

# Newsletter

Brought to you by **Dr Chris Hamlett**, Discover Materials National Outreach Officer

## Welcome to our very first newsletter

Happy New Year and welcome to our very first newsletter.

Our newsletters will be circulated at, or near, **start of every school half term** and highlight **recent developments in Materials Science and Engineering (MSE)**, new additions on **our website** as well as information for primary and secondary school **teachers and families**.

## News

### [Discover Materials this Winter](#)



On 12<sup>th</sup> December we ran an online event to showcase Materials Science and Engineering. We looked at materials for space exploration and had a fascinating Q&A session in which our ambassadors discussed their research, why they got into MSE and why it is such an important subject.

We also looked at Christmas-themed applications such as how to efficiently pack baubles, what materials Santa needs for his sleigh and even the properties of chocolates in a selection box. We recorded the session, and the recordings are now available on our YouTube channel:

### [Advances in Materials Science and Engineering](#)

Scientists in France have modified enzymes to help breakdown polyethylenetetraphthalate (PET). PET is a plastic used for drinks bottles and t shirts and this technology can use it to make new plastics - a fantastic step to creating a **circular economy** for PET. Source: <https://www.bbc.co.uk/news/business-67496717>

### Awareness weeks in the Spring Term

*Info from [www.awarenessdays.com](http://www.awarenessdays.com)*

- **National Careers Week** 4<sup>th</sup> – 9<sup>th</sup> March  
*Check out here for info about careers in Materials Science and Engineering*
- **British Science Week:** 8<sup>th</sup> – 17<sup>th</sup> March  
*Check out our British Science Week activities here (the theme this year is 'Time')*

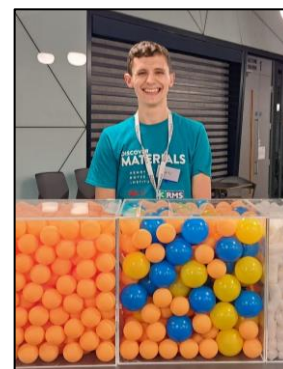
## Discover Materials Ambassadors



### Featured ambassador - [Dan Scotson](#)

*PhD student, The University of Manchester*

Dan researches ceramic coatings for future aerospace jet engines and has developed great resource that looks at the porosity of materials.



[Porosity in Materials activity](#)



[Dan's 'Baubles Packing' video](#)

## What is it?

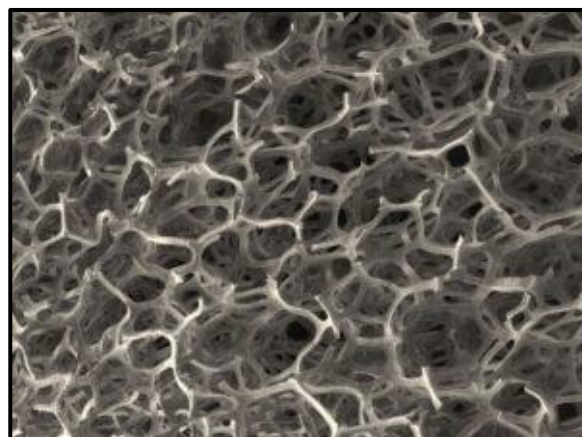


Image by Una O Hara

## For Secondary Schools

This section highlights useful resources and careers information on our website to help guide **11-18 year olds** into developing their interest in Materials Science and Engineering and discovering pathways to careers in the field.

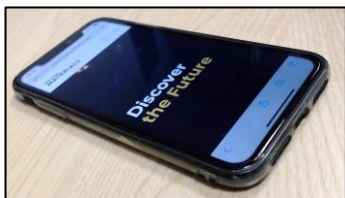
This month's featured resource:

### [Materials in a Mobile Phone](#)



Curriculum Link(s)\*:

- Technical knowledge (**Design and Technology, KS3**)
- Sounds waves and Light waves (**Physics, KS3**)
- The Periodic Tables (**Chemistry, KS3**)
- Wave motion (**Physics, KS4**)
- Chemical and allied industries (**Chemistry, KS4**)

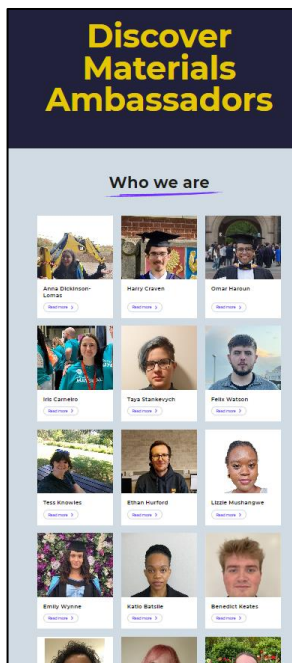


A video that explores the materials and devices in a mobile phone. The resource includes suggested activities at home.

This month's featured careers resource:

### [Discover Materials Ambassadors](#)

Our fantastic Discover Materials Ambassadors each have a profile in which they give an overview of what they love about MSE, their path into MSE and advice for 16 year olds.



## For Primary Schools and Families

This section highlights activities and information for primary school teachers and families to help inspire **0-11 year olds** about what things are made from.

This month's featured activity:

### [Materials Scavenger Hunt](#)



\*Curriculum Link(s):

Materials Scavenger Hunt		DISCOVER MATERIALS	
What do you think it's made of ...	What have you found?	What is that object used for?	Why do you think it's made from that material?
Wood			
Metal			
Plastic			
Glass			
Stone			
A compass (line or more materials used together)			

It would be great to know how you have got on! Please share photos of your completed sheet designed to be on Facebook by using the QR code or emailing the file: [discovermaterials@discovermaterials.co.uk](mailto:discovermaterials@discovermaterials.co.uk) when you can have access to the grid.

- Distinguish between an object and the material from which it is made.
- Identify and name a variety of everyday materials.
- Identify and compare the suitability of a variety of everyday materials

A downloadable sheet designed to foster the curiosity of young scientists And get them to find thing made of different materials and why they that material is used.

## Upcoming Events...



- ASE Teachers Conference (4<sup>th</sup> – 6<sup>th</sup> January, Northampton)
- Worcester STEAM Festival (27<sup>th</sup> January, Worcester)
- The Festival of Tomorrow (16<sup>th</sup> – 17<sup>th</sup> February, Swindon)
- Exploring STEM (28<sup>th</sup> – 29<sup>th</sup> February, Sheffield)

For more events see the Events page on our [website](#)

**What is it? .. It is a washing up sponge used as part of an activity to investigate [hydrogen storage](#)**



# DISCOVER MATERIALS

- Discover Materials
- @discovermaterials
- @discovmaterials
- @discovermaterials



\*The curriculum links are to the England and Wales National Curriculum