I am delighted to be speaking to you today - as trainee teachers of physics you are an audience that's very dear to my heart, and you are highly valued by the IOP.

I taught physics for 25 years.

Over the years, I have worked with dozens of trainees and newly qualified teachers, prospective teachers, sharing with them some of my experience and passion for physics and the teaching of physics, and helping them to feel the sense of fulfilment that comes from supporting young people

This year will be a challenging year, not least as we all continue to adapt to living through a pandemic. But this is also an exciting time, and I’d like to explain why.

Currently, significant inequalities exist in our society, leaving some groups and individuals feeling shut out of certain areas; and at the same time humankind faces significant challenges (sustainable energy supply, access to clean water). As physicists, we can help to address both of these; so today, we aren't just celebrating the start of your scholarship year, we are also asking you to join with us to achieve our ambitious goals.
So you are very special - on a personal level, we are rooting for you. But the IOP as an organization is behind you too; we have a vested interest in your success.
Welcome

IOP Strategy six aspirations – first two:
1. every secondary school pupil in the UK and Ireland will have access to a
   specialist physics teacher
2. girls will make up at least 30% of those taking physics at age 16-19 and
   there will be double the current number of young people from black and
   minority ethnic and lower socio-economic backgrounds

The IOP has a 5 year strategy, with big aims within education. Of our six aspirations, the first two are focused on schools.

1. Specialist physics teachers – every secondary student should have one

We are here to support you this year and throughout your career. We hope that you will want to stay in teaching, that you will be one of those many specialist physics teachers helping us to achieve our first aspiration. I’ll be telling you a bit more about the support we offer.

2. Looking at the second point...

With your support and encouragement, we hope that your students will appreciate physics – for the skills they develop, the job opportunities it might give them, that they will enjoy the intellectual journey too. But we cannot expect the responsibility for our second aspiration to fall just on the shoulders of physics teachers, so we are soon to launch an influencing campaign – we’ll be making some noise and working with many partners, to achieve this. We’ll be in touch with you as our campaign
launches. For now, please just know that we hope to remove barriers to underrepresented groups.

Over time, with a larger - and crucially more diverse - pool of skilled physicists, we hope that humankind will be in a better position to address the challenges we face.
Support and keeping in touch

Two key websites
• IOPSpark – spark.iop.org
• TalkPhysics – talkphysics.org

Twitter
• @IOPTeaching

Keeping in touch – mailing list
• Please sign up for KEEP trial

So I’m going to highlight a few aspects of our support – all available at no cost.
IOPSpark - teaching guidance and teaching resources. High quality, trusted content, tried and tested ideas to support every class; lots on misconceptions.

IOPSpark brings together the content from several 'legacy' sites, archiving materials from earlier physics education projects, so you may see items tagged to help those who are familiar with the earlier sites - you don’t need to worry about TAP, SPT, Practical Physics etc - Spark is all our *resources* on one site.
It is quick and easy to find questions to help you identify and address common misconceptions

Addressing the question: Why do they not get this? Will be a big part of your professional thinking. IOP provides these resources for free and offers CPD to help you to engage with others addressing the same issues as you.
It would be mean to show you the stem of the question without the question itself. The key point is that here you can find discussion of how you might address the conceptions of the students, that different answers might suggest different models that they ‘hold’ or ‘apply’.

As an aside, I could easily have found an example of a question with a boy kicking a football; I mentioned our campaign, and as we will be campaigning for better representation of diversity in school teaching resources – for resources that make more students feel more included - I made sure I didn’t choose a stereotypical situation. Over the next year or so, you may find time to be choosy and sometimes you may wish to edit resources to make them more inclusive.
Browsing the site – you’ll see that material is readily grouped into domains
We use the term Domain deliberately, not any of the terms that you might see used in exam specifications, course guidance notes etc.

You may also find in the pedagogical discussion on Spark material useful for course essays, projects etc,
TalkPhysics is our online forum – creating a safe space for teachers (and technicians) to discuss issues and ideas.
Groups – by nation/region and by teaching topic
Your regional group will put you in contact with your local professional community, plus their regionally delivered CPD
Given the current online focus, knowing your local colleagues will be an asset as we become able to offer face to face meetings and CPD.

If you have not registered already, please do that now.
https://www.talkphysics.org/join

If you do this before 5pm today, using the email address that has received emails about today’s session, then your approval will be accelerated; colleagues are waiting to see your names and emails on the applications to register.
If you apply after 5pm today, you’ll be emailed asking why you wish to join, so please do that right now if you haven’t done so already.

If you have registered already, and been approved, you can choose which regional group(s) to join by clicking the links from this page:
https://www.talkphysics.org/articles/nations-and-regions/
There’s also a group that’s been set up specifically for you -
https://www.talkphysics.org/groups/iop-2020-2021-scholars/

Once your application has been approved, then you can join these groups, and
contribute to them.

Talk physics is also your route to free CPD
We are soon to launch an exciting programme of online CPD, each HT  based around
the domains of IOPSpark, and with sessions specifically to support trainees and early
career teachers; your regional team is currently preparing materials for the first of
these.
Teacher Support – wherever you are

- 900 schools
- April – July 2020
- 280 sessions run online
- 700 schools
- 4500 teacher-hours of CPD
- Most deprived schools – accessing more CPD

To give you a sense of the scale of the CPD on offer, this map shows the schools that engaged over the last 18 months.

Recent analysis showed easier access for those in remote locations and more access from the most deprived schools (as indicated by % FSM of their student cohort).
Regional Days – usually 15 to 20 each year

Regional days give opportunities to beyond formal CPD, there’s time to network, with food and refreshments provided

Days scheduled for this HT have been replaced with online multi day ‘festivals’
Twitter – @IOPTeaching

Keep engaged on twitter – CPD, resources etc promoted here
KEEP – and keeping in contact

Keeping in touch with the IOP 2020/21

Thank you for your interest in the Institute of Physics.
Please ensure that you complete the survey through to the “thank you” page at the end.
Remember that it’s very important to tick a couple of final GDPR boxes or we won’t be able to contact you!

Please complete this form; I know Chris and the regional teams will say more and remind you about this

[link]

bit.ly/IOP-student-teacher

We’d love you to sign up for the KEEP teaching project – a research programme to aiming to investigate how to help early-career physics teachers build successful and enduring careers.

Thank you.
Hope you enjoy the rest of the afternoon. Wish you well for the year ahead – I may see you online or face to face some time.