A bold ambitious new science campaign from BBC Learning to inspire primary school pupils and teachers through exciting, innovative and accessible mass-participation scientific investigations

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BBC Terrific Scientific

Today BBC Learning, in partnership with Wellcome, launches Terrific Scientific, a bold and ambitious new campaign to inspire primary children to get excited about science.

Terrific Scientific is a major 18 month UK-wide campaign to bring practical science into the classroom and into our homes. Instead of lab coats and test tubes, the campaign will urge pupils, teachers and parents across the UK to grab lemons, leaves, tap water and other everyday items to join in with exciting and accessible mass-participation investigations.

Aimed at upper primary school level, Terrific Scientific will help deliver the objectives of the science curricula for 9-11 year olds across the UK.

Fewer than 15% of 10-14 year olds have aspirations to become a scientist and girls are even less likely to consider a science related career. By breaking down the traditional confines of science, and exposing children from a young age to the concept that science is all around us, the BBC along with a host of partners will support teachers to show that a career in science is open to everyone.

The campaign aims to make science as accessible as possible for children and will include a series of Live Lessons and bespoke films featuring famous faces including Fleur East, BFG star Ruby Barnhill, CBBC favourites and our Terrific Scientific Ambassador, Science and Wildlife Presenter, Liz Bonnin. These will bring science to life and encourage children and schools to get involved.

As part of the Terrific Scientific campaign for schools, BBC Learning is also launching Terrific Scientific At Home – aimed at encouraging children, siblings, parents and guardians to engage in science together. By exciting them about science, and demystifying any barriers to it, children and their families can recognise science as a viable academic and career choice.

Throughout the campaign, BBC Learning will provide a range of teaching resources online to support each investigation. In partnership with Wellcome we also will send every primary school in the country a box of materials to aid teachers in carrying out the investigations. In February 2017 we will be launching a unique interactive Terrific Scientific Map of the UK, enabling schools to upload their results from each of the scientific investigations and then compare and contrast their results with other schools across the country. Using state-of-the art graphics and data-visualisation, the Terrific Scientific Map will help to create a sense of belonging as part of a scientific community and ensure children develop their scientific enquiry skills – a key part of the science curriculum. In an innovative partnership; each investigation will also feed into real research being conducted by some of the UK’s leading Universities, giving children a sense of purpose for their scientific enquiry. BBC Learning will also be working with a number of scientific institutions such as the Royal Societies for the Sciences.

Through Get Set, Team GB and ParalympicsGB’s youth engagement programme, BBC is offering an amazing incentive to all classes taking part in Terrific Scientific. Simply take part in at least two of our investigations and upload your class findings to our map and your school will be in with a chance of receiving a very special visit from a member of Team GB or ParalympicGB!
Sinéad Rocks, Head of BBC Learning, said: ‘It is widely acknowledged that the UK is facing a STEM crisis. We want to change that – by turning our attention towards primary schools with the aim of inspiring a new generation to see science as ‘for them’.

Terrific Scientific is very much a collaborative effort. As well as the Wellcome – we’ll be joined by more than 20 other partners to deliver this campaign – including academic and research institutions, learned societies and educational organisations.

We want Terrific Scientific to be a game-changing initiative – one that reverses the decline in STEM participation.’

Dr Hilary Leevers, Head of Education and Learning, Wellcome said: “We are proud to be part of a campaign that is bringing science to the forefront in primary schools. Terrific Scientific is a fantastic opportunity to get children inspired and excited about science.”

For more information and for teachers to register to take part, visit http://www.bbc.co.uk/terrificscientific
Science and Wildlife Presenter, Liz Bonnin is an ambassador for Terrific Scientific.

Q: Why are you passionate about science?

A: To me science is not a subject. Science is a way of explaining the world around us. Ever since I was very small, I had a lot of questions about how things worked. Science gave me a means to find answers to these questions and the more I work in it, the more I discover incredible things about the natural world. For me, that's what being human is all about.

Q: What inspired you to choose science at school and as a career?

A: I was lucky enough to grow up surrounded by nature. My sister and I would play for hours on end outdoors with hedgehogs, snakes, spiders and all sorts around us. It fed my inherent curiosity about the world around me.

I remember being obsessed with little birds that used to land on my balcony. I wanted to know how on earth their eyes moved in their little sockets, how their little hearts beat and what allowed these incredible, tiny animals to function. So naturally, I wanted to study biology and chemistry to understand living systems all the way down to the chemical equations that explain them.

Q: Why should children be encouraged to take up science?

A: It’s a shame that we’re in a situation where we need to ask why children aren’t interested in science any more.

Children have a natural aptitude for science and research shows that they are excellent at STEM subjects. Somewhere along the way they become disengaged and it’s our job to understand why and to address this properly.

The key is to maintain the inherent curiosity all children are born with, and learn how to reignite it and encourage it in children who lose that passion along the way. We all have a role to play – teachers, parents and society.

Children will naturally embrace everything to do with science, we just need to support them in the right way – do away with stereotypes, think carefully about how we as a society influence young people to pursue career paths, take the right approach in the way we teach science - it is our responsibility as adults to address these challenges correctly, and so that children never have to feel that they are not smart enough to do science, or that if they love science they are not cool enough.

Q: Why Terrific Scientific?

A: What excites me about science is the collaborations that lead to innovations and new technologies - people talking to each other, sharing ideas and changing the world. Terrific Scientific allows schools to not only get practical again with science, but to then share their ideas and results across the country using an interactive map. By communicating, sharing and comparing their work they’ll learn so much more, but they’ll also be contributing to research being carried out in our Universities around the
country. I think that’s a really a positive step towards reminding children just how fun, engaging and rewarding science is.

Q: What investigation are you most looking forward to?

A: The investigations in Terrific Scientific run the gamut of scientific disciplines so I’m looking forward to them all, but I’m particularly interested in the tree investigation because there is a such a great need right now for us to better understand how we humans and the natural world are so inextricably linked. This is going to be a nationwide audit of trees in and around school playgrounds. It will look at how important they are as carbon sinks and water stores, and the roles they play in supporting wildlife. I think it’s a really exciting and interesting investigation for kids to get stuck in to.

Professor Danielle George MBE

‘Terrific Scientific is an amazing opportunity to provide teachers, parents and children with the resources to feel confident about science. Confidence to not just do the experiments but to go further and ask; what else can I do? What else can I try?

We have some great teachers in this country who want to inspire, who want to go that extra mile, who want to push the boundaries a bit. We can all think of a teacher who inspired us in some way. It might not have been when they gave us the answer to a question, instead it was much more about them saying; I don’t know the answer either, let’s find out together.

Through Terrific Scientific, we can inspire this confidence into a whole generation. Not just a generation of future scientists but also a generation of influencers; parents and teachers.’
Investigations

Primary schools across the UK will be able to take part in any or all of the five investigations that we have planned from January to June 2017. Schools can sign up at www.bbc.co.uk/terrificscientific.co.uk to take part and upload their results to the Terrific Scientific map.

There will be five more investigations in phase two of Terrific Scientific, from September 2017.

Investigation 1: Taste

January

Supported by Coventry University

This investigation will kick-off the campaign as it goes ‘live’ in January 2017 with learning activities and resources looking at taste, the food we eat and how we process it.

The Big investigation will involve pupils finding out what percentage of their class are supertasters. Via a Live Lesson, Pupils will be encouraged to explore taste and share their results.

Investigation 2: Water

February

Supported by University of Southampton; Royal Society of Chemistry; The Geological Society

The second Live Lesson will see the biggest ever schools investigation into the water that comes out of our taps. The Investigation will ask where does our water come from and why is it different across the UK?

Schools will be supplied with a dipstick to enable them to test their water for dissolved minerals. What makes water ‘hard’ or ‘soft’ and which area of the country has the softest water?

Pupils will freeze water to test the Mpemba Effect, where hot water freezes faster than cold. They will investigate whether water hardness is a factor.

Investigation 3: Time

March

Supported by The University of Oxford; The Wellcome Trust; Stargazing Live

Pupils will observe how the movement of the earth around the sun affects us. They will also keep sleep diaries to answer the question:

‘Do I change when the clocks change?’

In a mass participation investigation conducted during the week before and after the clocks go forward, children will participate in reaction tests to discover whether the clock changes have an effect on their
brain function and sleep patterns. This will be the first major investigation into the impact of clock changes on our young bodies.

**Investigation 4: Trees**

*May*

**Supported by University of Leeds; The United Bank of Carbon; Woodland Trust**

Children will be responsible for conducting an audit of the carbon value of the trees in their playground or Local Park.

Using maths and simple identification tools, children will calculate the size of each of the trees in their playground to input into the map. They will build a picture of the carbon value of the trees in schools across the UK.

They will learn how much water trees store, how they help ameliorate pollution and explore what lives in and around their trees.

**Investigation 5: Speed**

*June*

**Supported by: Institution of Engineering and Technology; Institute of Physics; Team GB & Paralympics Association**

A super-sized Live Lesson involving schools, children and parents; testing forces such as gravity, resistance and acceleration. This is an event-led experiment and will involve pupils conducting a series of tests based around their school sports day with a difference. The event will launch with a challenge set-down on BBC Breakfast; for example: how can you slow down the fastest runner or wheelchair racer in your school?

Children will devise their own solutions around air resistance and friction with schools uploading their results to the map.
Our Partners and Champions

BBC Learning is committed to working in partnership with other organisations in the public, private and third sector to deliver its major educational campaigns.

The Wellcome Trust
Coventry University
University of Southampton
Royal Society of Chemistry
The Geological Society
Primary Science Quality Mark
University of Oxford
Institute of Physics
The Institution of Engineering & Technology
University of Leeds
Woodland Trust
United Bank of Carbon
Team GB/Paralympic Association (the Get Set! Scheme)
British Science Association
Primary Science Teachers Trust
Association for Science Education
University of Manchester Science and Engineering Education Research Hub
Related Links

**BBC Terrific Scientific**
Terrific Scientific Website: [www.bbc.co.uk/terrificscientific](http://www.bbc.co.uk/terrificscientific)
Registration page: [www.bbcterrificscientific.co.uk/register](http://www.bbcterrificscientific.co.uk/register)

**Wellcome / Explorify**
Search Facebook for: BBC Primary Science Campaign group

Other links

**BBC Teach** – the best of teacher content from across BBC Learning and the wider BBC: [www.bbc.co.uk/teach](http://www.bbc.co.uk/teach)

**BBC Live Lessons** – join the biggest classroom in the UK through engaging interactive broadcasts for schools: [www.bbc.co.uk/livelessons](http://www.bbc.co.uk/livelessons)