

The logo consists of the word "Engage" in white, bold, sans-serif font, enclosed within a dark teal rounded rectangle. To the right of this rectangle, the words "Teacher Conference" are written in a dark teal, sans-serif font.

# **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

**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.



# 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



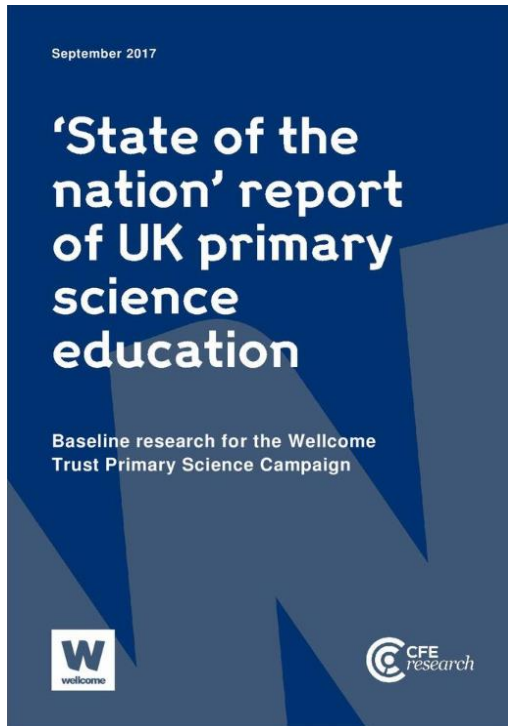
93% of educators reported Explorify had a positive impact on their pupils



# Why was Explorify created?



- 'State of the nation' report (Wellcome 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](#) [My dashboard](#) [What's new?](#) [Teacher support](#) Liz ▾

Year group (all) ▾

Year group (all)  
**Early Years**  
Year 1 – 2  
Year 3 – 4  
Year 5 – 6

Science topic (all) ▾


Science topic (all)  
Animals, including humans  
Celebrating scientists  
Climate challenge  
Earth and space  
Electricity  
Evolution and inheritance  
Forces  
Light  
Living things and their habitats  
Materials  
Plants  
Rocks  
Seasonal changes  
Sound  
States of matter  
**Topical science**

Activity type (all) ▾

Search 500+ activities 🔍

## W-prep activities for your class.

Topics to get more specific recommendations. [Update topics](#)




**WHAT'S GOING ON?**

**Magnets**

Year 3 – 4, Early Years

Forces



**ZOOM IN, ZOOM OUT**


**Shiny sections**

Early Years

[Browse all activities](#)

### Quick starters


Kick-start your morning or afternoon with these short, snappy activities. No right or wrong answers!



**ZOOM IN, ZOOM OUT**

**Yellow sunshine**

Early Years




**WHAT'S GOING ON?**

**Magnets**

Year 3 – 4, Early Years


Forces



**ZOOM IN, ZOOM OUT**

**Green scales**

Year 3 – 4, Early Years




**ZOOM IN, ZOOM OUT**

**Protective layers**

Early Years

# Explorify – Home screen

## Curriculum for Wales and Welsh

Home My dashboard What's new? Teacher support Liz

Year group (all)

Year group (all)

Early Years

PS1

PS2

PS3

Climate challenge

Science topic (all)

Being curious and searching for answers

Celebrating scientists

Climate challenge

Developing health and well-being has long term benefits

Forces and energy


Matter and the way it behaves

The world around us is full of living things

Topical science

Activity type (all)

Search 800+ activities



PROBLEM SOLVERS

**Plastig Ffanstastig**

Gofynnwch i'ch dosbarth feddwl am ffyrdd creadigol o aildddefnyddio gwastraff plastig.


PS1

Matter and the way it behaves

Climate challenge

Save

Mark as done?



WHAT IF...

**Beth petai dim plastig?**

Heriwch y dosbarth i feddwl pa mor addas yw plastig ar gyfer yr holl ddefnydd rydyn ni'...


PS1

Matter and the way it behaves

Climate challenge

Save

Mark as done?



PROBLEM SOLVERS

**Potiau planhigion anarferol**

Cyfle i fod yn greadigol gyda deunyddiau ailgylchu, i wneud potiau planhigion anarferol...


PS1

The world around us is full of living things

Matter and the way it

Save

Mark as done?



WHAT IF...

**Beth petai dim cludiant i gyrraedd yr ysgol?**

Heriwch y dosbarth i feddwl am wahanol ddulliau o gyrraedd yr ysgol

PS2, PS3

Climate challenge

Save

Mark as done?

# 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



**Activity overview**

15 mins Ages 5 – 7

**Science topics:**  
Materials

Take a much closer look at this familiar object. Can your class use their reasoning skills to work out what it is?

[Print page](#)

**Run the activity**

You will be zooming in and out of the image above – starting very close and stepping back slowly.

1. Start by asking everyone:

- What do they think the image is and why?
- What does the image remind them of and why?

2. Every time you zoom out, ask the class:

- Can they describe the colours, shapes and textures?
- What do they think the image is now – have they changed their minds?

**Top Tips:** [How to run Zoom In, Zoom Out activities](#)

**Background science**

Sevens are absorbent and can soak up water or any other liquid easily. There are made of linen.

- 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

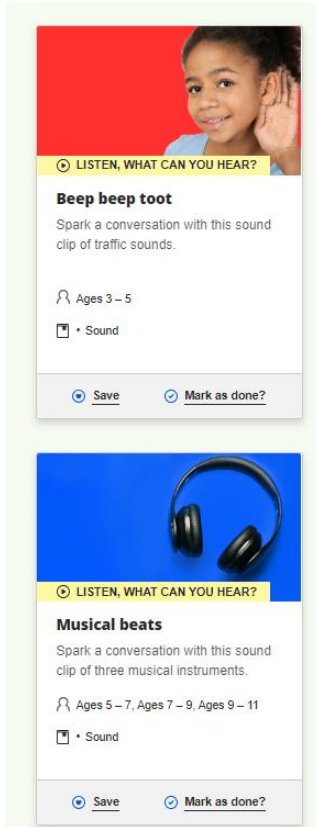
# Explorify activities

## – 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



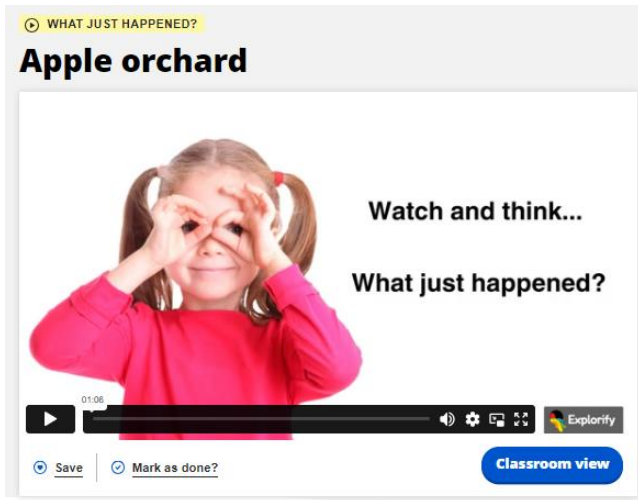


# Explorify activities

## – 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](#)



[Home](#)

[My dashboard](#)

[What's new?](#)

[Teacher support](#)

[Stacey](#) ▼

Early Years ▼

Science topic (all) ▼

Activity type (all) ▼

Search 500+ activities



New

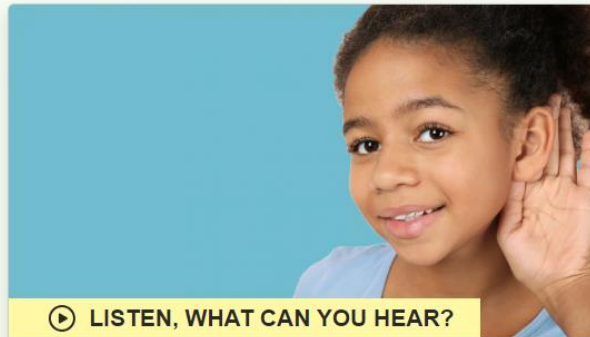
WHAT JUST HAPPENED?

## 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



▶ LISTEN, WHAT CAN YOU HEAR?

## Life in the wild

Spark a conversation with this sound clip of different animals.

Early Years

• Animals, including humans



▶ WHAT'S GOING ON?

## Woodlice exploring

Spark a conversation with this video showing woodlice moving about.

Early Years

• Animals, including humans





# Explorify: Teacher support

[Home](#)[My dashboard](#)[What's new?](#)[Teacher support](#)[Liz](#) ▼

## Teacher support

Search all resources in Explorify's Teacher support including helpful reads, planning videos and much more.



### How to use Explorify

Tips from the Explorify team and other teachers to help you make the most of Explorify.



### Science teaching support

Help with planning your science topics and with teaching the tricky bits of science.



### Science leader toolkit

Ideas to help you develop science in your school. A must see for new and experienced leaders.



### Helpful reads

Discover how you can develop science in your school with these helpful reads!

# 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

## Support for teachers

### Planning documents

Have you been wondering how to effectively plan science lessons to encapsulate knowledge, understanding and skills? Take a look at our planning examples for inspiration. [Learn more](#)

[Download planning](#)

### Enquiry maps

Explorify activities can help children practice and improve key skills they will need for science enquiry. Find out how with our example enquiry maps. [Learn more](#)

[Ages 5-7](#) [Ages 7-9](#) [Ages 9-11](#)

### Vocabulary list

As you teach science you'll be looking for certain words and phrases from your little scientists. Here's a full list of the words they should be using, divided by age group.

[Download vocab](#)

### Evidencing inspiration

Ever been asked to record all the great science learning your pupils are undertaking? Here's some inspiration for low-stress evidencing when using Explorify.

[Download evidencing](#)

## TEACHER SUPPORT

### Science teaching support

Help with planning your science topics and with teaching the tricky bits of science.



#### Free Explorify Planning Support

Would you like support finding just the right Explorify activities to enhance your science planning?



#### Tackle the tricky bits of science!

Browse our 12 topic guides. They've got all you need to know to confidently tackle common misconceptions in science.



#### Explorify for Inclusion Hub

Ideas and resources to help you make primary



#### Downloads

We've created handy files to take away. Scientific

# 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

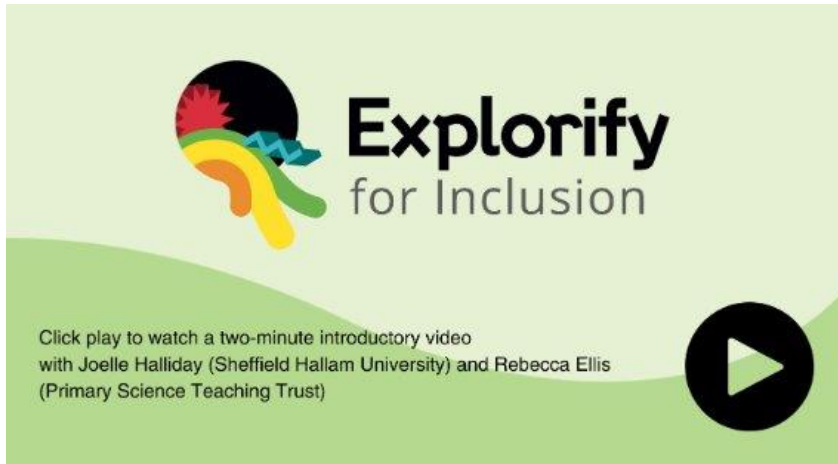
Each section includes top tips and clearly explained strategies for using Explorify to support inclusive primary science.

### 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>

# 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.



# 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

# Explorify – Celebrating scientists



## Additional Science topic – Celebrating scientists

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

Science topic (all)  
Animals, including humans  
**Celebrating scientists**  
Climate challenge  
Earth and space  
Electricity  
Evolution and inheritance  
Forces  
Light  
Living things and their habitats  
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Plants  
Rocks  
Seasonal changes  
Sound  
States of matter  
Topical science

Explorify

Home My dashboard What's new? Teacher support Stacey

Year group (all) Science topic (all) Activity type (all) Search 500+ activities

**WHAT'S GOING ON?**  
**Space engineer**  
Spark a conversation with this video showing a space scientist talking about her work.  
Ages 9 – 11  
Space • Celebrating scientists

**WHAT'S GOING ON?**  
**'Super broccoli' food research scientist**  
Spark a conversation with this video showing a scientist talking about her research.  
Ages 7 – 9, Ages 9 – 11  
Animals, including humans • Celebrating scientists

**WHAT'S GOING ON?**  
**Nuclear energy scientist**  
Spark a conversation with this video showing a scientist talking about her research.  
Ages 9 – 11  
Materials • Climate challenge

**Who is... Michael Sulu?**

Save Mark as done? Classroom view

# 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

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Keep up with Explorify news!



**Explorify Staff Room**



**Explorify @ExplorifySchool**



**explorifyschools**



# 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

# Engage


# Teacher Conference

## Thank you

**Contact Liz:**

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