and creativity
- ✓ Stimulates children to express themselves with more self-assurance
- ✓ Helps learners to remember and think about ideas
- ✓ Valuable as a systematic handwriting intervention and development programme

#### UPGRADE IF...

You want to raise the profile of handwriting in your school, support transcription skills acquisition and boost the development of confident, happy and fluent writers.





A one-day diary from first alarm to lights out

### WAKING UP

My alarm goes off at 6am, although either my cat or my toddler often wake me up earlier than that! Once I'm up, I'll read a few pages of my book while I have breakfast.

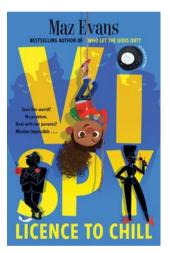


SARAH FARRELL IS A YEAR 6 TEACHER, MATHS LEAD AND ACADEMY NATIONAL CURRICULUM LEAD ©SarahFarrellKS2



#### **MY MORNING**

I get to school just before 7am because I find the mornings are my most productive time. Morning lessons are reading, writing and maths.



#### MY AFTERNOON

In the afternoons we focus on foundation subjects. My favourite is art, closely followed by history. We aways finish the day by reading our class story. Our last book was the brilliant *Vi Spy* by Maz Evans, and we all really enjoyed it!

### LUNCHTIME

At lunchtime, I make sure I have everything sorted for my afternoon lessons, and sometimes have lunch duty in the hall. I always have a mason jar of salad to eat, because I can make them on a Sunday and then they're ready to go each morning. Nice and easy.



#### **MY EVENING**

I try to leave by 4pm most days so that I can enjoy some time with my toddler before bath and bed, but Wednesdays are our staff meeting day, meaning

a slightly later finish. In the

evenings, I like to draw, read or do some of my own projects.





#### BEDTIME

I tend to go to bed at about 10pm and then read for a bit before immediately falling asleep as soon as I turn the light off!

### **QUICKFIRE QUESTIONS**

Career plan B? I would love to be an artist, author or editor. I have so many things that I want to do and not enough time to do them in!

**Must-listen?** I've been listening to lots of synthwave, such as Lebrock, The Midnight and Gunship. I also like the *Thinking Deeply About Primary Education* podcasts by @ Kieran\_M\_Ed.

Must-read? I was really excited to read The Family Remains by Lisa Jewell this month. I've also enjoyed reading some more of the Murder Most Unladylike series.

Twitter hero? I always love seeing tweets from @ DarrellWakelam – he has such amazing ideas and is so generous with sharing his creativity.

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