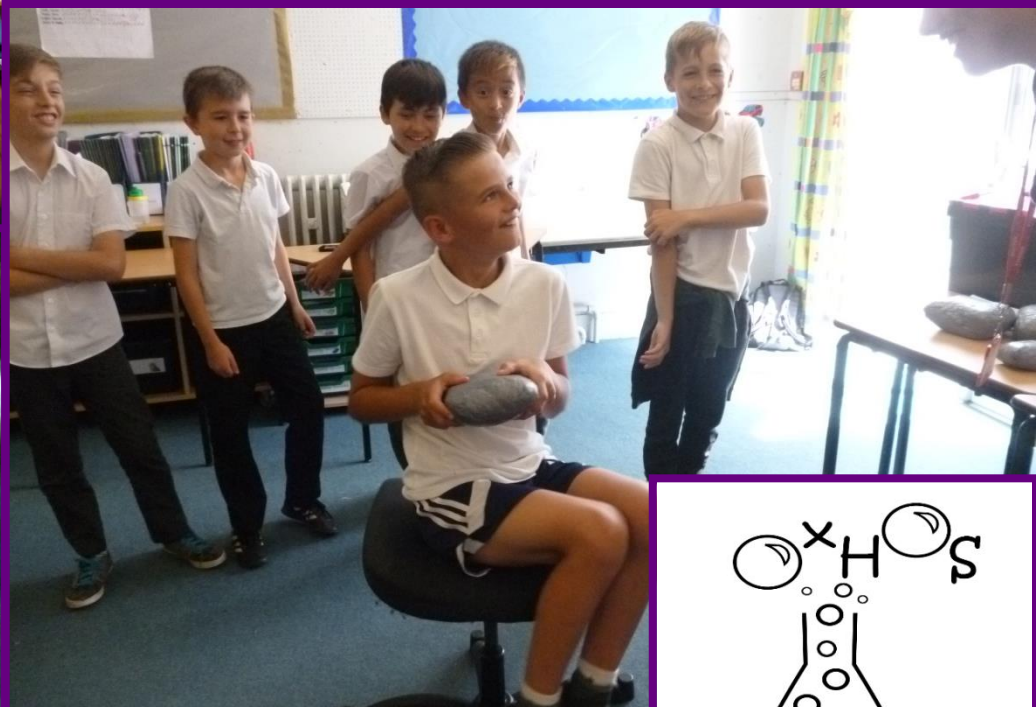


Oxford Hands-On Science (OxHOS) Summer Roadshow 2017 Report



Get in touch with us at contactoxhos@gmail.com
www.oxhos.org

About OxHOS

What is OxHOS?

Oxford Hands-On Science (OxHOS) is a student-run society in Oxford. We believe that science is fun and relevant to everyone! We aim to spread our enthusiasm for science to children and their families by taking lots of hands-on experiments drawn from a range of subject areas into schools and public venues, with lots of helpful student volunteers explaining the science behind the experiments!

OxHOS was founded in partnership with Cambridge Hands-On Science (CHaOS) in Summer 2015. We ran our first Roadshow in Autumn 2015, visiting schools and community and shopping centres around Oxfordshire. Since then, we have developed lots of exciting science experiments, and taken them on a Roadshow in Summer 2016, visiting Oxfordshire and South Wales to great success! This year we've been improving and building on our collection of experiments with some great new ideas.

Real pleasure to work with the OxHOS team throughout the day. They enabled a really pleasant and effective learning atmosphere to develop each and every session.

**Secondary school STEM
Coordinator**

Who runs OxHOS?

The Roadshow is organised by a team of science student volunteers who form the OxHOS committee. We work with public engagement staff and other researchers around Oxford to discuss our ideas too.

Lots of undergraduate and postgraduate students, as well as some staff, from the University of Oxford volunteer their time to make our events happen.

We offer volunteer training, given by experienced OxHOS members, alongside encouraging our volunteers to become STEM Ambassadors, in partnership with Winchester Science Centre.

Pre-Roadshow Events

Before the main Roadshow, OxHOS was involved in several events around Oxford. We wanted to see how everyone liked the new experiments that we've been developing!

On 25th February, OxHOS took part in 2 events in Oxford. Firstly, we were part of Greenlight for Girls, an event focussed on demonstrating the fun of science to 11-14 year old girls. Secondly, we ran some interactive activities at the St Edmund Hall Research Expo, using our interactive science activities to help communicate our research to the families of those affiliated with the Hall.



Looking at Cuddly microbes at the Research Expo

On 4th March, we ran an event in partnership with NAPE Oxfordshire, and were visited by lots of enthusiastic primary school children. They particularly enjoyed making a pH indicator solution from red cabbage and using it to test the pH of some household materials.

Later in the month, on 16th March, OxHOS took part in Windale School's inaugural Science Open Evening. Here, we joined forces with teams from lots of different scientific groups around Oxford to get the children (and their parents!) to have a go. We also got to stay for the finale show about fireworks!

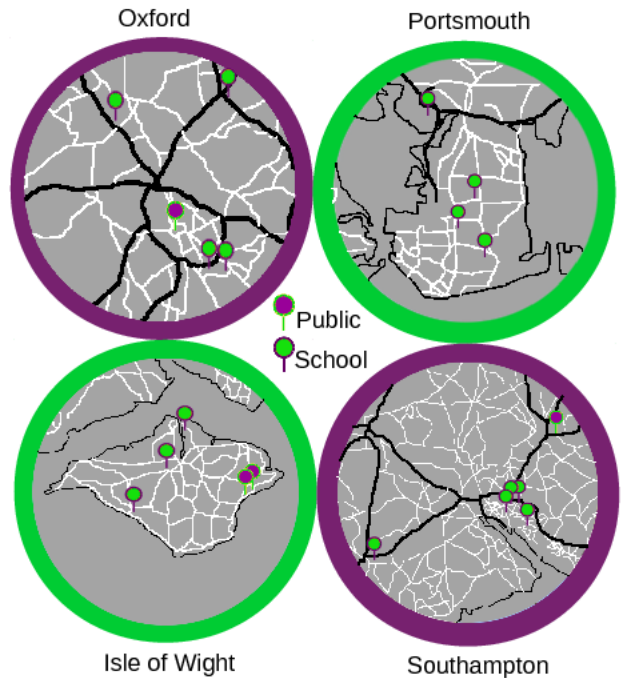
The Summer Roadshow 2017

Where did the Summer 2017 Roadshow visit?

The Summer 2017 Roadshow lasted for four weeks, beginning on 17th June in Oxford, and finishing on 14th July in Southampton, passing by Portsmouth and the New Forest. We even went 'overseas' to the Isle of Wight! During this time we visited 16 schools and held or took part in 5 public events. Take a look at the maps to see where the Roadshow 2017 went!

Oxfordshire Events

Our Summer Roadshow began with the Oxfordshire Science Festival. On the weekend of June 17th and 18th we set up a stand in the Explorazone in Oxford Town Hall, as well as taking some experiments busking around the town! Our hot air balloon powered by a toaster was a great eye catcher here and we even managed to reach the ceiling!



[How did the pupils benefit?]

- Specialist knowledge and expertise
- Use of equipment not available in school
- Quite advanced science explained at their level

Year 5 Teacher

'Digesting' food at the NAPE Oxfordshire event

On 19th June, we visited Marlborough School in Woodstock, where around 185 students from Years 7 and 8 enjoyed visiting the Roadshow.

On 21st June, the Roadshow returned to the Oxford Academy, where 300 students from Years 7 and 8, and local Year 6 pupils, got hands-on with our activities. The students were keen to get their hands messy and learn about non-Newtonian fluids using oobleck (a cornflour mixture), as well as watching it dance on a speaker!

We were hosted by Five Acres Primary School on 23rd June, where we met Year 5 and 6 classes. Here the students loved learning all about biology and evolution – using different 'beaks' to try to pick up different seeds.



[Pupils] found it fascinating and inspiring... Thank you so much for giving up your time to provide the pupils with exciting hands-on science.

Year 6 Teacher

Portsmouth Events

We packed up the minibus and headed out on the touring part of the Roadshow, down to the Portsmouth area. Our first school in Portsmouth was Newbridge Junior School, which we visited on 26th June. 120 Year 5 students came to take part in the Roadshow.



Using magnets to generate electricity

On 27th June, we were at Wimborne Junior School, where the Year 6 students tried out our activities.

'[Demonstrator] enthusiasm 10/10, [they] really wanted to talk and listen to the students

Year 8 Teacher

Next, we went to Portsmouth Academy for Girls, where 180 students from Years 7 and 8 enjoyed the Roadshow. Students loved learning how to make fruit into batteries and produce perpetual motion in the dynamo experiment.



Finding out how sun cream protects you from UV radiation

The final event in Portsmouth was at King Richard School, where 300 Year 7 and 8 students had a go with our activities. They particularly enjoyed the 'Cloud in a bottle' experiment and using prism goggles to shift their vision upwards. This resulted in a lot of missed high-fives which was fun for everyone involved and their friends too!

Really good enrichment. Really well organised so easy for school to run.

Year 7 Teacher



Learning about angular momentum using a bicycle wheel!

Isle of Wight Events

On 1st July, we held a public event at the Dinosaur Isle Museum in Sandown! Setting up among dinosaurs was slightly intimidating but that did not deter the brave explorers visiting our stalls.

The children gained a great deal from your visit and were really enthusiastic about it. It's great to be able to draw from a wider pool of expertise.

Primary school Science Coordinator



Using red cabbage to identify acids and bases

On 2nd July, we set up at the Isle of Wight Zoo! Here we were visited by the National Poo Museum - and made friends with some lions while demonstrating!



Our 'captivated' audience at the Isle of Wight Zoo

Superb – excellent questioning skills, clearly listen to student queries and respond with intelligent response in vocab that the students could understand. Specialist vocab was introduced and explained when required.

Secondary school STEM Coordinator

On 4th July, we took the Roadshow back into schools, starting with Gurnard Primary School, where 100 Year 5 and 6 students visited the Roadshow. The kids loved our Mini Explosions – of course safely contained in film canisters and a big see-through plastic box.

On the 6th July, the Roadshow went to Carisbrooke College to see 120 students from Years 7 and 8. The Airflow experiment was very popular here and the students particularly enjoyed the Airzookas. And did you know you can balance a ping pong ball in the stream of air coming from a hair dryer?

The Roadshow's final stop on the Isle of Wight was Brighstone Primary School, where Years 4, 5 and 6 got some hands-on science experience.

The Isle of Wight Studio School hosted us on 5th July. Here we demonstrated some of our experiments to 70 students from Year 10, as well as talking about why we do public engagement and our experiences at University.

The children were thrilled and eager to visit each station.

Year 5 Teacher

Southampton & The New Forest Events

After the ferry crossing back over to the mainland, we set up camp in the New Forest for the final week of the 2017 Roadshow.

On 9th July, we headed to Winchester Science Centre, where we nestled our activities among the exhibits. We set up our digestive system experiment next to the 'Colon Café' and complemented the wall-mounted infra-red camera with our hand-held one, so we could investigate infra-red more closely.



Making 'poo' with the digestive system

The demonstrators were very well informed about their stations and had excellent communication skills with the children.

Year 5 Teacher

On 10th July, we visited 120 students from Years 5 and 6 at Bassett Green Primary School. Our ultraviolet light experiment was very popular, with the students amazed that you can use UV to make glow sticks glow, and wowed by the hidden patterns on a couple of our demonstrators' driving licences, revealed under the UV light!

Looking at washing powder under UV light



The next day we visited Sholing Technical College, and 250 Year 7, 8 and 9 students came to the Roadshow. They particularly enjoyed seeing our colourful 'fantastic foaming fountain', finding out about chemical reactions that produce gas.

[The pupils] enjoyed the freedom to give their opinions and to show what they already knew.

Year 5 Teacher

On 12th July, we were hosted by Upper Shirley High School, and visited by Year 7s. One highlight was making a 'pasta rocket' using yeast and hydrogen peroxide!



Making 'hot air balloons'

On 13th July, we had a busy day at Ringwood School, where 250 Year 7 students had a go with our experiments. They particularly enjoyed finding out about the different blood groups in the ABO system, and making and testing different designs of paper aeroplane to find out about aerodynamics.

The final event of our Roadshow was on the 14th July, when we visited the Year 5 and 6 pupils at Mansbridge Primary School.

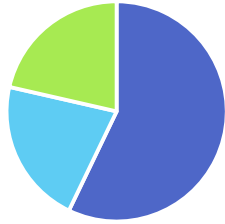
It gave children a chance to be hands-on with specialist explanations and demos. They had a great time!

Year 5 Teacher

What did our visitors think?

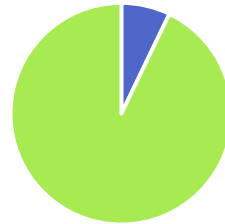
Feedback about our public events on the Roadshow was gathered using questionnaires given to groups of visitors. The responses to some of our questions are shown in the pie charts below. 93% of our respondents said they wanted to come back to see the Roadshow again!

How much did you learn?



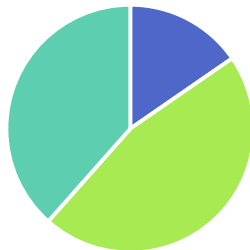
- A lot
- A fair amount
- A little
- Not much
- Nothing new

How did you find the content?



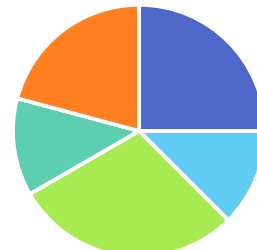
- Too easy
- A bit easy
- About right
- A bit tricky
- Too difficult

How long did you stay?



- < 30 mins
- 30 mins - 1 hr
- 1-3 hrs
- 3+ hrs

Ages of participants



- < 5
- 5-7
- 8-10
- 11-14
- 15-18



Demonstrating 'air flow' at the Research Expo

Can OxHOS visit us?

OxHOS visits schools and public events both in Oxfordshire and further afield in the UK during Roadshows, mainly held during June/July. If you are interested in a visit, request a visit through our website at www.oxhos.org or get in touch at contactoxhos@gmail.com.

How is OxHOS funded?

OxHOS Roadshows are made possible by the generous support of our sponsors, listed on the back cover of this Roadshow report. This financial support has made it possible for us to produce our interactive experiments, purchase camping equipment and hire vehicles so that our Roadshow can travel to areas of the country where students have less access to interactive science.



Our volunteers in 2017 were:

Beatrice Tyrrell, Casey Johnson, Cherelle Dacon, Christopher Arran, Corinna Kulicke, Dani Ellenby, Darren Valentine, David Macdougall, Hannah Behrens, Harriet Godwin, Harry Orchard, Isabel Wilkinson, Jack Martin William Smith, Jacqueline Gill, James Tarlton, Javs Estévez Cores, Joseph Lawrence, Joseph Smith, Joshua Bull, Kalina Naidoo, Loyal Liverpool, Lottie Philpott, Lucy Field, Mallika Jaiprakash, Naganand Saravanan, Pip Hellier, Rabeah Abdul Razak, Rachel Cartwright, Rebecca Sutton, Serena Dai, Stephen Early, Susan Leung, Thomas Hird, Tim Davies, Tonia Thomas.

The committee members active in organising the Roadshow were:

Beatrice Tyrrell & Tonia Thomas (Co-Presidents), Jacqueline Gill (Secretary), Tim Davies (Logistics Officer), Nicole Eichert (Fundraising Officer), Joseph Smith (Webmaster), Harriet Godwin (Treasurer), Emily Brooke (Schools Officer), Mallika Jaiprakash (Volunteers Officer), Quinrui Wang (Safety Officer), Rabeah Abdul Razak (Experiments Officer), David Macdougall (Physics Coordinator), Susan Leung (Chemistry Coordinator), Lottie Philpott (Biology Coordinator), Isabel Wilkinson (Publicity Officer) & Darren Valentine (Social Secretary).

With many thanks to:

- All of the schools and public venues for their hospitality and feedback
- Winchester Science Centre & The Oxfordshire Science Festival
- Professor Keith Gull (St Edmund Hall) & Dr Sian Tedaldi (Department of Physics)
- The Tyrrell family for hospitality in the New Forest
- All of our sponsors, listed below

Generously supported by

