

SEPnet Outreach Session

NExT PhD Workshop
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Who am I?



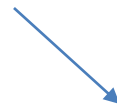
UNIVERSITY *of York*



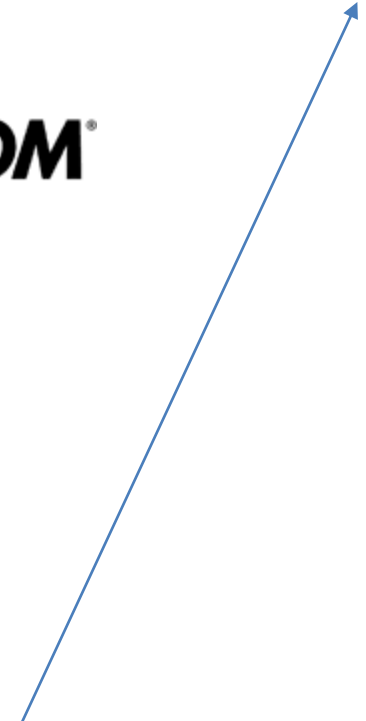
AECOM[®]



Imperial College
London



IOP
Institute of Physics



What is SEPnet Outreach?



High profile departments, supported by the wider community, selecting a diverse group of students from large pool of talented and interested people

What are we going to cover?

- What is public engagement?
- Who is the public?
- What do we do with the public?
- Why should I engage the public?
- What can I do after today?

What is public engagement?

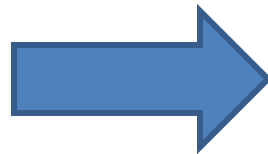
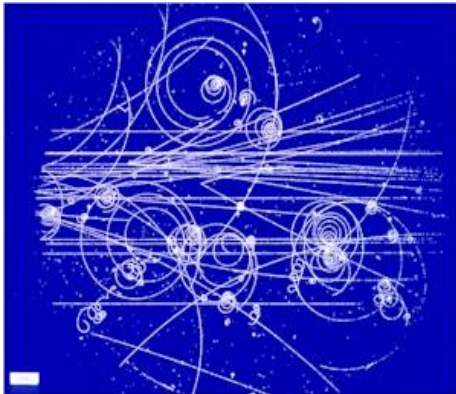
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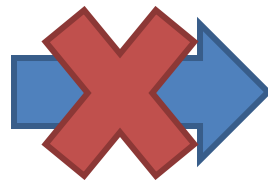
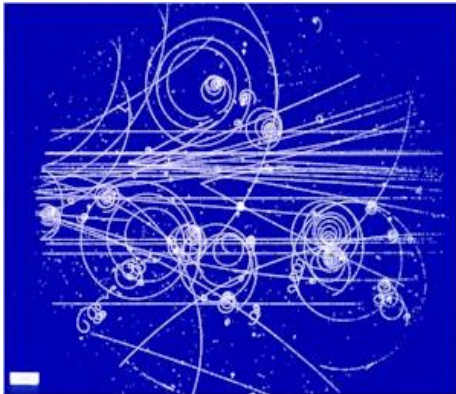
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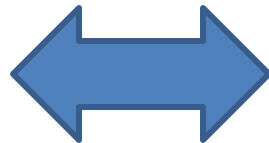
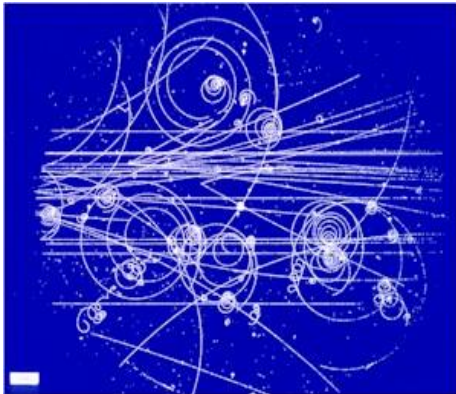
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Engagement is by definition a two-way process, involving interaction and listening, with the goal of generating mutual benefit.

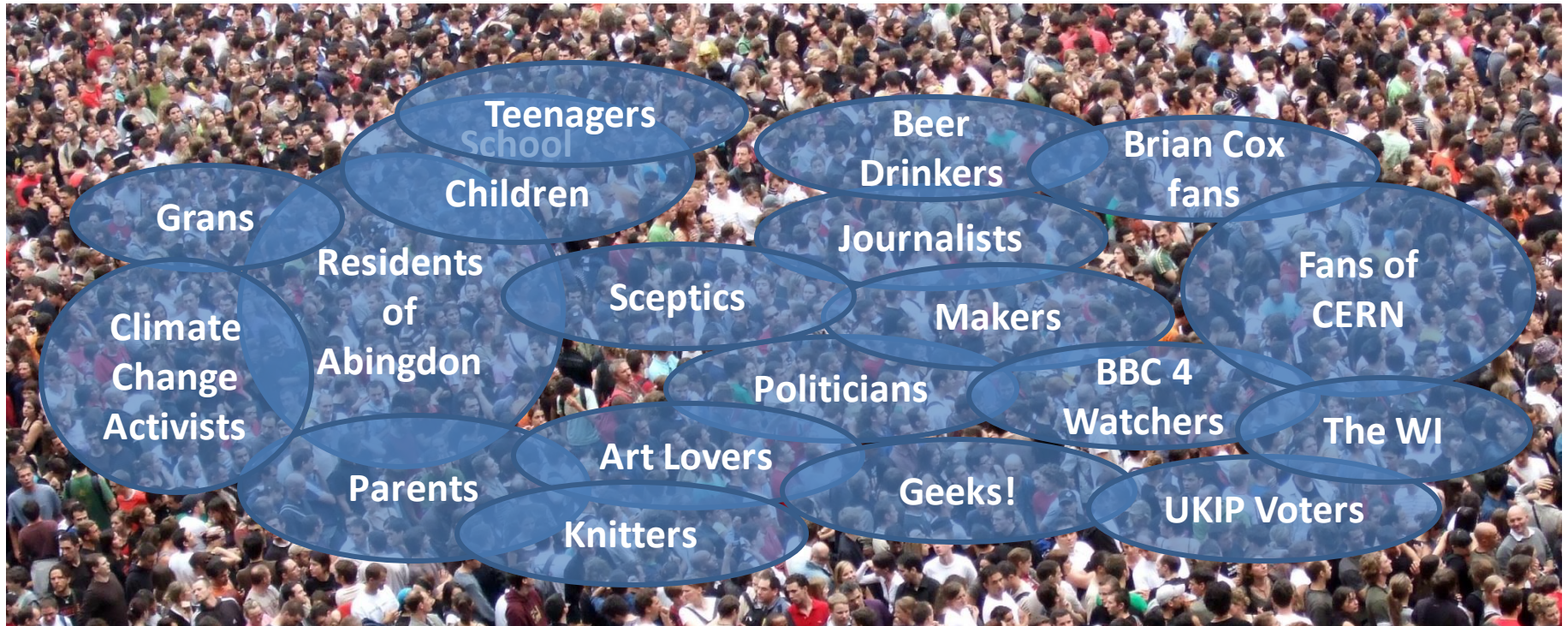


Who is the public?

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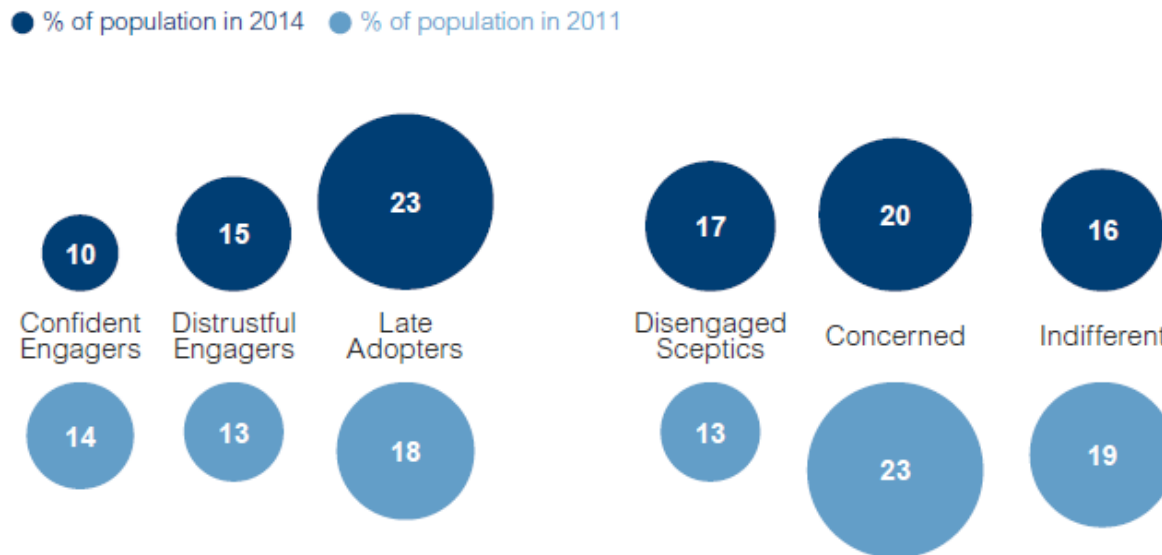


Who is the public?



Who is the public?

Figure 10.1 – segment size as a proportion of the population over time



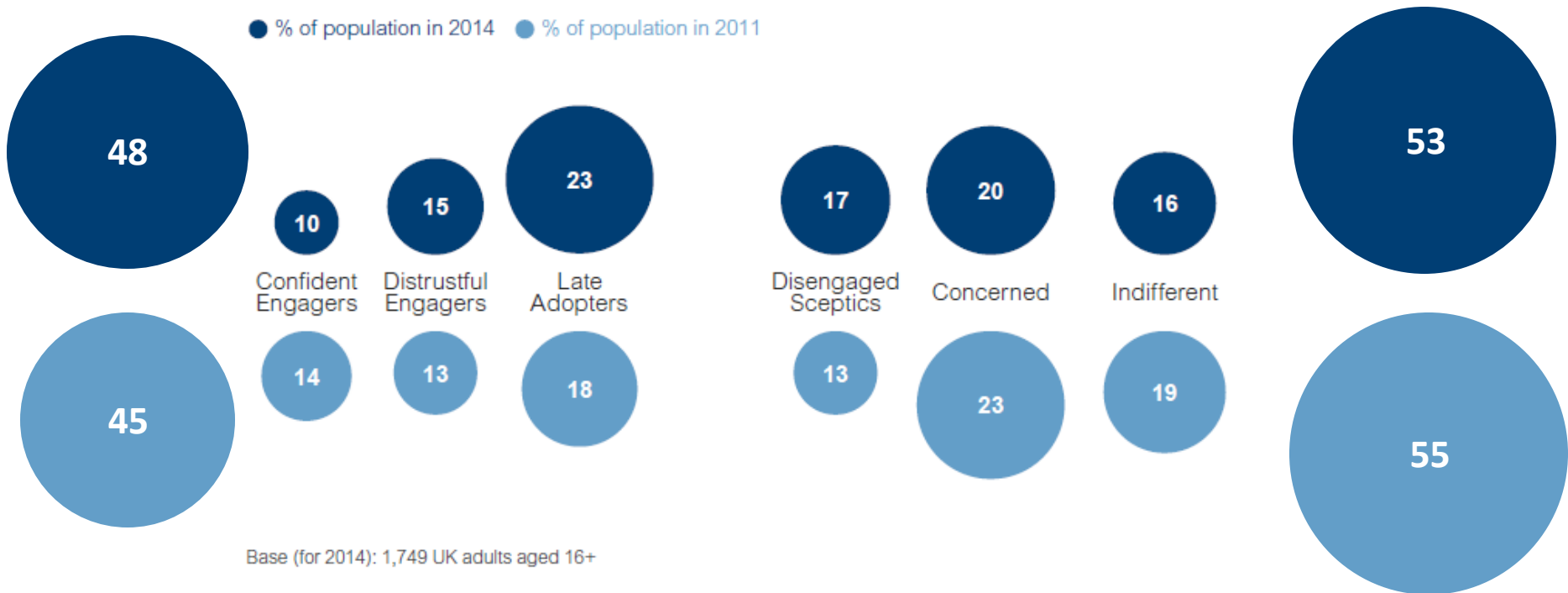
Base (for 2014): 1,749 UK adults aged 16+

Public Attitude to Science - <https://www.ipsos-mori.com/researchpublications/researcharchive/3357/Public-Attitudes-to-Science-2014.aspx>

Who is the public?

Figure 10.1 – segment size as a proportion of the population over time

● % of population in 2014 ● % of population in 2011



Public Attitude to Science - <https://www.ipsos-mori.com/researchpublications/researcharchive/3357/Public-Attitudes-to-Science-2014.aspx>

Who is the public?

- Different publics have different motivations to engage
- They will want different things from engagement – from wanting to have a fun day out to wanting evidence to support their cause

What can we do?

What can we do? – Do what?

- Public Talks
- Science Busking
- Discussion Panels
- Exhibitions
- Demonstrations
- School Talks
- Partnerships
- Blogs
- Twitter
- Online Videos
- Consultations
- Scientist in Residence
-

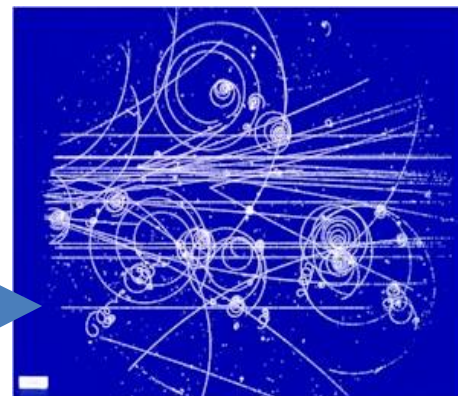
- Not all of this will work with every audience.
- Think about depth of engagement.
- Images! Actions! Smell! Touch!
Different people take in information differently.

What can we do? – Where?

- Guides / Scouts
- Local Schools
- Library
- Museums
- Supermarkets
- Twitter
- YouTube
- Specific Websites
- Local WI
- Community Groups
- Pub
- Cinema
- Local dance Group
- Amateur artists
-

- Different places have different audiences.
- Think about depth of engagement.
- Communities of interest, people are gathering. Why? This is your hook!

What can we do?



What can we do? - Depth

- Try to avoid jargon. Analogies can help but go so far....
- Break it down. What is the simplest idea you are getting across?
- Do some research, talk to your audience. What do they know already?
- Always test beforehand, family member, friend, or even a member of audience.

What can we do? – Why?

- What do you want to get out of this interaction?
- What will those taking part get out of this activity?
- Think in terms of Aims and Objectives.
- Do your research.

What can we do? – Why?

Cheers Physics aimed to communicate the following messages to pub customers and online visitors aged 25 to 40.

1. Physics has a positive impact on our lives. This includes improvements to the production, distribution and enjoyment of beer.
2. Physics is all around us, even in places where you would least expect, such as beer and the pub.

The campaign's stated objectives were to:

1. Create and distribute at least 50,000 mats to pubs across the country where the target audience is likely to frequent.
2. Design five experiments for the target audience to do in the pub and include them on the answer webpages.
3. Generate discussion, in line with IOP's aims, in pubs that the target audience frequents.
4. Generate discussion, in line with IOP's aims, across different social media sites.



What can we do? – Evaluate

- Measure success against your objectives.
- Evaluate throughout your project.
- What advice would you give to those running it again?
- Disseminate amongst your colleagues.
- It's OK if it goes wrong. At times more useful!

Why should I engage the public?

- Your research is probably publically funded. The public will want to know how you spend their money.
- Help embed your departments within community.
- There's a demand out there!
- More science savvy public helps raise profile of science issues.

Benefits for a PhD student?

- Experience in communicating in many different forms.
- Project management experiences. Many other skills....
- Fun! Great break to research repetitiveness.
- Learning to say “I don’t know” or “I’m not sure, let’s check it out...”
- Helps clarify basic ideas in your research. If you can explain it to your gran, you can talk about it in your viva.
- Work with some different groups of people that may influence how you work and think!

What are we going to cover?

- What is public engagement?
- Who is the public?
- What do we do with the public?

What, Where, Depth, Why

- Why should I engage the public?

How can I take part?



SETI Ciper Challenge

<https://www.seti.soton.ac.uk/>

UNIVERSITY OF
Southampton

How can I take part?

Nuclear Physics Masterclass

Our Nuclear Physics Masterclass aims to give students an insight into Nuclear Physics through a variety of activities during this one-day event. The day will include practical experiments in our Radiation Teaching Labs, talks and workshops from our researchers and a lecture on a Nuclear Physics topic.

This event is aimed at year 12 students.



How can I take part?

Teacher Masterclass:

This free masterclass is aimed at supporting and helping teachers in delivering the modern physics and particle physics part of the AS and A2 curriculum, as well as providing you with ideas and resources to enhance the curriculum. Our particle physics lecturers and staff will be on hand to discuss the latest news from CERN, the LHC and the search for dark matter, as well as participating in an informal forum in which you will be free to ask any questions you might have about particle physics or modern physics in general.



How can I take part?

Lego Physics Kits

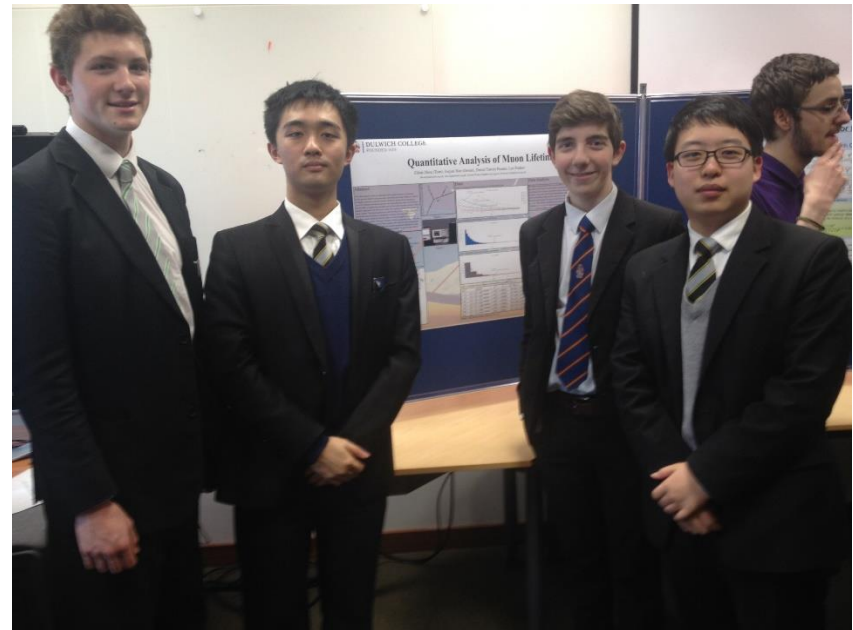
Queen Mary have produced resources for students and teachers using LEGO® to illustrate particle physics. These include lesson plans, activity sheets and booklets covering curriculum linked topics for GCSE and A-Level.



How can I take part?

Cosmic Ray Muons Research Project

A pilot research project scheme run at Dulwich College, which we hope to roll out to more schools in the next year. Students were given a scintillation particle detector that they calibrated to detect secondary muons from cosmic rays. Their independent projects involved collecting data on detected muon events and analysing them to ascertain the mean lifetime of muons, comparing their results with previous measurements and special relativistic theory. The results were presented as academic posters at the first “Muon-Con”, held at Queen Mary.



How can I take part?

- We want your ideas to reach new audiences!!!
- Officers are there to help develop ideas, however crazy they may be.
- Public Engagement Course GRADnet. Early next year.
- Funding available!

IOP - http://www.iop.org/about/grants/outreach/page_38843.html

STFC - <http://www.stfc.ac.uk/1361.aspx>

Thank You! Questions?

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