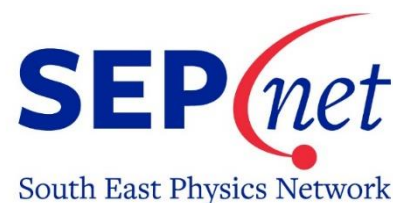


SEPnet Outreach & Public Engagement Strategy



High profile physics departments formed of engaged physics researchers with diverse communities; changing the culture in schools so that anyone can choose to do physics if they want to.

Structure Overview

The South East Physics Network (SEPnet) is a partnership of nine universities in the South East of England. The Outreach & Public Engagement Programme (OPE) has been part of SEPnet since its inception in 2008. Additional universities do also participate in the programme as OPE partners / Associate Members. All participating partners have agreed to commit at least 0.5 FTE staff time towards the SEPnet OPE programme.

SEPnet in turn will provide a Director of OPE and a central OPE budget (which will come from partner memberships of SEPnet). The Director will direct the collaborative OPE programme by ensuring this strategy is kept up to date and evolves with the wishes of the SEPnet Collaboration Board. The Director will manage the 0.5 FTE staff time contributions from partners, build opportunities for SEPnet by maintaining and growing key external partnerships, run central OPE projects and raise the profile of SEPnet by sharing the learning from OPE projects from across SEPnet.

Core Programme 1: Schools' Outreach

Aim: *To raise, or at least maintain the [science capital](#) of Key Stage 3 students in the region by communicating the following messages via our programme of activities:*

- 1. Anyone can do physics.*
- 2. Physics is exciting, relevant & important; it goes beyond the classroom.*
- 3. Studying physics further broadens career possibilities.*

Schools which are underperforming in GCSE science and A-Level physics **will be prioritised** using the latest publicly available data, alongside any analysis from our external partners such as the Institute of Physics (IOP) and The Ogden Trust (Ogden). Schools that are also supported by external teacher networks, such as local university [access and participation \(previously widening participation\) teams](#), the [IOP teacher networks](#) or [Ogden teacher fellows](#), are preferred in order to ensure students will continue to receive support throughout.

All SEPnet partners will offer the [Connect Physics](#) workshops as the basis of their schools outreach programme. SEPnet will continue to encourage projects which involve multiple engagements with fewer students across the region, helping build longer term partnerships with teachers and schools.

Partners looking to work on **improving the gender balance** in Physics are encouraged to participate in SEPnet's [Shattering Stereotypes](#) project which has been developed based on the [latest research](#) from the IOP's Improving Gender Balance team and is being delivered to Improving Gender Balance schools in 2018/19.

Other activities that can be included in this programme include local activities aimed at schools up to Year 11, as long as they include at least two of three messages featured in the Aim. These activities could include:

- Astrodomes sessions.
- Masterclasses / Discover sessions.
- Work Experience.
- Any on-campus events involving schools.
- Ogden School Physicist of the Year.
- Any additional partner-specific activity.

All activities will be delivered by the SEPnet Outreach Officers and their teams of trained physics ambassadors who will be mostly undergraduate and some postgraduate students. SEPnet Outreach Officers who are also working alongside the Ogden Trust should ensure the students they work with are within the required targets to ensure their continued support from the Trust.

Activities which target the following **will not** be considered as part of the Schools' Outreach programme and therefore will not be delivered as part OPE Officers' accounted SEPnet time:

- KS5 **A-Level Physics** students.
- Schools that are performing well in GCSE science and A-Level Physics.
- Any recruitment activity.

Please note that researchers wishing to work with schools (which may include the above) on projects based on their research should look at details of the Public Engagement **Research in Schools theme** below. Outreach activities targeting **families outside the classroom** should be considered alongside the Public Engagement **Communities theme**.

Core Programme 2: Public Engagement with Research

Aim: *To cultivate and embed a culture of engaged physics research with the public across all SEPnet partners through training and supporting research groups in SEPnet partners to develop, run and evaluate impactful methods of engaging many different and diverse publics with their research throughout their research cycles.*

This programme uses the National Coordinating Centre for Public Engagement's (NCCPE) [definition](#) of Public Engagement. All projects based on research and / or working outside schools are included in this programme.

The programme will be based around three themes:

1. Local Community.

Aim: To encourage SEPnet partners to engage with communities which are local to their universities

SEPnet will continue to support these events; however, more experienced partners in this theme will be encouraged to engage with local under-served communities. Activities featured in this theme help embed a culture of engagement across a physics department.

This will be the only theme where the degree of focus on physics research can be reduced depending on the nature of the project, allowing for local family outreach events to be included within the theme. However, these projects will be less eligible to be considered in future REF Impact Case Studies.

External Partners & Resources: [Institute of Physics Grant Scheme](#), [STFC / NCCPE Wonder Match](#).

Examples: [Stargazing Live](#), [Dark Matter Day](#), [Pride Festivals](#), [Discovery Planet](#) and [Music Festivals](#).

2. Research in Schools.

Aim: To help run projects which enable local students in schools to engage with and carry out current physics research.

Working with schools outside the Outreach programme continues to be popular amongst physics researchers across SEPnet. This theme will encourage those researchers to run projects which are research-based and are beneficial to participating students and teachers and move away from ad-hoc one-off interventions. This could involve projects that provide students with the skills to carry out their own research projects alongside researchers or projects directly linked to physics research which impact the participating school and students.

External Partners & Resources: [Institute for Research in Schools](#).

Examples: [QMUL Research in Schools programme](#).

3. Consultancy.

Aim: To assist research groups within SEPnet partners in developing, running and evaluating impactful research-based projects that engage with different publics.

OPE professionals within SEPnet partners are available to advise research groups to help plan projects, write bids and pathways to impact statements and help develop methods to evaluate and measure impact. The emphasis here is on entire research groups as opposed to individual researchers; this is to ensure that no single researcher ends up bearing all of this workload.

This theme is about developing projects which are led first and foremost by the research and whose impact will be directly linked to that research. These projects will be eligible to be considered for future REF Impact Case Studies.

Partner organisations and target publics will depend on the different projects being developed and therefore also dependant on the research.

External Partners & Resources: [NCCPE](#), [UKRI's Pathways to Impact statements](#), [STFC Public Engagement Grants](#).

Examples: [Tactile Universe](#), [Reflecting Photonics](#).

Additional Comments

Each partner will contribute at least 0.5 FTE staff time towards any of the SEPnet OPE programmes and projects. In most cases this 0.5 FTE will be linked to a single OPE professional based in each of the partners. However, in some cases this 0.5 FTE may be shared amongst more than one person, such as a professional services staff member or a researcher working to embed and facilitate PE processes.

For some partners, the SEPnet staff contribution will be substantially more than 0.5 FTE, especially if they have more than one OPE professional, for example a Public Engagement Manager and an Outreach Officer. Time spent by researchers carrying out Public Engagement projects based on their own research does not count towards this 0.5 FTE as it is part of their role as a researcher.

How this **time is divided** amongst the programmes and projects will be decided before the start of each academic year by the SEPnet Director of OPE, local OPE professional staff and the local SEPnet Collaboration Board member.

SEPnet advises each partner to have a **budget** of at least £10,000 per annum for OPE activity; though it recommends this should be nearer to £15,000. These budgets typically cover the costs of Physics Ambassadors and running Community Projects.

SEPnet recommends that all SEPnet OPE professionals review their **workload** once a term with the Director and local line manager to ensure they are working at 1.0 FTE. It is common for SEPnet OPE staff to be assigned too many projects, raising this to around 1.2 FTE or 1.4 FTE each.

SEPnet also recommends that each partner develop its **own local OPE strategy**. Having a local strategy will:

- Encourage OPE activity towards a partners local long-term aim, which could include a long-term recruitment strategy through a strategic Schools' Outreach programme or suitable Public Engagement projects which are eligible as Impact Case Studies in future rounds of REF.
- Focus the limited available OPE resource (including OPE staff time, researchers time, budget) at SEPnet partners towards encouraged activity.
- Help OPE staff to maintain a 1.0 FTE workload through prioritising projects based on alignment to local long-term aims.

The SEPnet Director of OPE will continue to run termly meetings and training sessions which may be attended by any OPE professional at a SEPnet partner, along with any additional staff assigned to the 0.5FTE SEPnet OPE contribution. The director is also responsible for coordinating these sessions with the IOP's [Outreach & Public Engagement Network](#) and the [Ogden Trust](#) to ensure there is no duplication in sessions.

Objectives, Evaluation & Impact

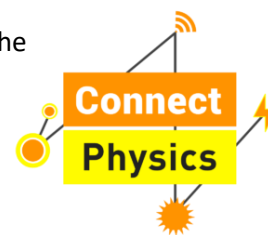
Forthcoming...

Projects

Connect Physics

[Connect Physics](#) is a set of three workshops for Key Stage 3 science students which answer the questions:

- What is physics?
- Why do physics?
- How do we do physics?



The workshops are suitable for students of all science abilities. The workshops encourage students to think of the bigger picture through connecting different ideas, such as topics from KS3 science, the latest physics research or their everyday lives. They are able to find out about careers that are available after studying physics and they are given a chance to develop their skills using the scientific method and the peer-review process by tackling an open-ended problem with no given solution. Details of each of the workshops can be found in our [Teacher's Guide](#).

The evaluation of the pilot project and development of the workshops can be found [here](#).

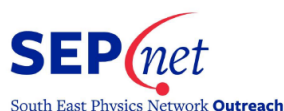
Shattering Stereotypes

[Shattering Stereotypes](#) is a set of three workshops for Year 8 students which aim to raise awareness of what gender stereotypes are, in particular:

- Gender Stereotypes in the context of a student's everyday life.
- Gender Stereotypes and a student's possible career path.

The project also aims to empower students so they can identify and challenge situations in which they are presented with these stereotypes.

The evaluation of the pilot project can be found [here](#).



Shattering Stereotypes

SEPnet Public Engagement Awards

The biennial Awards aim to showcase and reward the best of Public Engagement from across the SEPnet partners. The awards are divided into three categories showcasing the best in Individuals, Projects and Research Groups. Details can be found below:

- [2017 Award Winners](#).
- [2017 Call for Nominations](#).
- [2015 Award Winners](#).

Interact Symposium - SEPnet / IOP / STFC

The aim of this biennial symposium is to cultivate a community of engagement practitioners within the physical sciences who develop high-quality STEM engagement and encourage a culture of strategic and reflective practice.



Over half of the 30 parallel sessions on offer at Interact 2017 were delivered by physicists from a SEPnet partners, or had some SEPnet involvement in their project.

[The evaluation report](#) from Interact 2017 showcases the findings of physicists who attended the symposium.

Potential Projects- Schools' Outreach

With the development of Connect Physics, there are many possible new directions for a follow-up project. These include:

- Developing Connect Physics as a KS3 teacher's resource.
- Developing a similar set of workshops for KS2 and families.
- Looking at how the workshops can help KS4 teachers inform their students on career choice and pathways to physics.
- Developing a project that challenges accessibility into physics due to the perception that it is a subject only for the best students.

Outside this there are also projects that can look to target Medium Science Capital folk outside A-Level Physics and even schools who may not know about or have access to the many pathways into Physics. This project can also look into creating new more accessible pathways.

Potential Projects - Public Engagement

With the introduction of themes, in particular the *Community theme*, there is potential for SEPnet to develop projects that introduces new structures, support and resources to continue to embed a culture of engaged research across the network.