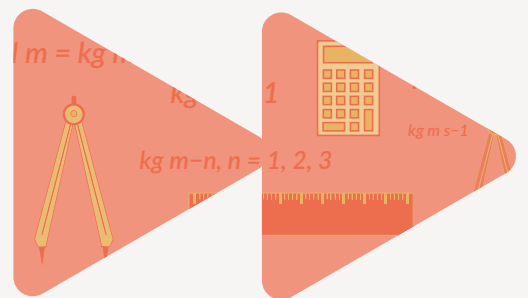


My Learning, My Future



Where can studying Mathematics 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

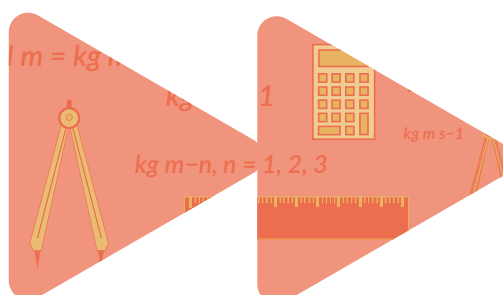
Linking curriculum learning to careers. Bring your subject to life by providing real-life examples from the world of work to help motivate and inspire students.

[Learn more](#)



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How to use this guide	1
Why study Mathematics?	2-6
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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 Mathematics?

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.



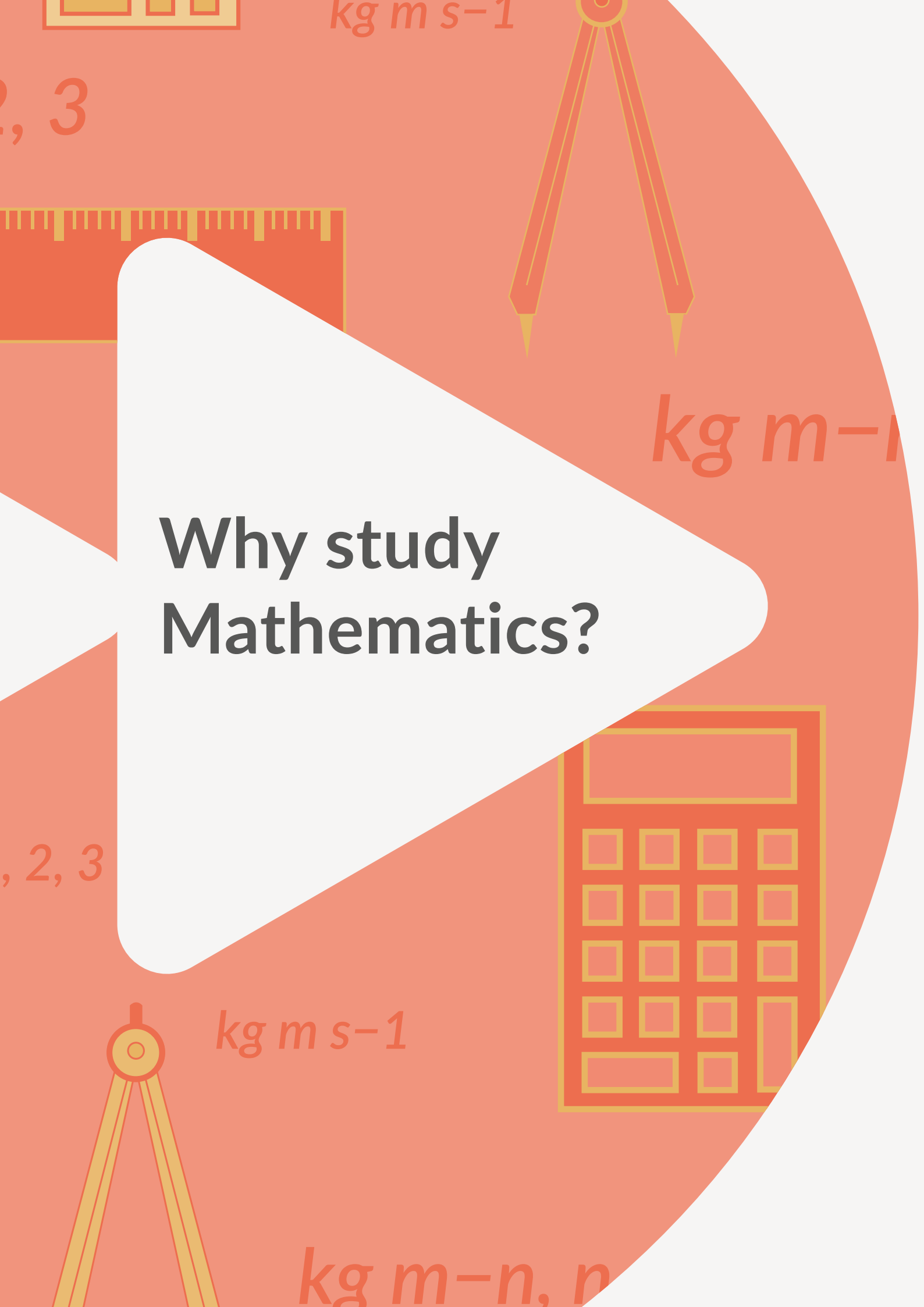
Careers in the Curriculum

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
Mathematics?**

Why Study Mathematics?

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 Mathematics.

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



Activity Ideas

1|



[Click here to access a KS3 My Learning, My Future homework task](#) you can set for your students, which encourages them to research and explore roles 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.

2|



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

4|



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

Resources to highlight the relevance of your subject

- [STEM Learning](#) World-leading STEM education for all young people across the UK.
- [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”).
- [Download Where Can Mathematics Take You? Poster](#) by National Apprenticeship Service.
- [Jobs that use Mathematics](#): BBC Bitesize Careers.
- [Why it Matters: Mathematics](#). 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.
- [Celebrate Maths Week](#).

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](#).
- [Institute of Mathematics: Maths Careers](#).

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](#).



Senior Systems Engineer

Manufacturing systems engineers design and install manufacturing equipment and assembly production lines.

[See Case study](#)

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



Accounting Technician

Accounting technicians handle day-to-day financial matters in all types of business.

[See Case study](#)

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

Quantity Surveyor

Quantity surveyors oversee construction projects, managing risks and controlling costs.

[See Case study](#)

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





Finance Officer

Finance officers help to manage the finances of an organisation by keeping track of its income and controlling its spending.

[See Case study](#)

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

Sales Associates

Sales representatives meet or ring customers to persuade them to buy products or services.

[See Case study](#)

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





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](#)

Resources

[Key stage 3](#)

[Key stage 4](#)



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

[Overview video](#)

[Key stage 3](#)

[Key stage 4](#)



The ability to find a solution to a situation or challenge.

[Overview video](#)

[Key stage 3](#)

[Key stage 4](#)

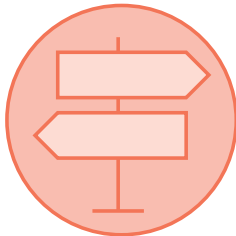
The background is a vibrant orange-red color with a large white arrow pointing to the right. Scattered around are faint, stylized icons of a ruler, a compass, and a calculator. Mathematical symbols like $kg\ m\ s^{-1}$ and numbers like 2, 3 are also visible.

Careers in the curriculum

Careers in the Curriculum

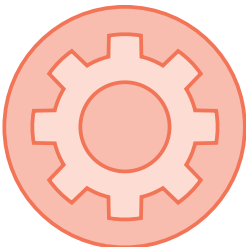
Young people critically need support to see and understand their future and ensuring that careers learning is delivered in all subjects has benefits clearly aligned to the priorities of schools and colleges and to positive outcomes for students. There are three different approaches to careers in the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



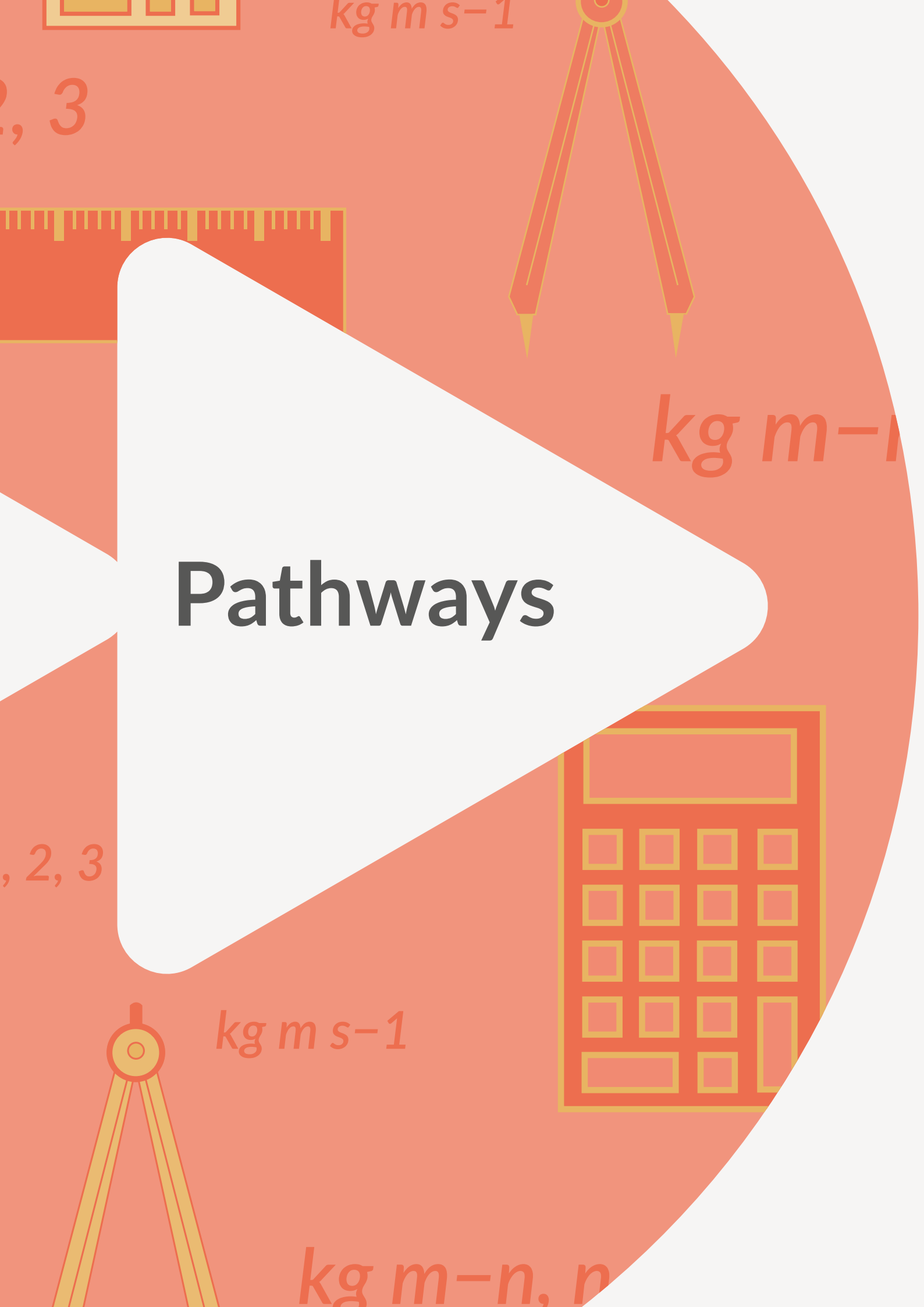
- [Discover how to adapt your curriculum to link to careers in science, design & technology, engineering, computing and mathematics.](#)
- [STEM Learning Secondary and A-Level Mathematics Resources.](#)
- [STEM Ambassadors](#) increase your awareness of STEM-related careers and employability skills, helping you to embed this information into your teaching.
- 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:

[KS3 Maths, Circumference and Area of Circles.](#)

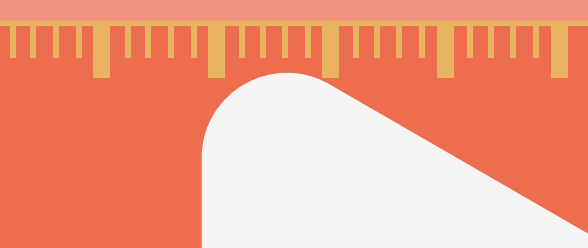


Pathways



$kg\ m\ s^{-1}$

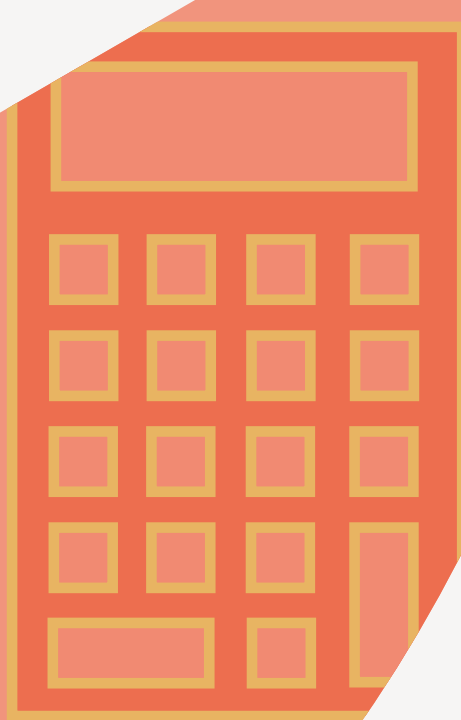
$2, 3$



$kg\ m^{-1}$

$, 2, 3$

$kg\ m\ s^{-1}$






$kg\ m^{-n}, n$

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 Maths</p> <p>A-Level Further Maths</p> <p>A-Level Economics</p> <p>A-Level Statistics</p> <p>A-Level Accounting</p> <p>T Level Digital Business Services</p> <p>T Level Building Services Engineering for Construction</p>
 <p>Degree Ideas</p>	<p>Applied Mathematics</p> <p>Cyber Security</p> <p>Mathematics Education</p> <p>Engineering Mathematics</p> <p>Financial Mathematics</p>
 <p>Apprenticeship Ideas</p>	<p>Architect</p> <p>Quantity Surveyor</p> <p>Cyber Security Technologist</p> <p>Bioinformatics</p> <p>Accountant</p>

Activity Ideas

1|



[Click here to access a KS3 My Learning, My Future homework task](#) you can set for your students, which encourages them to research and explore roles linked to your subject.

2|



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.

3|



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 Student facing presentation deck.](#)
- [Download Where Can Mathematics Take You? Poster](#) by National Apprenticeship Service.
- [Why it Matters: Mathematics.](#) 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.
- [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'.](#)
- [Institute of Mathematics: Maths Careers.](#)

Extension and Employer Engagement Opportunities linked to your subject

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

- [Resource and support for STEM Competitions, Trips, Activity Days and Meaningful Employer Engagement activities.](#)
- [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.](#)
- [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:

[KS3 Maths, Circumference and Area of Circles.](#)

- [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.
- [Barclays Life Skills](#): Barclays Life Skills resources help the development of financial capability including money management.
- [Maths4Girls](#) aims to inspire and encourage girls, aged 11-14, to take maths beyond GCSE and even the gender playing field at A-levels and university.

You can invite female role models - inspiring women from sectors such as finance, computing and science - to come into the classroom to talk to students about their own journey with maths and clearly link maths in the classroom with the real world. This will encourage both boys and girls to see the relevance of maths to the world of work. It will engage pupils with the maths being taught in school, improve their awareness of the many opportunities that maths can bring whilst also dispelling gender stereotypes. [Click here](#) to find out more and book your free Maths4Girls event.

*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
 Barclays Lifeskills
 BBC Bitesize
 Education & Employers, icould
 Forum Talent Potential
 Institute
 of Mathematics
 LMI for All
 Maths4Girls
 National Careers Service
 National Careers Week
 Skills Builder Partnership

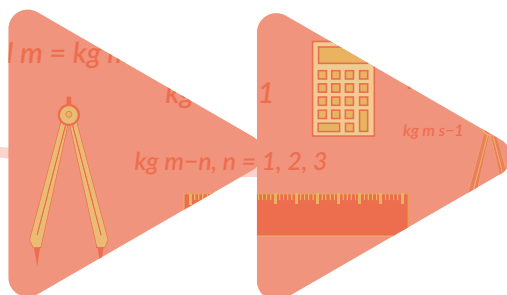


STEM Learning Ltd

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.



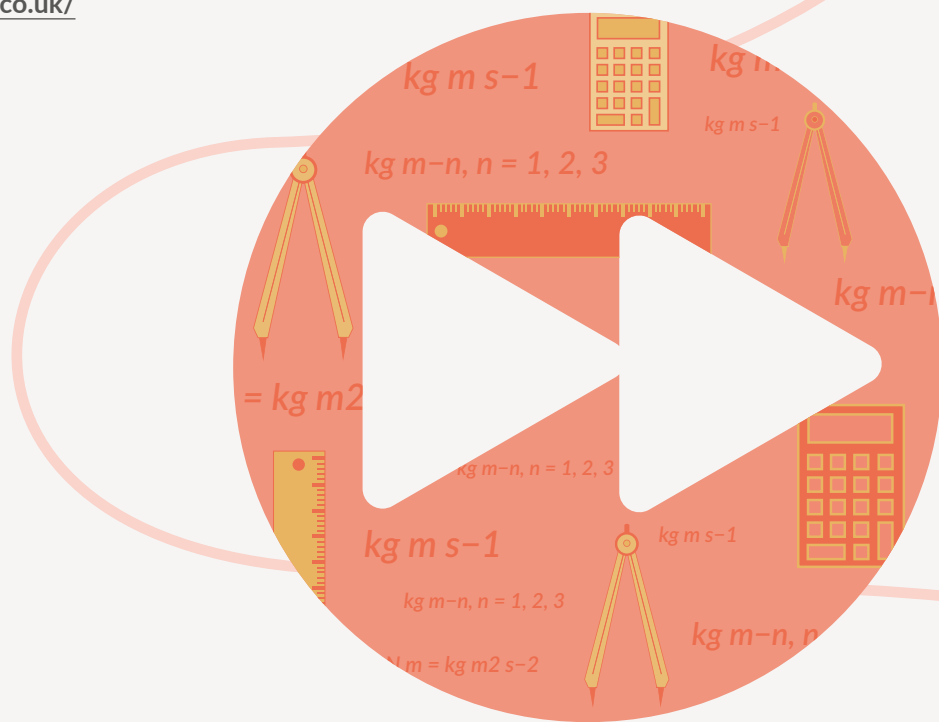
My Learning, My Future

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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