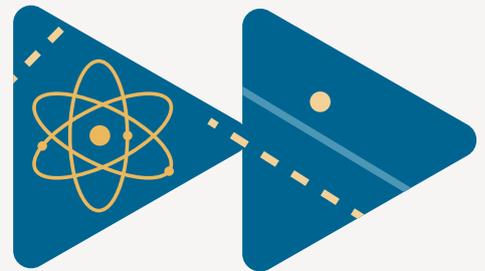




My Learning, My Future



Where can studying Physics take you?

Introduction

At The Careers & Enterprise Company, our mission is to help schools and colleges to inspire and prepare young people for the fast-changing world of work.

My Learning, My Future is a suite of resources that has been developed by The Careers & Enterprise Company in partnership with Skills Builder to help you speak confidently about the careers related to your subject as well as the various pathways and skills needed by employers.

Benchmark 4

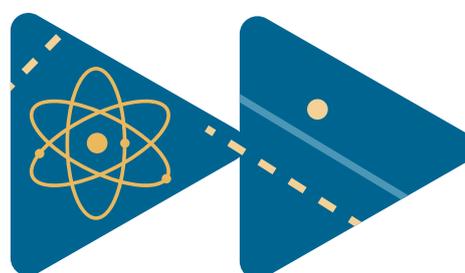
Linking curriculum learning to careers. Bring your subject to life by providing real-life examples from the world of work to help motivate and inspire students.

[Learn more](#)



Contents

<u>How to use this guide</u>	<u>1</u>
<u>Why study Physics?</u>	<u>2-6</u>
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How to use this guide

In this guide and supporting documents, you'll find resources to engage your students in curriculum learning, supporting work towards Benchmark 4, by highlighting the relevance of your subject to future careers and opportunities.

Explore the four key areas of the guide to inspire your students about where your subject can take them in the future.

Why study Physics?

Access key resources that link to your subject area that can be used in your lessons to help your students explore future careers.

Essential Skills

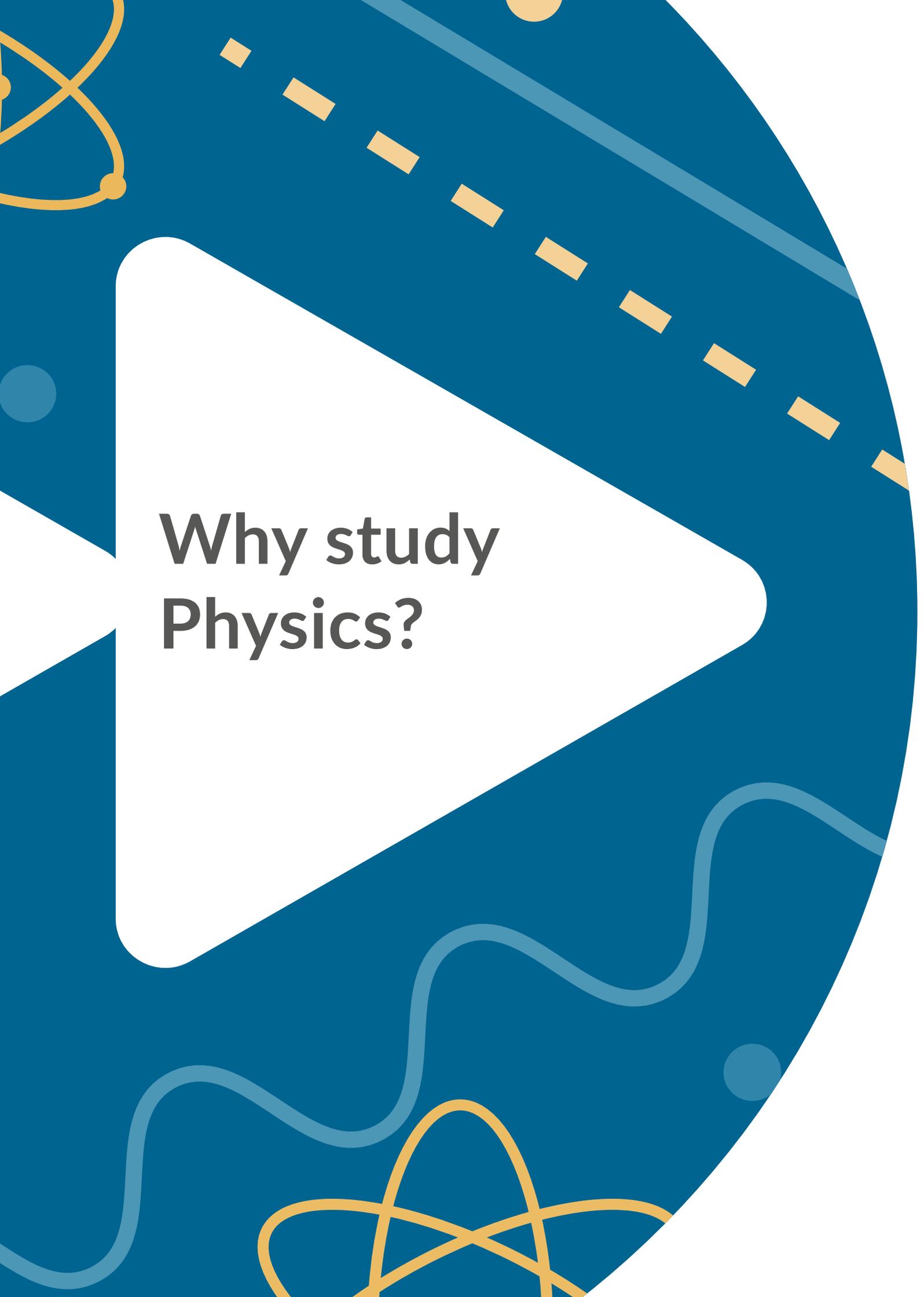
Learn how you can engage with Skills Builder to help students identify and develop essential skills linked to your subject.

Careers in the Curriculum

Discover resources and inspiration to link careers to the curriculum, employer engagement and extra-curricular opportunities.

Pathways

Take a look at a wide variety of resources that focus on the pathways a young person can follow to a career linked to the subject.



Why study Physics?

Why Study Physics?

There is a wealth of resource to support you in raising opportunity awareness as you highlight the relevance of your subject to future careers.

This section will connect you with key resources and links for students to explore opportunities linked to your subject area with the aim of motivating and inspiring your students about the world of work and pathways to a career using Physics.

There are a number of examples of roles and activities to support student opportunity exploration.



Activity Ideas

1|



Task the students to compare skills, wages and responsibilities of roles linked to your subject.

2|



Encourage students to research and present on roles of interest to them linked to your subject.

3|



[Click here to access a student facing PowerPoint slide deck](#), which will support you in highlighting the relevance of your subject with content taken from this guide.



Resources to highlight the relevance of your subject

- [Linking Careers to STEM Curriculum Guide for Teachers](#) (Strategy 1 “Help students to recognise the importance of STEM in their lives and the lives of others” & Strategy 2 “Challenge the Perception that STEM isn’t for me”).
- [A collection of video teaching resources](#) to help you bring Physics careers learning to life.
- [Why Science is for me video and poster](#).

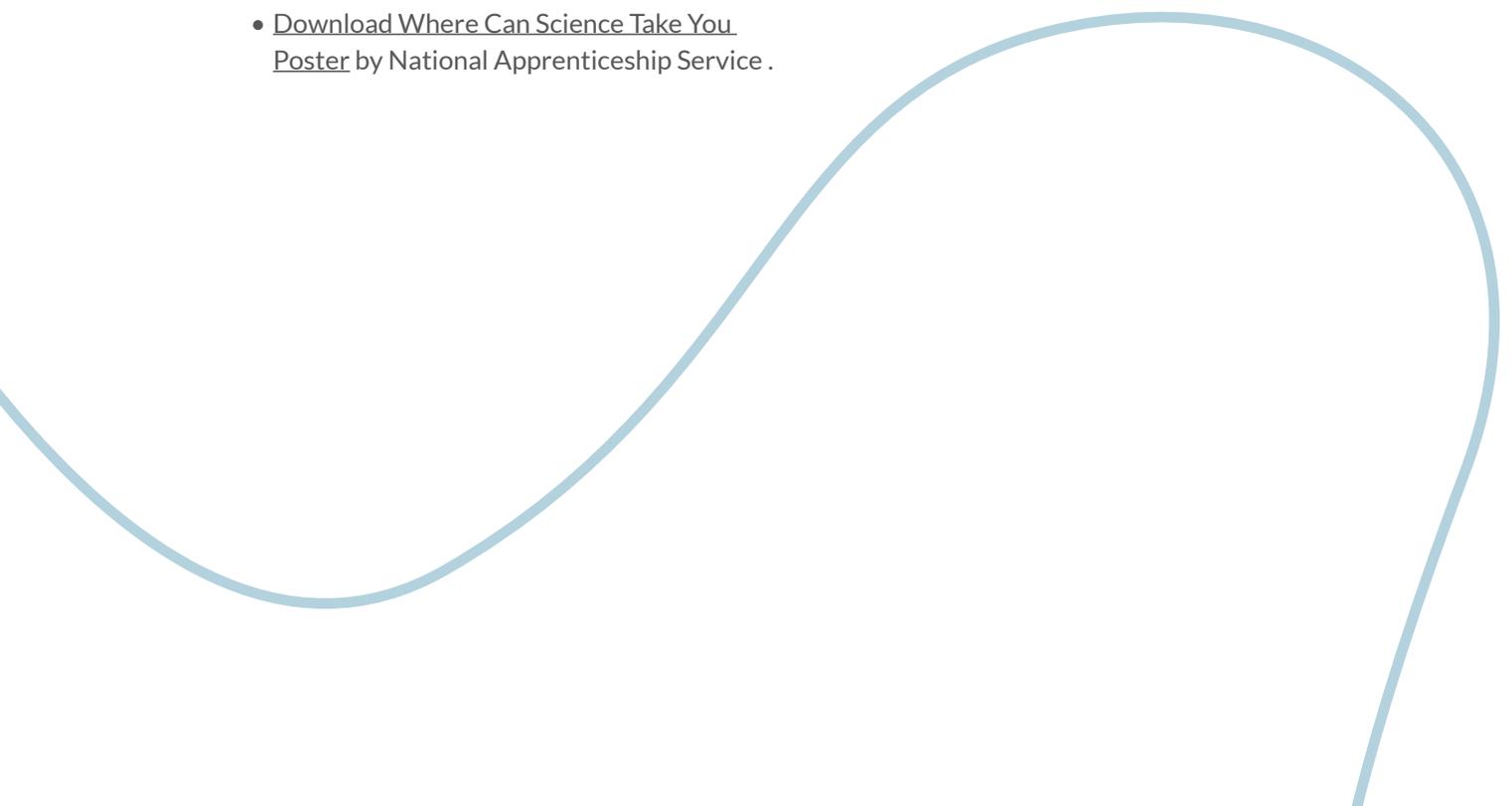
Other key Resources:

- [Jobs that use Physics](#) on BBC Bitesize Careers.
- [Institute of Physics: Where physics could take you](#).
- [Why it Matters: Physics: The Why It Matters](#) resources have been designed by Loughborough University to help students to understand where studying different subjects (both post 16 and post 18) might lead.
- [Download Where Can Science Take You Poster](#) by National Apprenticeship Service .



Labour Market Information

- The [LMI for All](#) portal provides high-quality, reliable labour market information (LMI) to inform careers decisions.
- Help your students to find out what a job involves and if it is right for them with [National Careers Service](#).
- National Careers Week [Future of Work Guide](#).
- [Labour market information and study routes into STEM careers](#).
- [NHS Careers A-Z](#).



Explore a career as a...

There are many more roles and careers linked to STEM and this guide contains the resource and support to explore many more opportunities. A small selection highlighted below and more information can be found via [STEM Learning's careers resources](#).



Field Technician (Wind Turbine)

Wind turbine technicians maintain and repair wind farm turbines on land and at sea.

[See Case study](#)

[Visit National Careers Service to learn more](#)

Electrical Engineer

Electrical engineers design, build and maintain electrical systems, machinery and equipment.

[See Case study 1](#)

[See Case study 2](#)

[Visit National Careers Service to learn more](#)





Naval Architect

Naval architects design, construct, refit and repair marine vessels and offshore structures.

[See Case study](#)

[Visit National Careers Service to learn more](#)

Risk Manager

Insurance risk surveyors carry out surveys of items that need to be insured.

[See Case study 1](#)

[Visit National Careers Service to learn more](#)



Why are people with physics backgrounds sought after in finance and law?

The kind of complicated, interconnected problems found in law and finance require the practical mathematical problem-solving skills physicists use to understand the world – sometimes even using the same equations. It's a bonus that physicists tend to be good at computer modelling and working with big data.



Prosthetist

Prosthetists and orthotists care for people who need an artificial limb or a device to support or control part of their body.

[See Case study 1](#)

[See Case study 2](#)

[See Case study 3](#)

[See Case study 4](#)

[Visit National Careers Service to learn more](#)



The background is a vibrant blue with various abstract elements. A large white shape, resembling a stylized arrow or a speech bubble, points towards the right and contains the text. A dashed yellow line runs diagonally across the upper right. In the bottom left, there are yellow orbital-like patterns. A light blue wavy line is visible in the lower half. Several solid blue circles of different sizes are scattered throughout the design.

Essential Skills

Essential Skills



A critical part of effective careers provision is building students' essential skills. These are the skills that underpin success in the classroom and the world of work such as Teamwork, Problem Solving, Speaking and Listening. Students need to be able to recognise their skillset and talk about it confidently too. They will probably be using them already in your lessons, but this can be a confusing space, with lots of overlapping terminology.

The Skills Builder Universal Framework has been developed by The Careers & Enterprise Company, [Skills Builder Partnership](#), Gatsby Foundation and others to address this problem.

The Framework breaks down eight essential skills into 16 teachable steps. It outlines a roadmap for progress, giving educators and employers a common language for talking about the skills that are essential for employment. [You can explore the Interactive Framework here.](#)

As a teacher, you can also create a free account on the [Skills Builder Hub here.](#) There's over 300 short lessons and a suite of other resources too. We have picked three essential skills that are likely to come up in your lessons. These short lessons are perfect for pastoral time and starters/plenaries.

Key Skill



Overview

The ability to use tactics and strategies to overcome setbacks and achieve goals.

[Overview video](#)

The ability to set clear, tangible goals and devise a robust route to achieving them.

[Overview video](#)

The ability to find a solution to a situation or challenge

[Overview video](#)

Resources

[Key stage 3](#)

[Key stage 4](#)

[Key stage 3](#)

[Key stage 4](#)

[Key stage 3](#)

[Key stage 4](#)

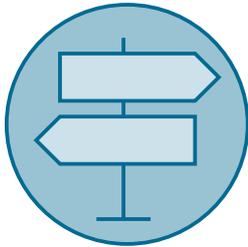


**Careers in
the curriculum**

Careers in the Curriculum

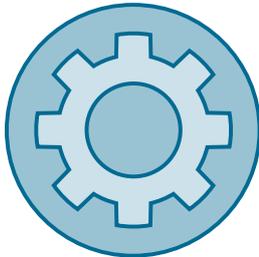
Young people critically need support to see and understand their future and ensuring that careers learning is delivered in all subjects has benefits clearly aligned to the priorities of schools and colleges and to positive outcomes for students. There are three different approaches to careers in the curriculum to consider:

1|



Highlight the relevance of your subject to future careers and opportunities.

2|



Set curriculum learning within the context of careers and the world of work.

3|



Deliver curriculum learning through employer encounters, experiences of work and/or extra-curricular opportunities.

Embed careers in curriculum teaching and learning

There are some excellent examples of how curriculum teaching can be put into the context of careers and the world of work. Here are some examples of resources linked to your subject for inspiration:

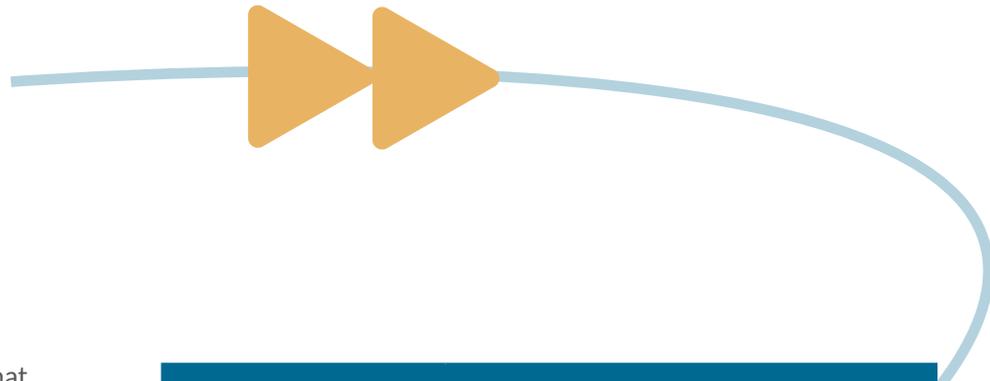


- [Discover how to embed careers into your Science curriculum.](#)
- [STEM Learning Secondary and A-Level Science Resources.](#)
- [STEM Ambassadors](#) increase your awareness of STEM-related careers and employability skills, helping you to embed this information into your teaching.
- [HS2 have developed a new collection of STEM lessons and activities, to support teachers who would like to bring a careers context to curriculum learning. These are plans for STEM lessons which teachers can use to introduce a careers context to a regular curriculum lesson.](#)
- [Developing Experts KS3 Lesson Plan Explain how density affects buoyancy.](#)

The image features a dark blue background with a large white arrow pointing to the right. A dashed orange line runs parallel to the arrow's path. In the top-left and bottom-right corners, there are yellow atomic symbols. A light blue wavy line is positioned below the arrow. The word "Pathways" is centered within the white arrow in a dark grey, sans-serif font.

Pathways

Pathways



When it comes to the question of what to do at key decision points, there are a lot of options to consider. Therefore, the Department for Education has put together a couple of simple and handy guides to inform young people and their parents about the options available to them. These include:

- A [route comparison grid](#) which shows all of the routes available after GCSEs, along with additional information on each one, such as the level of study, entry requirements, duration of the course, and where it can lead.
- A [2-minute animation](#) showcasing and explaining each choice in a simple, dynamic and visual manner.

The Department for Education T Levels team has created a helpful [T Level Guide](#) for Teachers and Careers Advisers, giving a comprehensive oversight of this exciting qualification.

Pathway options	
 <p>Example Post 16 Routes</p>	<p>A-Level Physics</p> <p>BTEC Applied Science</p> <p>T Level Building Services Engineering for Construction</p> <p>T Level Science</p>
 <p>Degree Ideas Explore options</p>	<p>Physics</p> <p>Medical Engineering</p> <p>Ocean and Geo Physics</p> <p>Astrophysics</p> <p>Geo Physics</p>
 <p>Apprenticeship Ideas</p>	<p>Science Technician Apprenticeship</p> <p>Pharmacy Assistant Apprenticeship</p> <p>Data Science Degree Apprenticeship</p> <p>Analytical Laboratory Scientist Degree Apprenticeship</p> <p>Healthcare Science Apprentice</p>

Activity Ideas

1 |



Encourage students to identify a job related to your subject that they will be doing in ten years' time and ask them to present the pathway they took to that role.

2 |



Encourage students to research local options at 16/18 in pathways related to your subject that interest them.



Resources to highlight pathways from your subject

- [Download My Learning, My Future Key Student facing presentation deck.](#)
- [Institute of Physics: Promote, develop and support excellent physics teaching through networks, CPD events and proven resources.](#)
- [Institute of Physics: An activity for 13-14 year olds to encourage more students, particularly girls, to consider careers related to physics.](#)
- [Institute of Physics: Where physics could take you.](#)
- [Posters and flyers promoting careers in STEM.](#)
- [Linking Careers to STEM Curriculum Guide for Teachers, Strategy 6 "Provide information on STEM-specific further study routes, careers and the labour market".](#)

Other Key Resources:

- [Download Where Can Science Take You Poster by National Apprenticeship Service.](#)
- [Undergraduate Degrees Inspiration.](#)
- [Why it Matters: Physics: The Why It Matters resources have been designed by Loughborough University to help students](#)



Extension and Employer Engagement Opportunities linked to your subject

Here is some inspiration to enhance student engagement in your subject:

- [Celebration events that promote STEM Careers.](#)
- [STEM Clubs](#) are an enjoyable way to engage young people with STEM subjects and careers.
- [STEM Ambassadors](#) increase your awareness of STEM-related careers and employability skills, helping you to embed this information into your teaching.
- [STEM Careers Toolkit: Careers Leader Guide BM4.](#)
- [Linking Careers to the STEM Curriculum: Teachers Guide.](#)
- [Catalyst](#) is a free online magazine aimed at young people and educators that provides articles and career stories linked to cutting edge STEM research.
- Forum Talent Potential is a tried-and-tested CPD process that builds the capacity of teaching professionals to create meaningful learning experiences in partnership with local employers and equip young people for life beyond school. It helps fulfil Gatsby benchmarks for 'Good Career Guidance' and Ofsted requirements for a 'Rich Curriculum' and each child's 'Personal Development', contributing to school improvement strategies. Find out more with the '[Getting Started Pack](#)'.
- Case studies linked to your subject: [KS4 GCSE Physics Forces.](#)

Institute of Physics:

- ['TalkPhysics' Online discussion forum for teachers](#) [Have a physics teaching question?](#) TalkPhysics is our online community for anyone involved in teaching pre-19 physics (teachers, teacher trainers, technicians, and supporters are all welcome).
- IoP Qubit newsletter for schools and college physics students: [Qubit](#)

Loughborough University:

- [Why it Matters: Physics :The Why It Matters resources have been designed by Loughborough University to help students to understand where studying different subjects \(both post 16 and post 18\) might lead.](#)
- [HE Unboxed Physics KS4: This box aims to enable students to make their own solar observations. Learners will look at how and why sunspots form before using our solar telescope to record sunspots and compare them to NASA's website.*Please note due to the equipment required to run this activity, demand for this box is often high.](#)

STEMettes: Showing the next generation that girls do Science, Technology, Engineering & Maths (STEM) too at our free, fun, food-filled experiences.

- [Stemillions: Bring a Stemettes-style experience to your community via a club run by young women.](#)
- [The Stemette Society: A closed social network for young women aged 13 to 25: An opportunity for students to connect with like-minded young women and nonbinary young people in a safe and moderated online space.](#)
- [Neon brings together the UK's best engineering experiences and inspiring careers resources to help teachers bring STEM to life with real-world examples of engineering.](#)

*NB – there may be costs associated with some of these resource inspiration ideas



Employer engagement

You may wish to invite someone from the world of work in to support you in highlighting the relevance of your subject to careers. Use the below guidance to help you.

Key Questions	Guidance
<p>What are you are looking to achieve?</p> <p>Try and be as clear and purposeful as possible when framing an 'ask' of employers</p>	<p>What are the planned outcome(s)? i.e.</p> <ul style="list-style-type: none"> • For students and parents/carers to understand the relevance of your subject to careers. • To encourage students to consider pursuing your subject to GCSE level. • For students to have an insight into <u>key labour market information</u>.
<p>What benefits would there be to the employer for supporting?</p>	<p>For emotional reasons:</p> <ul style="list-style-type: none"> • Personal connection, e.g. they have family at the school or a relative works at the school or college. • History, e.g. they are an alumni of the school or college. • Locality, a local employer wants to give something back to the local area. <p>For commercial reasons:</p> <ul style="list-style-type: none"> • Skills shortages – to attract young people into their industry. • To help change perceptions of certain industries. • Corporate Social Responsibility (CSR) positioning – being seen to give something back.
<p>How to engage an employer?</p>	<p>Speak to your Careers Leader to access contacts that already exist in the school. Try:</p> <ul style="list-style-type: none"> • Staff networks (e.g. family, friends, Governors). • Student networks (parents, relatives). • Alumni network. • Supply chains (IT, Catering, Maintenance). • If your school or college has an Enterprise Adviser, they may have wider employer links or suggestions. • Social media appeal with a clear ask.
<p>Format</p>	<p>Articulate where, when and how the encounter will take place.</p> <p>Would you like someone to create a video/take part in a recorded Q&A or is this a physical invitation into a lesson?</p>
<p>Recording and Evaluation</p>	<p>How will you evaluate the session and get a temperature check of value from students and the employer?</p> <p>Remember to communicate activity and student register to Careers Leader as this supports Gatsby Benchmark 4 and potentially 5/6.</p>

Acknowledgements



With special thanks to the following organisations for their support and insight into developing the My Learning, My Future resources:

Amazing Apprenticeships

BBC Bitesize

Developing Experts

Education & Employers, icould

Forum Talent Potential

Institute of Physics

LMI for All

Loughborough University

National Careers Service

National Careers Week

NHS Careers

Skills Builder Partnership

STEMETTES

STEM Learning

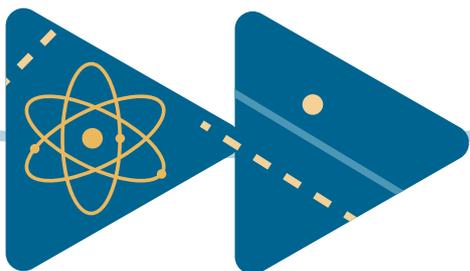


STEM Learning Ltd

STEM Learning Ltd operates the National STEM Learning Centre and Network; providing support locally, through Science Learning Partnerships across England, and partners in Scotland, Wales and Northern Ireland; alongside a range of other projects supporting STEM education.

This is made possible by the generous support of the Wellcome Trust, Gatsby Foundation, Department for Education, our partners in Project ENTHUSE and other funders of related STEM projects.

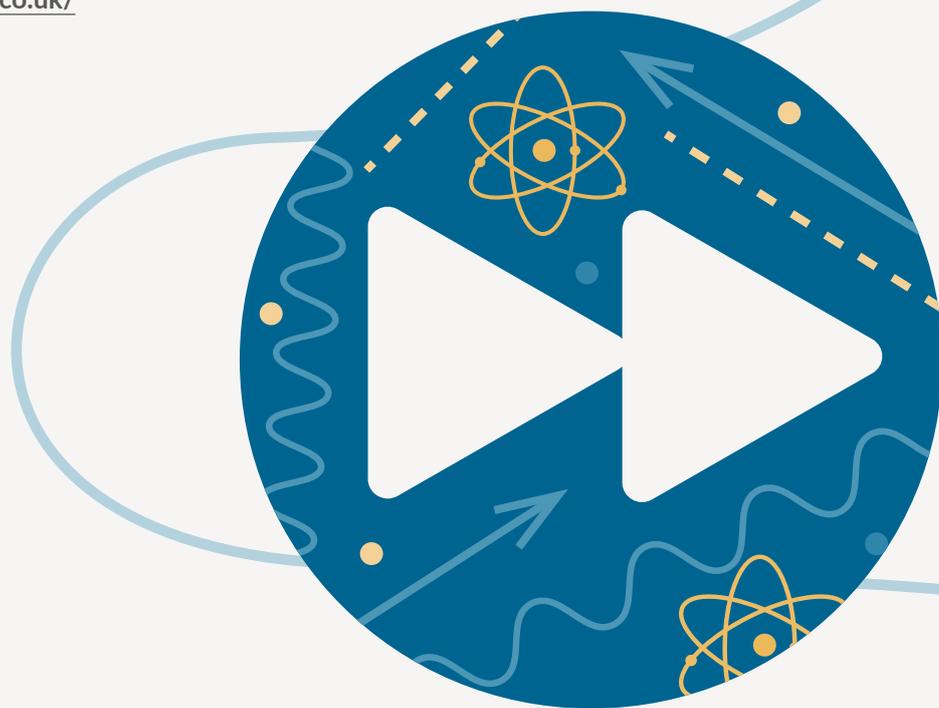
STEM Learning is an initiative of the White Rose University Consortium (comprising the Universities of Leeds, Sheffield and York) and Sheffield Hallam University.



My Learning, My Future

If you have any questions about this guide,
contact us at:
education@careersandenterprise.co.uk

Access all resources at:
[resources.careersandenterprise.co.uk/
my-learning-my-future](https://resources.careersandenterprise.co.uk/my-learning-my-future)



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