



Limit Less

School Careers Activities

**A Limit Less campaign resource
for IOP members and volunteers**

Use this guide:

- As a starting point to help you deliver a successful careers event
- To find all our careers resources in one place
- To find out how to get involved in the Limit Less campaign

This guide has been created as part of the Limit Less campaign to encourage and support young people to change the world and fulfil their potential by doing physics.

Schools, teachers and peers are important in the lives of young people. A careers event you take part in could be crucial in encouraging young people from underrepresented groups to study physics in school and consider a career using physics.

By using the guidance and associated resources when talking about careers through physics, you are playing your part in making physics a welcoming environment for all young people.

What is the Limit Less campaign?

We know that many young people are put off studying physics after the age of 16, not because of a lack of ability or interest in the subject, but because of prevailing social attitudes that discourage them. Young people are exposed to the widespread misconception that physics is a subject for other people, perhaps people who they are told are cleverer than them, or who come from more privileged backgrounds or particular social and ethnic groups. This leads to many young people being told by those they trust, or reaching their own conclusion, that 'physics is not for them'.

This view is reinforced from all around – be it the education system, from parents and family or among local communities and wider society. This must change. Limit Less is the campaign that aims to encourage and support young people to change the world and fulfil their potential by doing physics. It seeks to challenge the misconceptions and stereotypes about the subject and remove the barriers to young people doing physics beyond the age of 16.

The Limit Less campaign has identified five groups that are currently underrepresented or underserved in the physics community. These young people are less likely to do physics and more likely to face a hostile environment when they do.

These groups are:

- Girls
- Young people from disadvantaged backgrounds
- Disabled young people
- LGBT+ young people
- Young people of Black Caribbean descent

If we want to build a thriving, more diverse physics community, it is vital that we encourage more young people from more diverse backgrounds to choose physics. We know that diversity of experience and thought makes for better physics, and a better contribution from physics to solving the global challenges we face. A more thriving, more diverse physics community will make a greater contribution to our economy, creating more jobs and growth. Importantly, we know that choosing to do physics gives young people the tools to understand their world and shape their future.

Types of careers events

Careers talk

This is usually a short presentation about yourself and your job followed by time for students to ask questions. You might be asked to speak to a single class, a year group, or a whole school assembly.

What impact might a careers talk have?

By sharing your stories and experiences, you'll be helping to ensure that young people have correct information about the relevance of physics, the pathways available to them and the opportunities it can open up for them.

Careers talks allow young people to hear from relatable role models who can demonstrate the connection between what is taught in the classroom and the real-life issues that they care about. This also allows students to gain an understanding of what different careers entail while bringing what they are taught in school to life.

Careers fair

A careers fair is an opportunity for a young person to start thinking about what is out there in the world of work. You will probably be running a stall as part of a marketplace set-up and having short informal conversations with students throughout the event. Here you might introduce young people to the physics sector, the types of opportunities and routes into doing physics, and you might well end up talking about yourself and your own path as well.

What impact might a careers fair have?

Careers fairs are a fantastic opportunity to link subjects from the classroom to the real world. This process could help young people make informed choices about their education or training choices, and to become passionate about their future path. The conversations you have with young people could spark ideas about their future as well as correcting any misconceptions they might have about the educational and training pathways available to them and the range of careers physics opens up.

How to prepare for your careers event:

Before the event

Prioritise for impact

Almost all schools will run careers talks and fairs for their students. To maximise the impact of your activity, prioritise schools whose students are most likely to be from groups underrepresented in physics. This might be, for example, working with a school in an area of high socio-economic deprivation, where a large proportion of young people receive free school meals. Or it might be working with a school that has a focus on supporting young people with disabilities.

Think about what you are going to talk about

There are lots of different ways you can frame what to talk about and knowing your audience will help you focus in on what the most effective way will be to get your message across. For example, an introduction to your industry or research might provide insights into the breadth of roles and make a physics career more relatable. Focussing on the impacts you want to see in the world can be inspiring. And highlighting your own personal journey gives a personal connection. But trying to do all three in a short space of time could end up muddled.

Think about how you are going to talk about it

Our [inclusivity guide](#) contains practical advice and guidance to help you ensure your activity is open and accessible to all. Find it on our Limit Less resources page (iop.org/CareersResources).

Think about what to bring

For a talk you might want to bring visual aids or an object that is close to your work or your personal route through physics. At a careers fair, it is a good idea to have leaflets and give aways for students to refer back to later and inspire them further. Email campaigns@iop.org to find out what resources are available to support you.

During the event

Remember our key messages when talking about Physics

Use your event as an opportunity to bust the myths about physics and to pass on these key messages:

- 1 Doing physics empowers young people to change the world**
- 2 Physics is for people of all identities and backgrounds**
- 3 Physics depends on teamwork and diverse viewpoints**
- 4 Being a physicist isn't the only career available to physics students**
- 5 Physics opens the door to many stable career options, including well-paid jobs that do not require a degree**

Then...

Introduce yourself

Speak to young people as you would adults.

Be friendly, and don't be scared to talk about yourself

Share personal examples that students can relate to. It could be your hobbies, or the subjects you enjoyed as a teenager; this helps break down initial barriers. Explain the aspirations you had when you were young and describe the route you took to reach your current role.

If you are using slides, pictures work better than a lot of text. A [Limit Less careers talk PowerPoint](#) is available.

Use real examples

Bring to life what you do on a day-to-day basis through real life examples, but make sure to explain any technical points you make. Speak honestly about your job and tell students both what you like and what you don't like about your role.

Don't forget that you are representing more than just yourself

To a certain degree you are representing the whole physics community. Make sure you highlight the variety of roles, routes and lived experiences that make possible the physics we do.

Make your Q&A thoughtful

The question and answer session is often the highlight of a careers talk. When taking questions, be sensitive and avoid making judgments about questions or questioners. To ensure you have understood what is being asked, allow students to finish before you answer and take a moment to consider whether you need clarification and how much explanation is necessary before you respond.

Top tips to bear in mind:

- Repeat back quiet or confusingly phrased questions before you answer, to ensure you have understood the question and everyone has heard what is being asked.
- Challenge stereotypes about physics and physicists as they come up
- Don't be put off by funny or provocative questions – these can make good discussions if you think the subject can be explored or they can be thrown back to the questioner or to the group.
- If you don't know the answer, it is best just to be honest about it; you can find it out and report back to the school afterwards if you have time.
- Take questions from as wide a range of the class as possible – try to hear from students from as many underrepresented groups as possible.
- Avoid jargon, technical language and acronyms. If you need to use a technical term, explain it clearly and then use it throughout your explanation.

For more advice on how to run a great event, please see the [IOP's Inclusivity Guide](#).

After the event

Evaluate

Seek feedback from the school. How did the event go? What did people enjoy and what could be improved?

Point to further information

Make sure to point students, families, and the school to other helpful resources, for example the [IOP's career pages](#).

Resources from the IOP

You can find all of our Limit Less resources online at iop.org/CareersResources (see below for details). Or you can email campaigns@iop.org to be sent the full suite of Limit Less careers resources.

Limit Less careers booklet

The [Limit Less careers booklet](#) is designed for 12 – 15-year-olds and their families. We want young people and those who influence them to have correct information about the impact of doing physics. Use the profiles in the booklet as examples of people from

under-represented backgrounds who have taken physics post-16 and gone on to do something exciting, fulfilling, and well-paid.

Inclusivity guide

[This guide](#) will take you through the basics of planning and delivering an accessible and inclusive event. A must read!

Careers Talk PowerPoint

[This template](#) can act as the basis of your careers talk.

What next?

So your careers event went really well! What next?

Let us know! We want to be able to share and celebrate your success and make sure that we are capturing the impact of the much-appreciated support that you are giving the Limit Less campaign. Stay in touch with the Campaign team (campaigns@iop.org) and make sure you sign up for the supporter newsletter to keep up to date with new opportunities and resources.

Share your success with your local branch. Knowing that your event has been a success will inspire your friends and colleagues to get involved as well.

Become a Limit Less physics ambassador. The Limit Less campaign has partnered with Founders 4 Schools to offer the opportunity to become a Limit Less Ambassador. Please email campaigns@iop.org to meet lots of your local schools and take part in a wide range of careers activities.

All of our Limit Less careers resources can be found online at iop.org/CareersResources