Engage Teacher Conference

How to use Explorify to improve science teaching and learning.

Participants will be introduced to the Explorify digital platform and how it can be used effectively in the classroom to spark the curiosity of all learners and get them engaged in their learning

Liz Hooper
Explorify and Resources Lead, STEM Learning Ltd

Engage Teacher Conference

Engage

Welcome, please be aware:

- Talks are recorded
- You can ask questions in the chat throughout
- There will be time for questions at the end

Explorify:
Supporting effective primary science education

Wednesday 19th June 2024

Liz Hooper – Explorify and Resources Lead
STEM Learning Ltd

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Session aims

- Introduce Explorify and explain how it is used effectively in the classroom to engage pupils and get them thinking and talking like scientists

- Explain how Explorify can be used to support learners with additional needs

- Demonstrate how Explorify can be used to raise the aspirations of all young learners

What is Explorify?

Explorify is an extensive and totally free digital resource of engaging, creative science activities for primary and early years teachers designed to stimulate curiosity, discussion, and debate in the classroom.

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Explorify – Why use it?

94% of Explorify users have recommended it to other teachers

74% of primary schools have at least one teacher using Explorify

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A Hyve Event
WINNER
IN ASSOCIATION WITH besa

93% of educators reported Explorify had a positive impact on their pupils

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Why was Explorify created?

- 'State of the nation' report (Welcome 2017) Covered all UK nations

Findings – Some highlights

- Only half of science leaders received release time for their role
- Science treated as a low priority subject
- Significant number of teachers did not feel confident teaching science
- Pupils viewed science positively
- Significant number of pupils perceived the need to be clever to do science
- 54% of classes received less than 2 hours science teaching a week

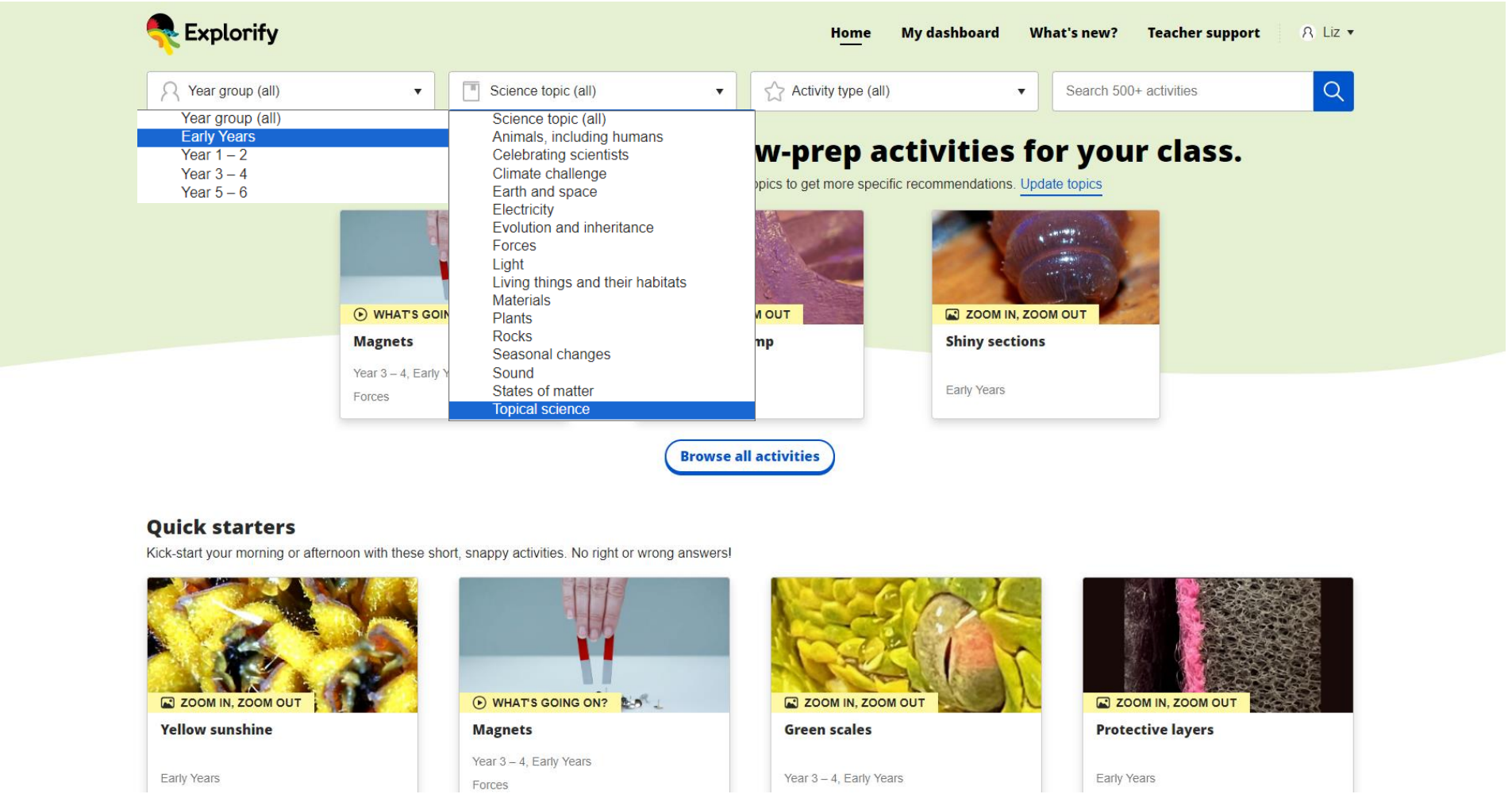
Primary science education research

- State of the nation – Wellcome Trust – (Sept 2017)
- Improving primary science - EEF - (Nov 23)
- Finding the optimum – The science subject report – Ofsted (Feb 2023)
- The 10 key issues with children's learning in primary science (2021)
  - Lynne Bianchi, Christine Whittaker & Amanda Poole
- Explorify Evaluation report (2023)

EEF report – Improving Primary science - Recommendations

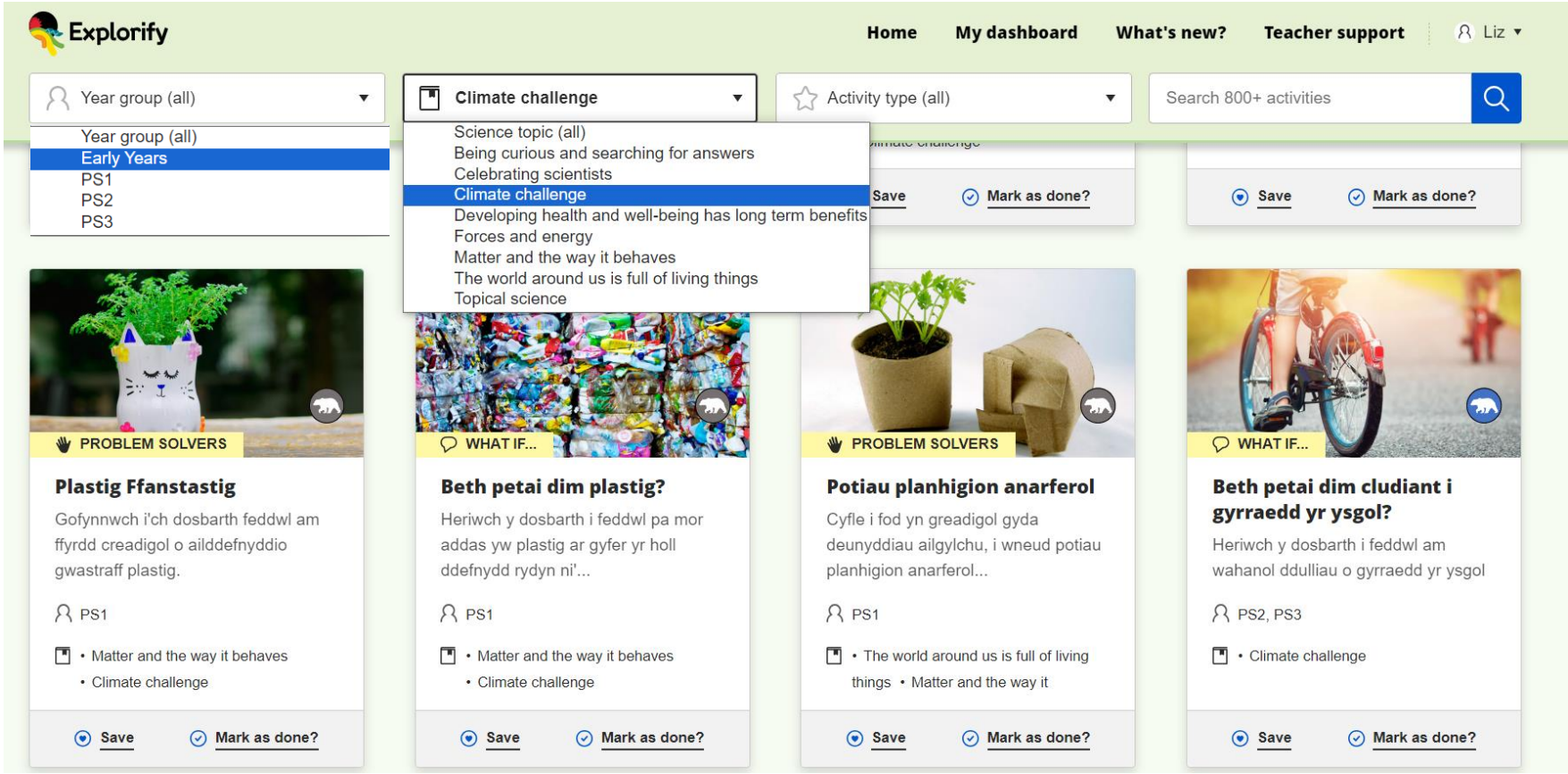
- Develop pupils' scientific vocabulary
- Encourage pupils to explain their thinking, whether verbally or in written form
- Guide pupils to work scientifically
- Relate new learning to relevant, real-world contexts
- Use assessment to support learning and responsive teaching
- Strengthen science teaching through effective professional development, as part of an implementation process

Explorify – Home screen



Explorify – Home screen

Curriculum for Wales and Welsh

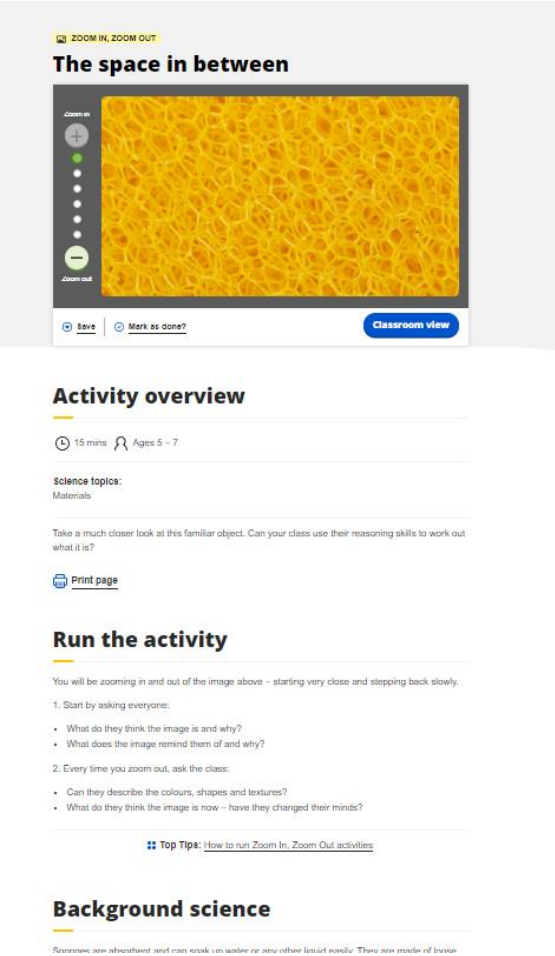


Explorify features

- Short, mostly image-based activities designed to develop curiosity, discussion and thinking skills in science and beyond.
- Designed to support science teaching, both content and working scientifically.
- Underpinned by evidence from research
- Teacher support area including a Science Leader tool kit
- Activities aligned to all UK primary curricula and in Welsh
- Special activities for Early Years
- All activities follow the same template so quick and easy to use
- Additional topics:
  - Climate Challenge
  - Celebrating Scientists
- Dashboard area to save favourites

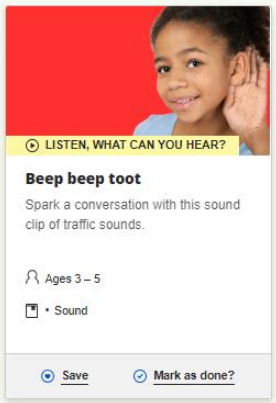
https://explorify.uk/en/activities

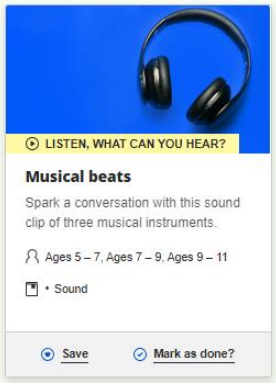
Explorify activities – Teacher support



- Activities categorised by age, curricula topic and activity type
- Every activity has an overview
  - How to run the activity – key questions to ask
  - Background science
  - Take it further
  - Related activities
- Reduces planning time

Explorify activities – Different activity types



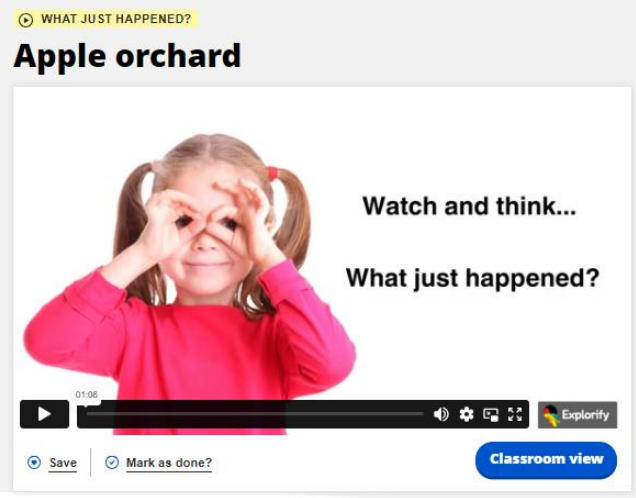


Shorter activities to stimulate discussion and assess prior learning, preconceptions, misunderstandings

- Odd one out
- Zoom In, Zoom out
- Listen, What can you hear?
- Have you ever…? – Primary Science Capital approach

Explorify activities – Different activity types

Longer activities: testing observational skill, leading to investigations or investigations.



- What's going on?
- What just happened? – Early Years
- Start with art
- What if?
- The Big question
- Mystery bag
- Mission survive
- Problem solvers

Early Years activities

[Blog - New Explorify Early Years Activities]

Explorify

Home | My dashboard | What's new? | Teacher support | Stacey

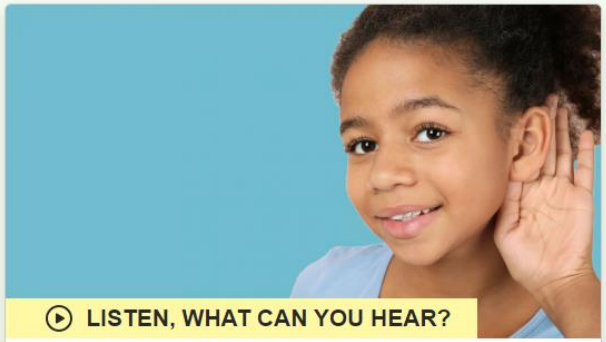
Early Years | Science topic (all) | Activity type (all) | Search 500+ activities

Apple orchard

Put your class' observation skills to the test with these images of apple trees in an o...

Early Years

• Plants • Living things and their habitats



Life in the wild

Spark a conversation with this sound clip of different animals.

Early Years

• Animals, including humans

Woodlice exploring

Spark a conversation with this video showing woodlice moving about.

Early Years

• Animals, including humans

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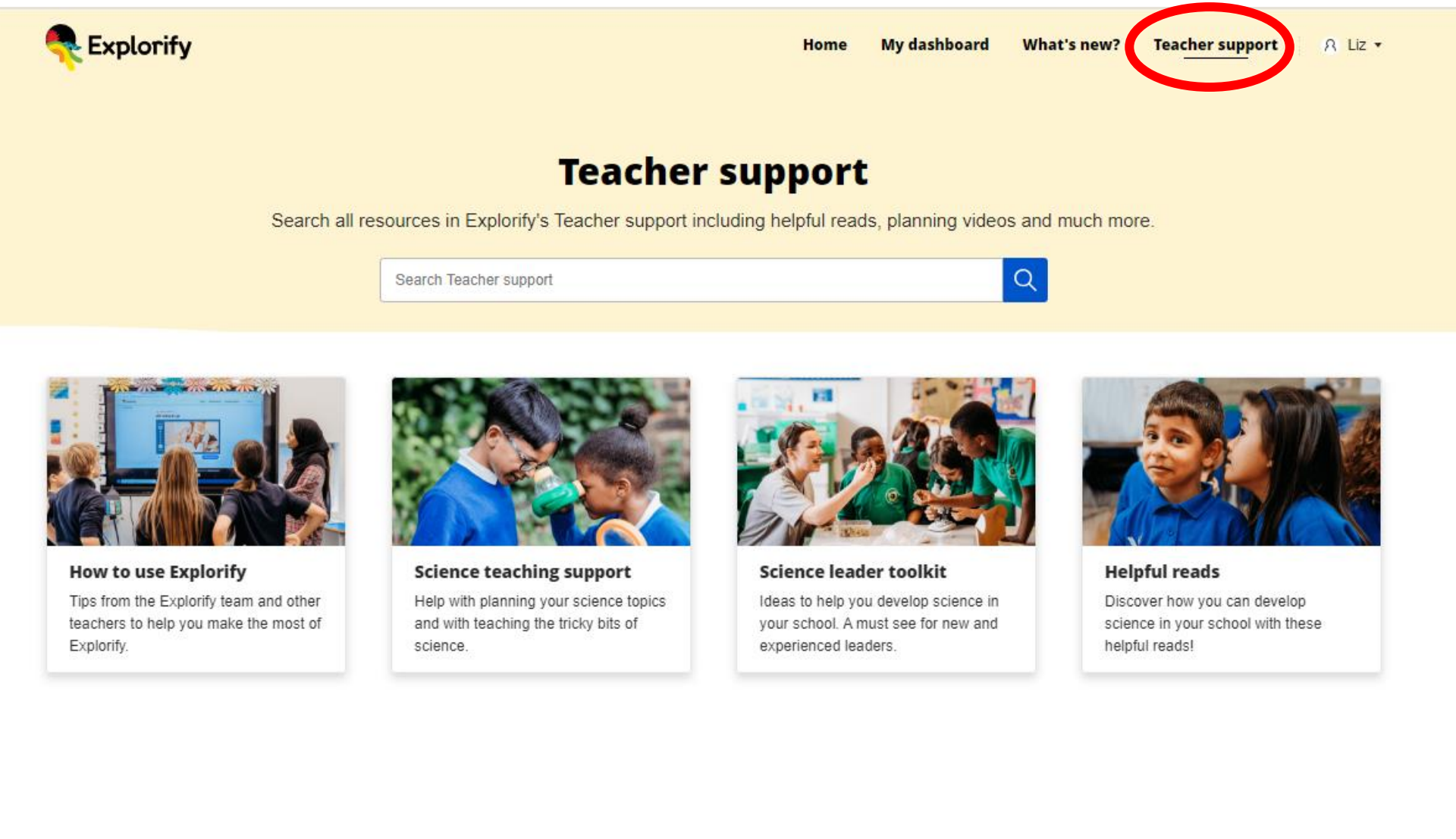
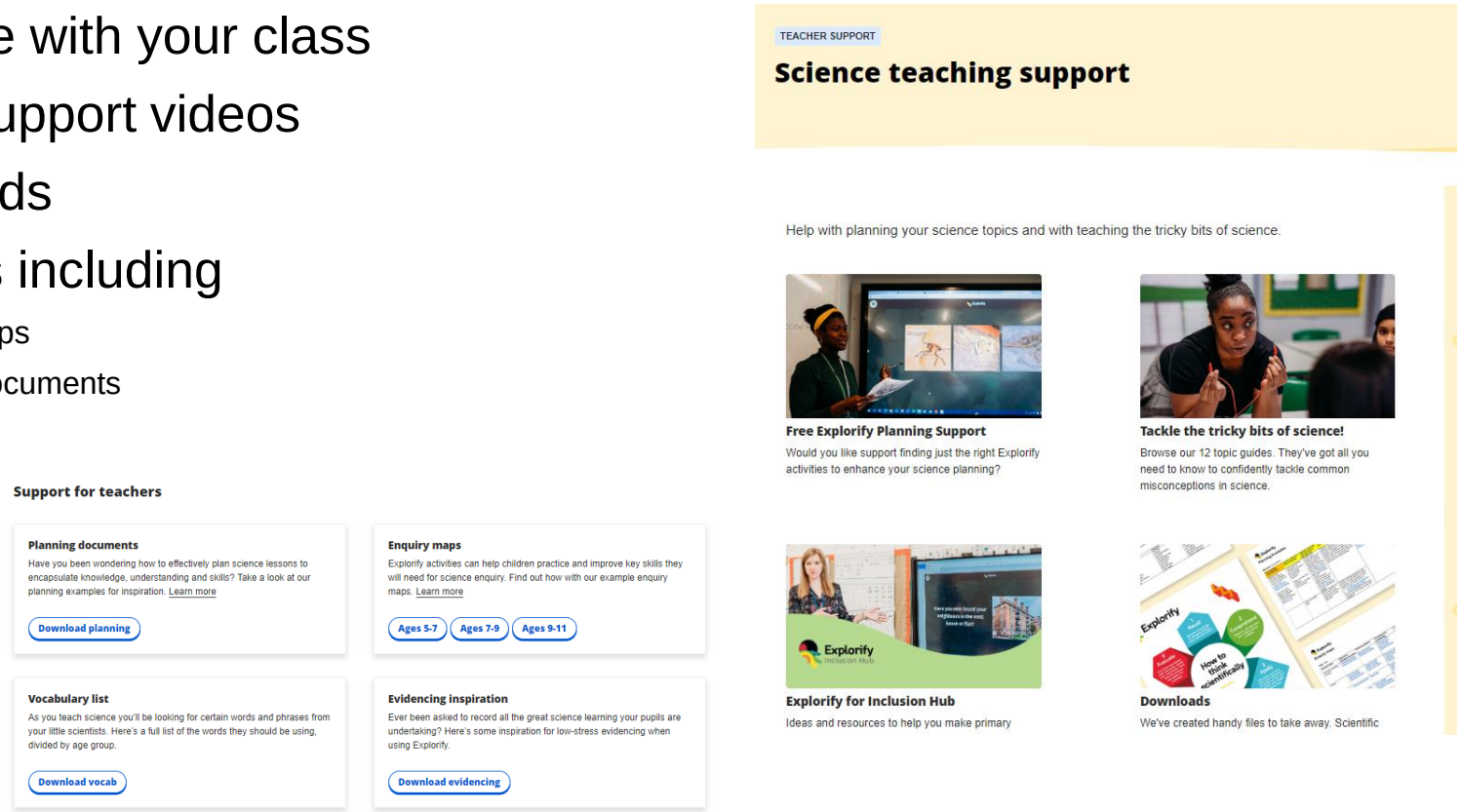
Explorify: Teacher support



Explorify: Science teaching support

- Topic guides
  - Tackling tricky bits – to improve teacher subject knowledge
  - Explore with your class
- Planning support videos
- Helpful reads
- Downloads including
  - Enquiry maps
  - Planning documents
  - Vocab list



Explorify for inclusion – Why focus on inclusion?

"The key strength of Explorify for all learners is that it builds links between **everyday experiences** and **scientific thinking**, whilst stretching them to provide logical explanations. This particularly **supports those who learn in an atypical way** whilst benefiting all those whose development is more typical for age. In other words, it is the ideal tool for creating an inclusive science lesson."

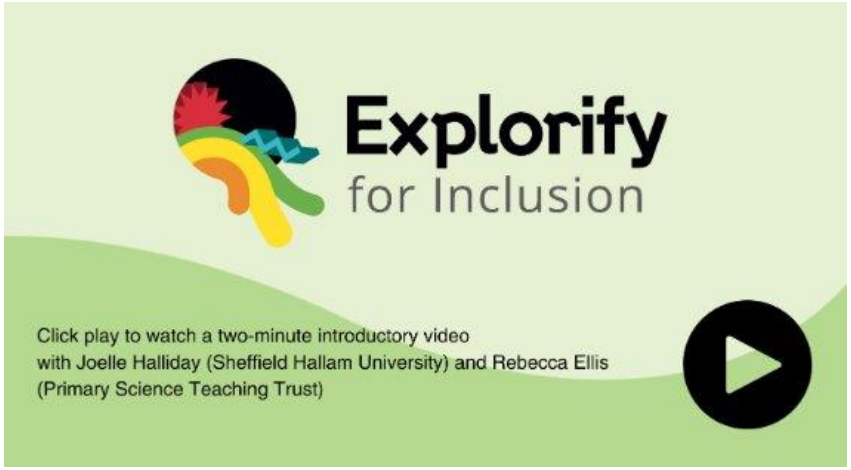
Dr Jane Essex

(University of Strathclyde)

Explorify for inclusion

Start from the **Inclusion Hub**

- Welcome video
- Strategies developed by teacher-researchers



Each section includes top tips and clearly explained strategies for using Explorify to support inclusive primary science.

1. **Choosing which Explorify activities to use**
2. **Establishing calm and focusing attention**
3. **Improving the quality of thinking and talking**
4. **Recording children's responses**

https://explorify.uk/teacher-support/science-teaching-support/explorify-for-inclusion-hub

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Explorify for inclusion

– Ideas to create a collaborative learning environment

Some top tips are developed:

- Teacher-research Case Studies
- 2-minute videos

Zoom In Zoom Out to capture children's attention

The children who often spent time in the provision base were highly engaged and the activities could be accessed as a whole class.

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Explorify for inclusion

– Starting with children's experiences

Using Have You Ever? activities so that science starts with children's experiences

- every child has a voice
- teachers to assess children's science knowledge more accurately

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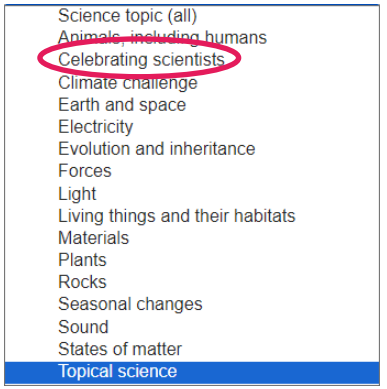
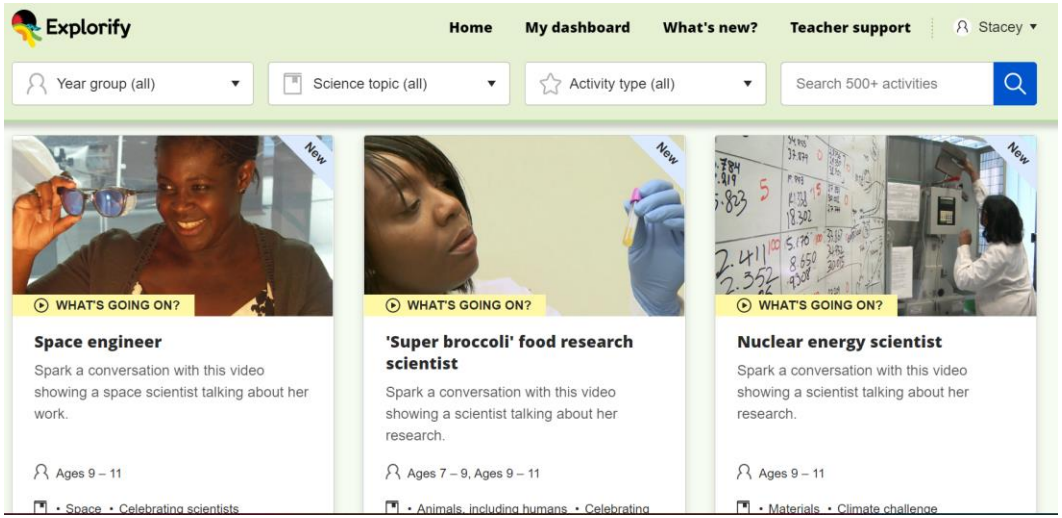
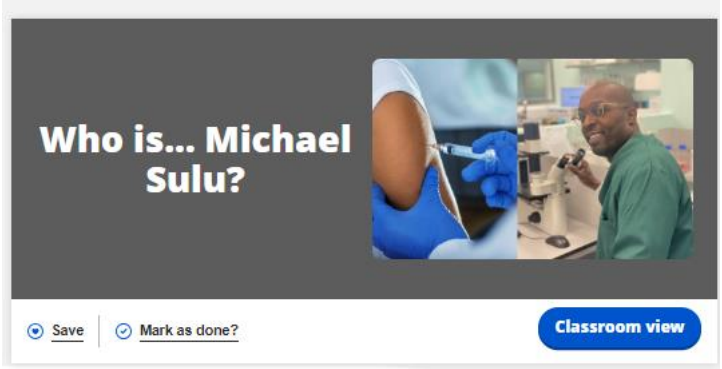
Explorify – Celebrating scientists

Additional Science topic – Celebrating scientists

- Who is…?
- What's going on? – 2 - minute videos







Reflection

How can you use Explorify in your school?

Or

How do you use Explorify in your school?

Do you have any questions?

Contact Us

explorify@stem.org.uk.

Elizabeth Hooper e.hooper@stem.org.uk

Keep up with Explorify news!

Explorify Staff Room

Explorify @ExplorifySchool

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Ofsted report – Finding the optimum - Recommendations

- better connection between reception and Year 1 learning needed (Ages 4 to 5 in England)
- Make time for pupils to recall and connect to other science concepts
- Sequence disciplinary knowledge (working scientifically) in the curriculum
- Plan curriculum to take account of other subjects.
  - e.g. maths
- Ensure pupils have a secure knowledge of what has been taught previously before moving on

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Thank you

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