





My Learning, My Future



Where can studying Computer Science/IT 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

How to use this guide	1
Why study Computer Science	e/IT? 2-6
Essential Skills	7-8
Careers in the Curriculum	9-10
Pathways	11-15



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 Computer Science/IT?

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 extracurricular 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. 1

<o:OfficeDocumentSettings> <o:AllowPNG/> <o:PixelsPert </o:Office </xml> <![<meta http <meta nam <title>*|MC

PixelsPerInch>

ΨF

<o:OfficeDocumentSettings>

Why study Computer Science/IT?

<title>*|MC:SUBJECT|*</title>

<o:OfficeDocumentSettings><o:AllowPNG/>

<o:PixelsPerInch>96</o:PixelsPerInch> </o:OfficeDocumentSettings>

</xml> <![endif]--> <meta charset="UTF <meta http-equiv="X-UA-Compatible" co <meta name="viewport" content="widt" <title>*|MC:SUBJECT|*</title>

<0:OfficeDocumentSettings>
<0:AllowPNG/>
<0:PixelsPerInch>96</0:PixelsPerInch>
</0:OfficeDocumentSettings>
</xml> <![endif]---> xmeta charset="UTF"

Why Study Computer Science/IT?

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 Computer Science/IT.

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

3

Activity Ideas

1		
		$\left \right\rangle$
	V	

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.



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.



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



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

Resources to highlight the relevance of your subject

- <u>STEM Learning</u> World-leading STEM education for all young people across the UK.
- Linking Careers to STEM Curriculum Guide for <u>Teachers</u> (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").

Other key Resources:

- Download Where Can ICT Take You? Poster by National Apprenticeship Service.
- Jobs that use Computing and ICT: BBC Bitesize Careers.
- Why it Matters: <u>Computer Science</u>. 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.

Labour Market Information

- The <u>LMI for All</u> 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.

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 <u>STEM Learning's careers resources</u>.

Senior System Engineer

Senior systems engineers manage the computer and network systems within organisations.

See Case study

Visit National Careers Service to learn more



5



Cyber Security Apprentice/Officer

Cyber intelligence officers gather information about where threats to information technology (IT) systems come from and how they work.

See Case study

Visit National Careers Service to learn more

Software Engineer/ Developer

Software developers design, build and test computer programs for business, education and leisure services.

See Case study 1 See Case study 2 <u>Visit National Careers</u> Service to learn more



6



Business Analyst

Business analysts work with organisations to help them change and improve.

See Case study

Visit National Careers Service to learn more

Computer Games Developer

Computer games developers make games that can be played online, and on mobile phones, PCs and games consoles.

See Case study

Visit National Careers Service to learn more



<o:OfficeDocumentSettings> <o:AllowPNG/> <o:PixelsPert </o:Office </xml> <![<meta http <meta nam

<title>*|MC

·PixelsPerInch>

ŲΓ

<0:OfficeDocumentSettings>
<0:AllowPNG/>
<0:PixelsPerInch>96</0:PixelsPerInch>
</0:OfficeDocumentSettings>
</xml> <![endif]--> <meta charset="UTF
meta http-equiv="X-UA-Compatible" co
eta name="viewport" content="width
MC:SUBJECT]*</title>

Essential Skills

<title>*|MC:SUBJECT|*</title>

<o:OfficeDocumentSettings><o:AllowPNG/>

<o:PixelsPerInch>96</o:PixelsPerInch> </o:OfficeDocumentSettings>

</xml> <![endif]--> <meta charset="UTF <meta http-equiv="X-UA-Compatible" co <meta name="viewport" content="widt" <title>*|MC:SUBJECT|*</title>

<0:OfficeDocumentSettings>
<0:AllowPNG/>
<0:PixelsPerInch>96</0:PixelsPerInch>
</o:OfficeDocumentSettings>
</xml> <![endif]--> <meta charset="UTF"</pre>

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, <u>Skills Builder</u> <u>Partnership</u>, 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. <u>You can</u> explore the Interactive Framework here.

As a teacher, you can also create a free account on the <u>Skills Builder Hub here</u>. 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.



<0:OfficeDocumentSettings>
<0:AllowPNG/>
<0:PixelsPer
</0:Office
</xml> <![
<meta http<meta nam
<title>*|MC

PixelsPerInch>

JTF

<title>*|MC:SUBJECT|*</title>

<0:OfficeDocumentSettings>
<0:AllowPNG/>
<0:PixelsPerInch>96</0:PixelsPerInch>
</0:OfficeDocumentSettings>
</xml> <![endif]--> <meta charset="UTF
<meta http-equiv="X-UA-Compatible" co
eta name="viewport" content="width</pre>

Careers in the curriculum

<o:OfficeDocumentSettings> <o:AllowPNG/>

<o:PixelsPerInch>96</o:PixelsPerInch> </o:OfficeDocumentSettings>

</xml> <![endif]--> <meta charset="UTF <meta http-equiv="X-UA-Compatible" co <meta name="viewport" content="widt" <title>*|MC:SUBJECT|*</title>

<0:OfficeDocumentSettings>
<0:AllowPNG/>
<0:PixelsPerInch>96</0:PixelsPerInch>
</0:OfficeDocumentSettings>
</xml> <![endif]---> xmeta charset="UTF"

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:



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.



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:



Example resources supporting you to link curriculum learning to careers from STEM Learning:

- Discover how to adapt your curriculum to link to careers in science, design & technology, engineering, computing and mathematics.
- STEM Learning Secondary and A-Level Computing Resources.

- <u>STEM Ambassadors</u> 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 'How is HTML Useful?'

<o:OfficeDocumentSettings> <o:AllowPNG/> <o:PixelsPeri </o:Office </xml> <![<meta http: <meta nam

<title>*|MC

PixelsPerInch>

VTF

<0:OfficeDocumentSettings>
<0:AllowPNG/>
<0:PixelsPerInch>96</0:PixelsPerInch>
</0:OfficeDocumentSettings>
</xml> <![endif]--> <meta charset="UTF
meta http-equiv="X-UA-Compatible" co
eta name="viewport" content="width
"MC:SUBJECT]*</title>

Pathways

<title>* MC:SUBJECT * </title>

<o:OfficeDocumentSettings> <o:AllowPNG/>

<o:PixelsPerInch>96</o:PixelsPerInch> </o:OfficeDocumentSettings>

</xml> <![endif]--> <meta charset="UTF <meta http-equiv="X-UA-Compatible" co <meta name="viewport" content="widt" <title>*|MC:SUBJECT|*</title>

<o:OfficeDocumentSettings> <o:AllowPNG/> <o:PixelsPerInch>96</o:PixelsPerInch> </o:OfficeDocumentSettings> </xml> <![endif]--> <meta charset="UTF

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:

- <u>A route comparison grid</u> 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 <u>2-minute animation</u> showcasing and explaining each choice in a simple, dynamic and visual manner.

The Department for Education T Levels team has created a helpful <u>T Level Guide</u> for Teachers and Careers Advisers, giving a comprehensive oversight of this exciting qualification.

Pathway options	
	T-Level <u>Digital Production, Design</u> and Development T-Level <u>Digital Business Services</u> T-Level <u>Digital Support Services</u> A-Level Computer Science
Example Post 16 Routes	BTEC Computing Level 2/4 Esports Management, Games Development, Games Art, Games Technology
Degree Ideas	Computing Science Computer Game Technology Computing and Forensic Security Artificial intelligence Software Engineering
	Cyber Security Technologist IT Solutions Software Developer Infrastructure Technician

12

Activity Ideas

	$\left \right\rangle$

<u>Click here to access a KS3</u> <u>My Learning, My Future</u> <u>homework task</u> 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.

 \bigcirc

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 ICT Take You? Poster by National Apprenticeship Service.

Example Key Sector Bodies/Websites:

- <u>STEM Learning</u> World-leading STEM education for all young people across the UK.
- <u>Discover Creative Careers</u>: Bringing together careers information and opportunities from creative organisations in one explorable directory.
- Intogames: Explore Careers
- <u>UKIE</u>: Industry body for the UK's fastmoving, innovative and creative games and interactive entertainment sector.

Extension and Employer Engagement Opportunities linked to your subject

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

- <u>STEM Learning</u> World-leading STEM education for all young people across the UK.
- Resource and support for STEM Competitions, Trips, Activity Days and Meaningful Employer Engagement activities.
- Celebration events that promote STEM Careers.
- <u>STEM Clubs</u> are an enjoyable way to engage young people with STEM subjects and careers.
- <u>STEM Ambassadors</u> 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.
- <u>Catalyst</u> 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 <u>'How is</u> HTML Useful?'

• <u>Intogames</u> 'Start your journey into games now': Find a career, build a game, go to an event, get a mentor, find opportunities.



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	
What are you are looking to achieve? Try and be as clear and purposeful as possible when framing an 'ask' of employers	 What are the planned outcome(s)? i.e. 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 key labour market information. 	
What benefits would there be to the employer for supporting?	 For emotional reasons: 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. For commercial reasons: 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. 	
How to engage an employer?	• Alumpi network	
Format	Articulate where, when and how the encounter will take place. Would you like someone to create a video/take part in a recorded Q&A or is this is a physical invitation into a lesson?	
Recording and Evaluation	How will you evaluate the session and get a temperature check of value from students and the employer? Remember to communicate activity and student register to Careers Leader as this supports Gatsby Benchmark 4 and potentially 5/6.	

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 Education & Employers, icould Forum Talent Potential Intogames LMI for All Loughborough University National Careers Service National Careers Week NHS Careers 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

The Careers & Enterprise Company 2-7 Clerkenwell Green Clerkenwell London EC1R 0DE

careersandenterprise.co.uk



Follow us on Twitter: @CareerEnt