

CHOICES



WELLBEING

UNDERSTANDING QUALIFICATIONS

SUBJECT FOCUS: SCIENCE

LEARNING ABOUT STEM JOB ROLES

INSIDE:

WELCOME TO CHOICES

**SUPPORTING STUDENTS ACROSS
WORCESTERSHIRE TO UNDERSTAND
THEIR CAREER CHOICES.**

CHOICES IS A CAREERS AND ADVICE MAGAZINE THAT WILL HELP YOU TO UNDERSTAND THE WIDE RANGE OF CAREER CHOICES AND OPPORTUNITIES AVAILABLE TO YOU ACROSS WORCESTERSHIRE AND SUPPORT YOU TO START PLANNING FOR YOUR FUTURE.

**BROUGHT TO YOU BY THE
INSPIRING WORCESTERSHIRE CAREERS HUB**
WWW.SKILLS4WORCESTERSHIRE.CO.UK



ABOUT US...

WHO ARE WE?

The Inspiring Worcestershire Careers Hub is part of a national initiative led by the Careers and Enterprise Company to support the delivery of high-quality careers education within educational establishments across Worcestershire.

WHAT DO WE DO?

Our aim is to ensure that through our work with educational establishments across Worcestershire that every young person receives the information, advice and guidance they need to ensure they are fully prepared to enter the world of work.

WHY DO WE DO IT?

We ensure that young people get high-quality careers guidance so that they can make informed choices about their future careers.

If young people don't get high-quality careers guidance then they may make the wrong choices and this could impact on their future careers but it would also affect Worcestershire's employers as they need young people with the right skills, qualifications, experience and attitude to ensure that their businesses thrive in the future.

We need to make sure that Worcestershire's economy grows so that there are jobs for all its residents and so that new, exciting companies are keen to invest in the county. Employers need young people who hold the right skills, qualifications and experience. Young people can then find the careers they want and do not have to leave the county.

CHOICES UNDERSTANDING QUALIFICATIONS CHOICES



Choosing what qualifications, you would like to take when you finish year 11 means you will need to start to understand the different types of qualifications available to you and where you can continue your journey through education as early as possible. It can be confusing to make this decision if you aren't sure what all of the different qualifications and levels available mean.

Up until you choose your GCSE options, you will have probably been attending lessons learning subjects chosen for you by your school.

You will soon be given the opportunity to make choices about your own learning and the qualifications that go with it. This can influence your options for future education or employment.

QUALIFICATIONS EXPLAINED.

Now that you have learnt a little more about why qualifications are important it would be useful to understand a little more about the different qualifications you may hear about as you begin to plan the rest of your journey through education. Here is an explanation about just a few of the more common qualifications you may come across:

GCSE

GCSE stands for General Certificate of Secondary Education. It's the part of the National Curriculum taught to pupils aged 14 to 16 in years 10 and 11. It also includes exams, the results of which have a significant bearing on a child's future career.

GCSEs are the exams young people must take at the end of Key Stage 4

A-LEVELS

Short for Advanced Level, A-levels come after GCSEs. They usually focus on academic subjects, compared to vocational qualifications like BTECs and NVQs, which are more practical. There are more than 40 different A-level subjects on offer – some will be subjects that you studied at GCSE and others may be new.

A-Levels are highly valued by employers and universities so they can open up lots of doors to further study and careers

DEGREES

A degree is an academic course and qualification studied for and attained at university – a bachelor's degree or master's degree. For school leavers, the most relevant degree to be aware of is the bachelor's degree, which can be taken in hundreds of subjects, ranging from traditional academic ones such as history, English literature and geography, to the sciences, to newer subjects like digital and social media.

NVQS

An NVQ (National Vocational Qualification) is a work-based way of learning – which is carried out at a college, school, or workplace.

Each NVQ level involves a range of on-the-job tasks and activities that are designed to test you on your ability to do a job effectively.

You may start out by applying your knowledge to basic tasks, and progress to incorporating fundamental principles into a variety of contexts.

QUALIFICATION LEVELS

SO, YOU KNOW WHAT TYPES OF QUALIFICATIONS THERE ARE, BUT WHAT ARE THEIR LEVELS?

There are not only different qualifications for you to choose to take but there are also lots of different levels of qualifications. This will also relate to how hard that qualification is to complete. The higher the level, the harder the qualification.

In total, there are nine levels of qualifications.

As you continue your journey through education, it is important that you work at a level that best suits you, trying to achieve too much too soon is likely to make it harder for yourself and de-motivate you from completing your studies.

Once you have gained a certain level of qualification, you can then move on to the next level.

Top Tip: When deciding what level to study after you finish your GCSEs, make sure you consider the requirements of the job you want to do and how long it will take you to complete that qualification.

If you aren't sure what the different levels mean, here is a handy overview of the first 4 levels.

QUALIFICATION LEVELS EXPLAINED:

LEVEL 4:

LEVEL 4 QUALIFICATION

Degree, Foundation Degree, HNC or HND, NVQ Level 4/5

FULL LEVEL 3:

MINIMUM 2 X A-LEVELS

NVQ Level 3, BTEC Awards, Certificates & Diplomas at Level 3, BTEC Extended Diplomas, OCR Nationals, Cambridge Technicals Level 3

FULL LEVEL 2:

5 X GCSE'S A*-C OR GRADE 4-9

NVQ Level 2, BTEC First Diploma, Functional Skills Level 2, OCR Nationals, Cambridge Technicals Level 2

LEVEL 1:

GCSE'S D-G

NVQ Level 1, Introduction Diploma, Certificate, Cache Diploma, Skills for Working Life, Functional Skills Level 1, OCR Nationals/Foundation

ENTRY LEVEL:

1, 2 OR 3

Entry Level Awards, Certificates and Diplomas, Functional Skills at Entry Level



TOP TIP:

As GCSEs are the next qualification you are likely to undertake visit this site as it will help you understand more about GCSE's.

What are GCSEs?
(educationquizzes.com)

UNDERSTANDING QUALIFICATIONS

Now we have explored the different qualifications and their levels we should now look at the different types of education establishments you could move on to.

These establishments may also be known as pathways. Understanding them in more details will help you pick the pathway which is right for you in the future.

FULL-TIME EDUCATION OPTIONS FOR WHEN YOU LEAVE YEAR 11...

SCHOOL SIXTH FORM

If you attend a school that has a sixth form, you should consider that as an option, you already know the place, the people and the teachers so it can be a lot less daunting. However, you can also apply to sixth forms at different schools. Make sure you speak to the head of sixth form at the school you currently attend, as well as attending open days for others so you can make the best decision for yourself based on what they can offer.

SIXTH FORM COLLEGE

Enrolling at a sixth form college gives you the opportunity to have a fresh start, meet new people, experience a different environment and meet new teachers and support systems. Sixth form colleges are usually bigger than school sixth forms, so the choice of subjects and courses is usually bigger too.

To find out more about the sixth form in Worcestershire, [click here](#).

FURTHER EDUCATION COLLEGE (FE COLLEGE)

Moving away from your school and studying at a college is a completely different experience. Further education colleges are very large with lots of students of all different ages studying full and part-time courses. Colleges offer a wide range of subjects, courses and facilities, so if you are interested in attending college, you should visit their open days to find out more about what is on offer and view the environment you would be working in.

To find out more about the colleges in Worcestershire (Heart of Worcestershire College, Kidderminster College, Warwickshire College Group) [click here](#).



TOP TIP:

If you are looking to go to university in the future, check the entry requirements of the course you would like to study before you make your post-16 option

SPECIALIST COLLEGE

Some students attend specialist colleges. These are colleges usually outside of the local area and may mean moving away from home. Specialist colleges offer a range of courses, including courses for young people with disabilities or learning difficulties.

To find out more about specialist colleges, [click here](#).

T LEVELS

T Levels are new courses which follow GCSEs and are equivalent to 3 'A' levels. These 2-year courses, which launched in September 2020, have been developed in collaboration with employers and businesses so that the content meets the needs of industry and prepares students for work, further training or study.

T Levels offer students a mixture of classroom learning and 'on-the-job' experience during an industry placement of at least 315 hours (approximately 45 days). There are a range of different subjects that [T Levels can be studied in](#) but these courses will become available at different times over the next few years. If you would like to find your nearest T Level educational provider, [click here](#).

APPRENTICESHIPS

If you choose to take the apprenticeship option, you will work and earn money at the same time as you are learning and gaining your qualification. An apprenticeship combines hands-on training in the workplace with off-the-job training at a local college or training provider. You must be over 16, living in England and have finished school to be able to start an apprenticeship. There are different levels of apprenticeships and the entry requirements vary depending on the vacancy you apply for. There are 100's of different types of apprenticeship vacancies in almost every type of industry and job role and all pay at least the [national minimum wage for apprentices](#).

In Worcestershire we have an apprenticeship service (Worcestershire Apprenticeships) who can provide you with free information and support and who can also help you find and apply for a vacancy. Visit: www.worcsapprenticeships.org.uk

Don't forget- it is advisable that if you want to do an apprenticeship you start looking and applying for vacancies in the spring term of year 11, even though you can't officially start until you finish school in June.

VISIT WORCESTERSHIRE'S ONLINE CAREERS TOOL



**INFORMATION
ABOUT EMPLOYERS
IN WORCESTERSHIRE**



**SUPPORT FOR
SCHOOLS**



**WORCESTERSHIRE'S
LABOUR MARKET
INFORMATION**



**SUPPORT FOR
YOUNG PEOPLE**



CAREERS ADVICE



CAREERS EVENTS



INTERVIEW TIPS



**SUPPORT FOR
PARENTS**



CAREER PATHWAYS



WWW.SKILLS4WORCESTERSHIRE.CO.UK

KEY STAGE 3 CAREERS LEARNING JOURNEY

As you make your way through education it is worth exploring the wide range of information you may need to know and some of activities you could undertake in order to prepare yourself for the next stage of your journey towards the world of work. Here are a few ideas you could consider:



YEAR 6

YEAR 7

YEAR 8

Understand how Maths can help you in the future

Develop a lifelong love of Learning

Get involved in TEAM sports or activities

Talk about your hobbies and interests

Ask adults about their jobs

Learn to understand more about the things you are good at

Learn more about SKILLS and what they are.

Develop a thirst for Reading and Writing

Sit your Year 6 SAT tests

Talk to your friends about what they want to be when they grow up

Learn more about the NEW subjects you are now taking at school

Develop your knowledge of different job roles

Understand what "Employability Skills" are

Attend a Careers Event

Listen to an adult talking about their job in more detail.

Can you find out what the jobs of the future are likely to be

Can you talk about the NEW Skills you have learnt this year

Take an online "Personality" quiz

Attend a Careers Event

Take a "Virtual Tour" of a local business

Understand what STEM means and look at the careers linked to this sector

What is your favourite subject? Research what careers could you pursue in that subject.

Discuss what you want to do when you leave school with your school careers adviser or careers leader

What is Labour Market Information (LMI) and how might this help your career choices

Speak to your family about their jobs and career pathways

How do the GCSE options you are considering link to different job roles

Listen to an employer talk about their industry or maybe visit a workplace

Why not watch a careers video about the job role you would like to do once you leave school

Pick your GCSE Options

BE CURIOUS ABOUT CAREERS

BE AN ACTIVE INVESTIGATOR

- > Learn to ask good questions to find the answers you need.
- > Explore why people do things and not just what they do

SHOW A REAL INTEREST IN PEOPLE

- > Be willing to listen to people's stories and how they got to where they are today
- > Learn from other people's mistakes and ensure you can walk away with at least one good piece of advice.

BE WILLING TO TRY NEW THINGS

- > Undertake a NEW hobby, project, interest, or sporting activity
- > Learn NEW skills, subjects or improve existing ones



BE A LEARNER THROUGHOUT YOUR LIFE

- > When you stop learning you stop discovering NEW things.
- > The world of work is vast and is always changing.

ALWAYS KEEP AN OPEN MIND

- > Just because you haven't done something in the past it doesn't mean you can't do it in the future.
- > Always be open to consider NEW ideas and suggestions

BE CURIOUS ABOUT CAREERS



DID CURIOSITY REALLY KILL THE CAT?

We live in a society in which curiosity isn't encouraged often enough. However, having a curious mind brings with it a whole host of benefits, including making you a better learner and ultimately more employable.

SO WHY IS CURIOSITY SO IMPORTANT? AND HOW WILL IT BENEFIT YOUR CAREER?

Let us explain why curiosity is important...

Since personality has so much to do with education, and later in career success, then it's important to continuously develop your curiosity. If you are in school, the best thing you can do is always ask questions, whether they are just questions for yourself as you study, or if you pose them to a teacher in class.

If you get into the habit of always asking "why?", your curiosity will begin to develop, and you will achieve more while you are in school.

Many colleges and universities look for indications that the student has a curious disposition before they will accept them. Schools, and employers, want people that come to their classes or to work who have a sense of curiosity about things. A person is only as good as the questions they ask about things they do not understand yet.

By letting your curiosity roam free, you will be more successful at putting what you have learnt to good use. Without something driving you to work hard and learn more, your level of knowledge will serve you well, but not as much as the determination that comes with the quest for knowing much more.

Employers are keen to recruit individuals with an insatiable curiosity because they will make more efficient use of their minds compared to those who are bright but who don't know how to ask questions. So, next time you are in class or in a job interview, try to come up with questions that will help you learn even more.

Assumptions stop growth

Think about how many times a day you make assumptions about something.

You look at the way things are being done by classmates, tutors, and assume that this is just the way things have always been. I mean, why rock the boat?

Of course, it would be ridiculous and unproductive to question every tiny little thing about the way a company operates. However, if you're curious about a particular process and think you have ideas for change, don't be afraid to ask some questions. Companies don't progress and become world leaders in their field by doing things as they have always been done, so don't forget the power you have to trigger change, no matter what stage you're at on your career ladder.

Great teams are made up of individuals

The best teams are the ones which incorporate a wide range of personalities from different backgrounds. We learn most from those around us and can work more effectively by drawing on others' strengths and personal experiences to supplement our own knowledge gaps.

It broadens your view of the world

Employers are looking for candidates who are switched on about the world around them. They want individuals with their own interests, passions, and specialisms. Whether you're a history geek or passionate about photography, having further interests shows you're curious about the world around you, and will be good at understanding other people's opinions.

Curious people also learn to question sources. Just because you're told something, does that make it true? Asking questions makes you sharper and more observant – something every employer is looking for.

The unknown isn't as scary as you think

It's a natural human instinct to be afraid of what we don't know.

We're most comfortable in situations with a guaranteed outcome. While risks do exist, they shouldn't put you off embracing new experiences and suggesting new ideas. It's up to you to assess the risks, prepare for them accordingly, and make that bold move.

Ultimately, even if you don't receive the results you hope for, if you can learn from the experience and use it to inform your future work, the process will have been a success.

It could help accelerate your career

Employers like ambitious individuals who are willing to dedicate themselves to a company for a significant period. The best way of progressing through your career to roles with more responsibility is by showing a curiosity for the working environment around you.

Offering up your services and demonstrating a willingness to learn is going to impress your boss and make your time at work more rewarding.

THE WORCESTERSHIRE APPRENTICESHIP HUB

LOOKING FOR A GREAT WAY
TO START YOUR CAREER?

WANT TO LEARN ON THE JOB, GAIN
EXPERIENCE AND QUALIFICATIONS
WHILST ALSO EARNING MONEY?

THE ANSWER MAY BE AN APPRENTICESHIP...

HOW WE CAN HELP...

- One to one advice and guidance
- Explaining all about how apprenticeships work
- Help in producing a CV
- Support in searching for vacancies and completing the online application
- Applying for vacancies and setting up alerts
- Preparing for the interview
- Understanding the role of the training provider and employer
- Other options if you can't get an apprenticeship just yet

GET IN TOUCH...

 worcsapprenticeships.org.uk

 @worcsapprentice

 /worcsapprenticeships

 0300 666 3 666



**WORCESTERSHIRE
APPRENTICESHIPS**

LOOKING AFTER YOUR OWN WELLBEING

Over the last 12 months everyone across the UK has faced a unique set of challenges due to the COVID 19 Pandemic which has meant that we have all had to change how we have been able to go about our everyday lives.

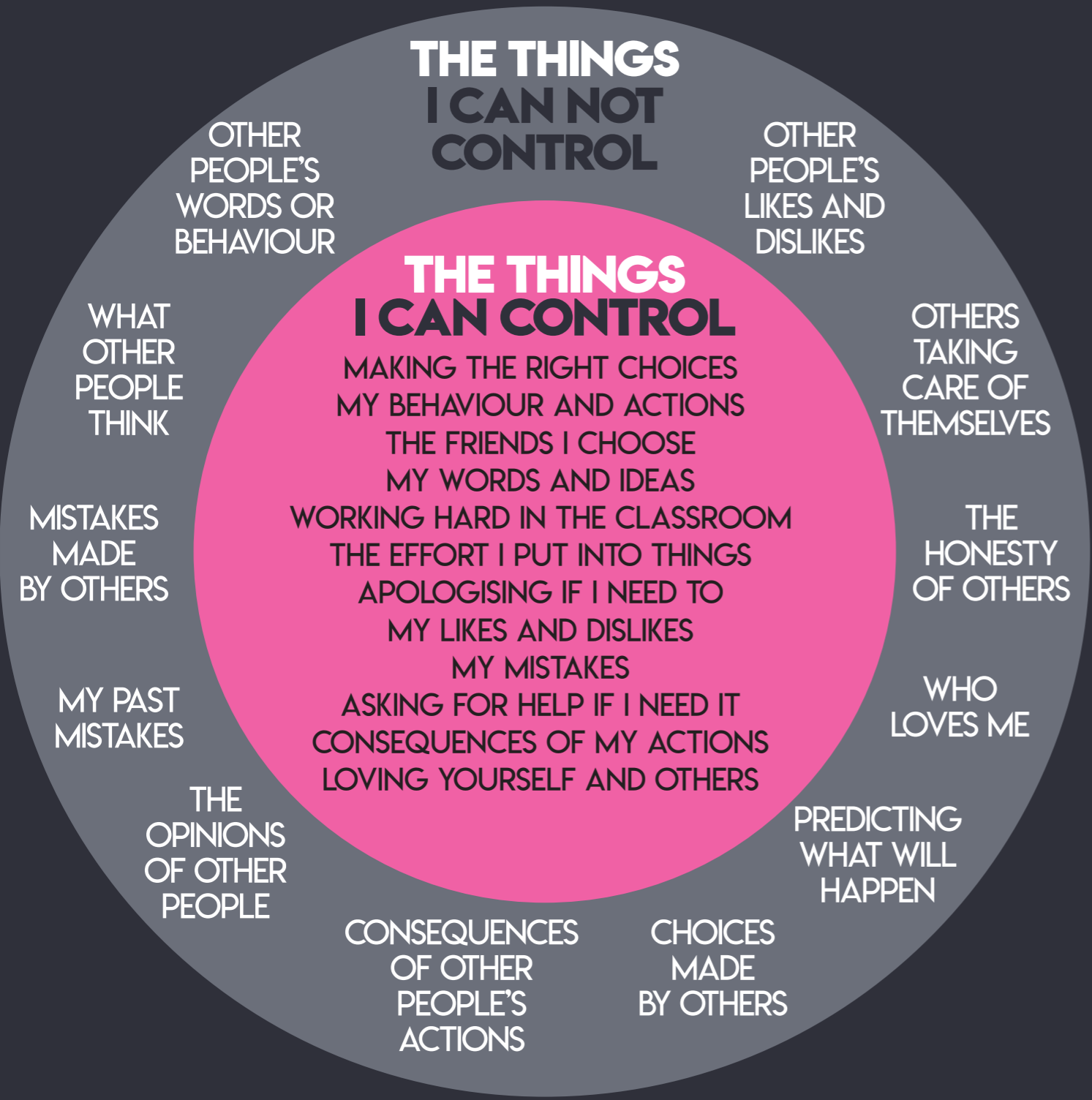
These changes have meant that we have been unable to attend school every day, we have been stopped from seeing our friends and extended family, we were not allowed to participate in the sports or hobbies we enjoy and have even been stopped from eating at a restaurant or watching a movie at the cinema.

Regardless of their age people react to change in different ways.

Some people adapt very easily and take these changes in their stride, but others can find it very difficult to adapt to new ways of doing things.

Over the next few pages, we shall explore some examples of how you can improve your own wellbeing and give you some advice which might help you or your friends adapt to change a little better in the future.



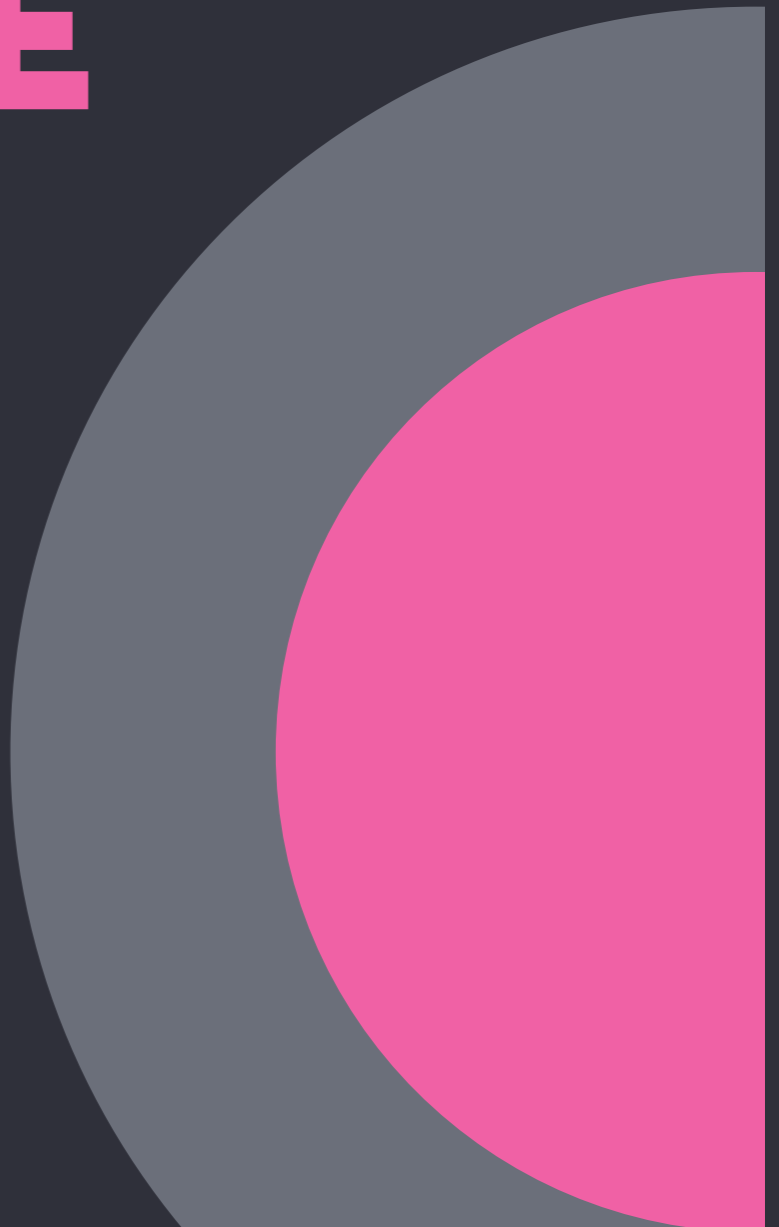


YOUR CONTROL CIRCLE

Using a control circle can help you understand some of the things that you can control but also helps you understand the things you cannot control.

We often spend time worrying or become anxious about things that we do not actually have any control over, and this can have a negative impact on our personal well-being

Why don't you discuss some of these examples with your teacher, friends and family or maybe perhaps create your own control circle using the template on the next page to add some new things which are relevant to you.



THE THINGS
I CAN NOT
CONTROL

THE THINGS
I CAN CONTROL

WHY DON'T YOU EXPLORE THESE 4 WAYS WHICH MAY HELP YOU STOP WORRYING OR BECOMING ANXIOUS ABOUT THE THINGS YOU CAN'T CONTROL?

Remember you will always be more effective when you put your time and energy into the things you can actually control.



DEVELOP HEALTHY AFFIRMATIONS

Make it happen. Whenever you catch yourself saying something like, "I hope I do OK today," remind yourself, "Make it happen." It will remind you that you are in control of your actions.



CREATE A PLAN TO MANAGE YOUR STRESS

Exercising, eating healthy, and getting plenty of sleep are just a few key things you need to do to take care of yourself. You must make time to manage your stress so you can operate more efficiently.



IDENTIFY YOUR FEARS

Ask yourself what you are afraid will happen. Are you predicting a catastrophic outcome? Do you doubt your ability to cope with disappointment?

Usually, the worst-case scenario isn't as tragic as you might envision. There's a good chance you're stronger than you think.



DETERMINE WHAT YOU CAN CONTROL

When you find yourself worrying, take a minute to examine the things you have control over. You can't prevent a storm from coming but you can prepare for it. You can't control how someone else behaves, but you can control how you react.

BECOMING MORE RESILIENT

WHAT IS RESILIENCE?

The dictionary says that **RESILIENCE** is when a person is able to withstand or recover quickly from difficult situations or conditions.

Here are 10 Tips to help you build your resilience.

From the outside it always looks so easy to be a teen — everyone seems to be laughing, hanging out with friends, wearing exactly the right clothes. But if you're a young adult, you know that life can often be pretty tough. You may face problems ranging from having disagreements with friends to experiencing the death of a family member.

You may ask yourself the question why is it that sometimes people can go through really rough times and manage to bounce back quickly while for others it takes a much longer time to feel that things are back to normal?

The difference is that those who bounce back more quickly are using the skills of resilience.

The good news is that resilience isn't just something you're born with or not - the skills of resilience can be learned.

As you begin to use these tips, keep in mind that each person's journey along the road to resilience will be different — what works for you may not work for your friends.

1. GET TOGETHER

Talk with your friends and, yes, even with your parents. Understand that your parents may have more life experience than you do, even if it seems they never were your age. They may be afraid for you if you're going through really tough times and it may be harder for them to talk about it than it is for you! Don't be afraid to express your opinion, even if your parent or friend takes the opposite view. Ask questions and listen to the answers. Get connected to your community, whether it's as part of a church group or a high school group.

2. CUT YOURSELF SOME SLACK

When something bad happens in your life, the stresses of whatever you're going through may heighten daily stresses. Your emotions might already be all over the map because of hormones and physical changes; the uncertainty during a tragedy or trauma can make these shifts seem more extreme. Be prepared for this and go a little easy on yourself, and on your friends.

3. CREATE A HASSLE-FREE ZONE

Make your room a "hassle-free zone" – not that you keep everyone out, but home should be a haven free from stress and anxieties. But understand that your parents and siblings may have their own stresses if something serious has just happened in your life and may want to spend a little more time than usual with you.

4. STICK TO THE PROGRAM

Spending time in school means more choices; so, let home be your constant. During a time of major stress, map out a routine and stick to it. You may be doing all kinds of new things, but don't forget the routines that give you comfort, whether it's the things you do before class, going out to lunch, or have a nightly phone call with a friend.

5. TAKE CARE OF YOURSELF

Be sure to take of yourself – physically, mentally, and spiritually. And get sleep. If you don't, you may be grouchier and more nervous at a time when you must stay sharp. There's a lot going on, and it's going to be tough to face if you're falling asleep on your feet.

6. TAKE CONTROL

Even in the midst of tragedy, you can move toward goals one small step at a time. During a really hard time, just getting out of bed and going to school may be all you can handle, but even accomplishing that can help. Bad times make us feel out of control – grab some of that control back by taking decisive action.



7. EXPRESS YOURSELF

Tragedy can bring up a bunch of conflicting emotions, but sometimes, it's just too hard to talk to someone about what you're feeling. If talking isn't working, do something else to capture your emotions like start a journal, or create art.

8. HELP SOMEBODY

Nothing gets your mind off your own problems like solving someone else's. Try volunteering in your community or at your school, cleaning-up around the house or apartment, or helping a friend with his or her homework.

9. PUT THINGS IN PERSPECTIVE

The very thing that has you stressed out may be all anyone is talking about now. But eventually, things change and bad times end. If you're worried about whether you've got what it takes to get through this, think back on a time when you faced up to your fears, whether it was asking someone on a date or speaking up in school. Learn some relaxation techniques, whether it's thinking of a particular song in times of stress, or just taking a deep breath to calm down. Think about the important things that have stayed the same, even while the outside world is changing. When you talk about bad times, make sure you talk about good times as well.

10. TURN IT OFF

You want to stay informed – you may even have homework that requires you to watch the news. But sometimes, the news, with its focus on the sensational, can add to the feeling that nothing is going right. Try to limit the amount of news you take in, whether it's from television, newspapers or magazines, or the Internet. Watching a news report once informs you; watching it repeatedly just adds to the stress and contributes no new knowledge.

You can learn resilience. But just because you learn resilience doesn't mean you won't feel stressed or anxious. You might have times when you aren't happy – and that's OK. Resilience is a journey, and each person will take his or her own time along the way. You may benefit from some of the resilience tips above, while some of your friends may benefit from others. The skills of resilience you learn during really bad times will be useful even after the bad times end, and they are good skills to have every day. Resilience can help you be one of the people who've "got bounce."



AGRICULTURE

THIS SECTOR EMPLOYS OVER 350,000 PEOPLE ACROSS THE UK, AND MANY NEW JOBS WILL BE CREATED IN AGRI-TECH IN THE FUTURE.

CAREER PATHS

- >> ECOLOGIST
- >> FOOD SCIENTIST
- >> CONSERVATION SPECIALIST
- >> PLANT BREEDER

ENGINEERING & MANUFACTURING

THE PROPORTION OF YOUNG ENGINEERS HAS DROPPED OVER THE LAST DECADE, THIS MEANS THERE WILL BE A HIGH DEMAND FOR YOUNGER WORKERS IN COMING YEARS.

CAREER PATHS

- >> MANUFACTURING PLANT MANAGER
- >> SOFTWARE ENGINEER
- >> PHARMACEUTICAL ENGINEER
- >> MARINE BIOLOGIST

PUBLIC SECTOR

THE PUBLIC SECTOR (WHICH INCLUDES NHS HOSPITALS, STATE SCHOOLS, LOCAL COUNCILS, AND THE POLICE) EMPLOYS MORE THAN 5 MILLION PEOPLE ACROSS THE UK, THAT'S OVER 17% OF THE WORKFORCE.

CAREER PATHS

- >> ENVIRONMENTAL MANAGER
- >> WATER CONSERVATION OFFICER
- >> MUSEUM EDUCATION OFFICER
- >> CARE WORKER

IT & INTERNET

PEOPLE WITH QUALIFICATIONS IN SCIENCE AND IT HAVE ONE OF THE HIGHEST RATES OF EMPLOYMENT IN THE UK.

CAREER PATHS

- >> DATA ANALYST
- >> SOFTWARE ENGINEER
- >> CAD TECHNICIAN
- >> AUTOMATED TEST ENGINEER

TRANSPORT & LOGISTICS

THE UK TRANSPORT INDUSTRY EMPLOYS 1.5 MILLION PEOPLE ACROSS THE COUNTRY. OVER THE NEXT 10 YEARS, 100,000 NEW WORKERS WILL BE REQUIRED IN RAIL ALONE.

CAREER PATHS

- >> TELECOMS RAILWAY TECHNICIAN
- >> LOGISTIC ANALYST
- >> PILOT
- >> MECHANIC

SUBJECT FOCUS: SCIENCE

HOW DO THE SUBJECTS YOU STUDY AT SCHOOL LINK TO CAREERS IN THE WORLD OF WORK?

MEDICINE & HEALTHCARE

THE UK HEALTHCARE INDUSTRY EMPLOYS OVER 4 MILLION PEOPLE, MAKING IT ONE OF THE LARGEST EMPLOYMENT SECTORS. 4 OF THE 5 HIGHEST GRADUATE SALARIES ARE IN FIELDS RELATED TO MEDICINE.

CAREER PATHS

- >> NURSE
- >> PHYSIOTHERAPIST
- >> DOCTOR
- >> PHARMACIST

SCIENCE & RESEARCH

BETWEEN 2016 AND 2023 JOBS IN SCIENCE AND RESEARCH WILL GROW AT TWICE THE RATE OF OTHER INDUSTRIES, CREATING 142,000 NEW JOBS. 1 IN EVERY 6 JOBS WILL BE IN SCIENCE AND RESEARCH.

CAREER PATHS

- >> RESEARCH SCIENTIST
- >> AEROSPACE ENGINEER
- >> METEOROLOGIST
- >> NATURE CONSERVATION OFFICER

ENERGY & UTILITIES

TODAY ABOUT 50,000 PEOPLE WORK IN THE ENERGY AND UTILITIES SECTOR BUT WITH THE DEMAND FOR GREEN ENERGY GROWING, BY 2020 HALF A MILLION PEOPLE COULD BE WORKING IN RENEWABLES ALONE.

CAREER PATHS

- >> GAS ENGINEER
- >> NUCLEAR ENGINEER
- >> HAZARDOUS WASTE MANAGER
- >> ELECTRICIAN

EDUCATION

SCHOOL AND NURSERY TEACHERS HAVE ONE OF THE HIGHEST RATES OF JOB SATISFACTION IN THE UK. OVER 450,000 TEACHERS WORK WITHIN EDUCATION ACROSS THE UK.

CAREER PATHS

- >> SCIENCE TEACHER
- >> HIGHER EDUCATION LECTURER
- >> LAB TECHNICIAN
- >> SEND SPECIALIST

CONSTRUCTION

ONLY 6 PERCENT OF HIGH SCHOOL STUDENTS CONSIDER A CAREER IN THE TRADES. BY 2030, 79 MILLION SKILLED TRADESMEN WILL RETIRE, WHILE ONLY 41 MILLION NEW WORKERS WILL ENTER THE WORKFORCE. SKILLED TRADESMEN CAN MAKE ABOVE-AVERAGE INCOMES.

CAREER PATHS

- >> ELECTRICAL ENGINEER
- >> ESTIMATOR
- >> MECHANICAL SERVICES ENGINEER
- >> PLUMBER

SUBJECT FOCUS: STEM

NOW YOU HAVE EXPLORED THE SUBJECT NOW LOOK AT SOME OF SPECIFIC JOB ROLES.

WE WILL COVER 4 X JOB ROLES
(ONE FOR EACH STEM ELEMENT) THEY WILL BE:

SCIENCE – CRIME SCENE INVESTIGATOR

TECHNOLOGY – GAMES DEVELOPER

ENGINEERING – CIVIL ENGINEER

MATHEMATICS – STATISTICIAN

STEM JOB PROFILES CRIME SCENE INVESTIGATOR



Crime scene investigators apply keen observation and problem-solving skills in carrying out their scientific, investigative work with the police

As a crime scene investigator, you'll be involved in securing and protecting crime scenes, and collecting evidence from crime scenes, post-mortems, and other incidents, such as fires and suspicious deaths.

You'll also be responsible for processing and categorising evidence so that it can be used in criminal investigations. This might include gathering photographic evidence or physical samples from the scene, such as weapons, fingerprints, clothing, or biological evidence.

Crime scene investigators are sometimes known as scenes of crime officers or forensic scene investigators.

RESPONSIBILITIES

As a crime scene investigator, you'll need to:

- respond to calls from the police to attend crime scenes
- preserve a crime scene so that evidence is accurate and doesn't become contaminated
- work closely with the police - including the National Counter Terrorism Security Office (NaCTSO) and the British Transport Police, forensic scientists, and other organisations such as the National Crime Agency
- take a lead in finding evidence that may support a later criminal case
- photograph and video the incident you're attending
- use scientific methods to gather biological evidence
- carefully record and catalogue evidence found at the crime scene such as samples of blood, hair, or fibres from clothing
- examine crime scenes for latent finger impressions
- take imprints of evidence, such as footprints or tyre prints
- write reports
- attend court to give evidence as part of a trial process.

SALARY

- Starting salaries for crime scene investigators are between £16,000 and £24,000, plus allowances.
- Experienced crime scene investigators or crime scene managers can earn between £24,000 and £35,000, plus allowances.
- Senior crime scene investigators take on greater responsibility and manage the work of others. They can earn higher salaries of £30,000 to £40,000 or more.

Income figures are intended as a guide only

WORKING HOURS

Full-time working hours are around 30 to 40 hours per week. Hours of work are on a shift pattern, as you'll need to respond to calls from the police to attend scenes of crime 24 hours a day, seven days a week, all year round.

QUALIFICATIONS

You'll usually need at least 5 GCSEs at grades 9-4 (A*-C) including maths, English, and science, as well as an A-level in a laboratory-based science subject.

It isn't mandatory to have a degree to be a crime scene investigator, but most recent applicants are graduates and this is more commonly becoming a deciding factor for employers during selection.

A degree in one of the following subjects could be advantageous:

- forensic science
- biological science
- chemistry
- criminology
- psychology.

You can complete specific qualifications to be a crime scene investigator, such as those offered by the College of Policing. These can be undertaken at the police force you work for.

A qualification in digital media such as photography could also be helpful, as you'll need to gather photographic evidence and film at incidents you attend.

SKILLS

You'll need to have:

- a careful and methodical approach to your work and be able to prioritise and take appropriate action
- good attention to detail and keen observational skills for finding and recording evidence
- strong analytical skills and an inquisitive approach
- the ability to work in a team and to coordinate with other professionals
- the patience to be able to correctly catalogue and store evidence
- good written communication in order to write up reports accurately, for being presented in court if necessary
- good verbal communication skills, as you'll need to communicate with victims, witnesses, and investigators in criminal investigations
- technical ability to use digital and scientific equipment
- the capacity to stay calm under pressure and to cope with sometimes distressing situations
- motivation and be able to work on your own initiative, as well as by following instruction
- the ability to follow set procedures and processes when submitting evidence for consideration
- a respect for confidentiality at all times and a trustworthy nature
- an understanding of health and safety guidelines and the diligence to follow these at all times, and those set through the Forensic Submissions Policy
- a flexible approach, with the ability to adapt to alternative approaches for solving problems
- integrity and the commitment to uphold the values and ethical standards of the police service
- good physical fitness and accurate colour vision
- good IT skills - for using Microsoft Office programs, such as Word and Excel, and for using a forensic case management system
- a full driving licence, to get to incidents quickly when you're on call.

STEM JOB PROFILES

GAMES DEVELOPER



You'll need a passion for games, technical skills, and the ability to work on your own and with a team to succeed as a game's developer

Working in games development, you'll be involved in the creation and production of games for personal computers, games consoles, social/online games, arcade games, tablets, mobile phones, and other handheld devices.

With a large games company, you may focus on a particular area of programming such as network, engine, graphic, toolchain and artificial intelligence. With a smaller independent 'indie' game producer, there's often much less of a distinction between the role of developer and designer, and your job may incorporate both programming and design.

The making of a game from concept to finished product can take years and involve teams of professionals. There are several stages, including creating and designing a game's look and how it plays, animating characters and objects, creating audio, programming, localisation, testing, editing, and producing.

RESPONSIBILITIES

As a game developer, you'll need to:

- design, develop and deliver systems and high-quality code using programming languages, such as C++ and C#
- perform code reviews to ensure code quality
- refactor code to improve the design of existing code
- quality test coding in a systematic and thorough way to find problems or bugs and record precisely where the problem was discovered
- debug programs and solve complex technical problems that occur within the game's production
- collaborate with games development team members to meet the needs of a project
- work closely with designers, artists and other staff involved in the design process in order to create a quality product to schedule
- perform effectively under pressure and meet deadlines to ensure a game is completed on time.

Depending on the role you may also:

- develop designs or initial concept designs for games including game play
- generate game scripts and storyboards
- create the visual aspects of the game at the concept stage
- use 2D or 3D modelling and animation software, such as Maya, at the production stage
- produce the audio features of the game, such as character voices, music, and sound effects.

SALARY

- Typical starting salaries are around £19,000 to £25,000.
- Once you have a few years' experience, you may earn a salary of £35,000 to £50,000.
- One you're in a senior position, such as team leader or technical director, your salary can range from £55,000 to more than £75,000.

Salaries vary depending on your specialism, as well as on the type of company you work for, its size and location. Some companies offer bonuses or a profit-sharing scheme.

Income figures are intended as a guide only

WORKING HOURS

Developers often work a 40-hour week, although the role offers some flexibility and you won't necessarily work 9am to 5pm. You may have to work extra hours when deadlines approach. On these occasions you could work over the weekend and into evenings.

QUALIFICATIONS

Although you can become a games developer with any degree subject, employers often look for a degree, HND or foundation degree in:

- computer games (development or design)
- computer games programming
- computer science
- games technology
- mathematics
- physics
- software engineering.

If your work includes design as well as development, a degree in a subject such as animation, interactive media, games design and art or graphic design may be useful.

With the increasing popularity of games and advances in technology, the industry offers a range of opportunities, but competition is intense at all levels and you'll need to demonstrate a high level of commitment and achievement.

SKILLS

You will need to have:

- technical ability, in particular familiarisation with a range of programming languages and/or software packages
- teamworking skills to liaise with other developers and other teams involved in making a game
- self-motivation and the ability to work independently on your own projects
- a creative and innovative approach to solving complex technical problems
- communication skills
- flexibility to meet deadlines and client requirements
- organisational skills to manage and prioritise your workload effectively
- attention to detail
- a forward-thinking approach to work and willingness to keep learning and developing your skills
- enthusiasm for and knowledge of the games industry.

STEM JOB PROFILES CIVIL ENGINEER



Civil engineers advise on the design, development, and construction of a range of projects in the built and natural environment

As a civil engineer, you'll ensure the safe, timely and well-resourced completion of different projects.

Liaising with clients, you'll plan, manage, design, and supervise the construction. You'll work in a number of different settings and, with experience, could run projects as a project manager.

You may choose to specialise in a certain area of civil engineering, such as:

- buildings
- coastal and marine
- construction of dams and canals
- environment
- geotechnical engineering
- highways and transportation
- power
- rail
- structural work
- tunnelling
- waste management
- water and public health.

RESPONSIBILITIES

As a consulting civil engineer, you'll need to:

- undertake technical and feasibility studies and site investigations
- develop detailed designs
- assess the potential risks of specific projects, as well as undertake risk management in specialist roles
- supervise tendering procedures and put together proposals
- manage, supervise, and visit contractors on site and advise on civil engineering issues
- oversee the work of junior staff, or mentor civil engineers throughout the charterhip process
- communicate and liaise effectively with colleagues and architects, subcontractors, contracting civil engineers, consultants, co-workers, and clients
- think both creatively and logically to resolve design and development problems
- manage budgets and other project resources
- be adaptable, as the client may change their mind about the design, and ensure relevant parties are notified of changes in the project
- lead teams of other engineers, perhaps from other organisations or firms
- compile, check and approve reports
- review and approve project drawings
- use computer-aided design (CAD) packages for designing projects
- undertake complex and repetitive calculations
- schedule material and equipment purchases and delivery
- attend public meetings to discuss projects, especially in a senior role
- adopt all relevant requirements around issues such as building permits, environmental regulations, sanitary design, good manufacturing practices and safety on all work assignments
- ensure that a project runs smoothly and that the structure is completed on time and within budget
- correct any project deficiencies that affect production, quality and safety requirements before final evaluation and project reviews.

SALARY

- Consulting civil engineer salaries usually start at around £23,500, rising to £26,500 with two years' experience.
- For non-members, salaries usually average around £30,450.
- The average basic salary for members of the Institution of Civil Engineers (ICE) is almost £50,000.
- The average basic salary of ICE fellows is £81,447

Income figures are intended as a guide only

WORKING HOURS

The average working week is 42 hours and may include some unsocial hours, depending on your particular speciality and individual project requirements. You may occasionally have to work long hours and weekends.

QUALIFICATIONS

This area of work is open to civil and structural engineering graduates.

An honours degree, accredited by the ICE, is essential for gaining Chartered Engineer (MICE CEng) status with the ICE.

It may be possible to enter this profession as a graduate with a BSc or another engineering discipline, but progression could be limited. Entry with a HND only is unusual.

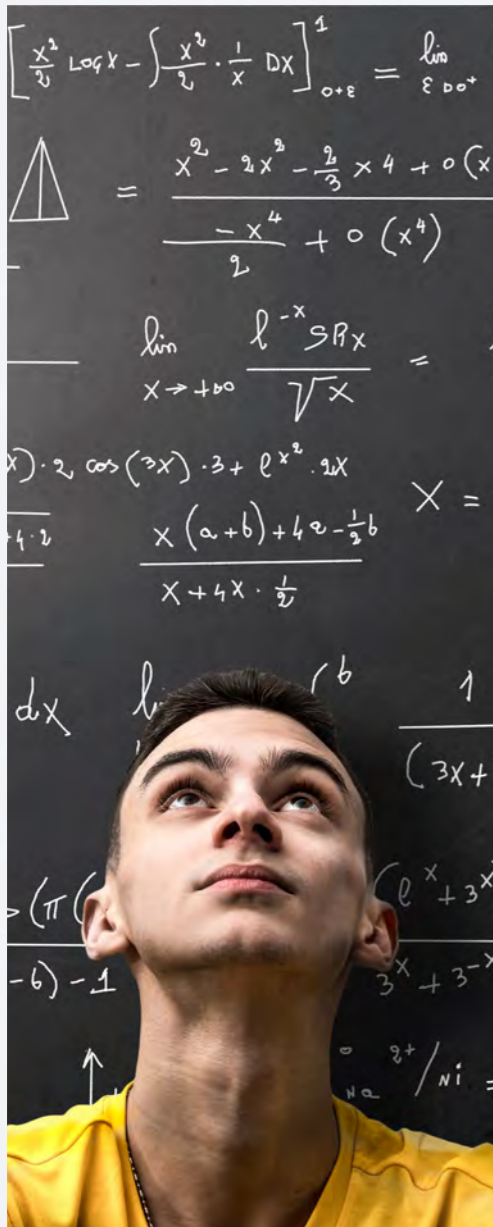
SKILLS

You'll need to show:

- technical competence
- strong numeracy and IT skills
- excellent communication and teamworking skills
- ability to work to budgets and deadlines
- knowledge of relevant building legislation
- attention to detail, combined with the ability to oversee large projects
- negotiation and leadership skills
- creative problem solving
- a flexible approach.

STEM JOB PROFILES

STATISTICIAN



Working as a statistician means dealing with data and helping to find practical solutions to problems. If you're keen on numbers, skilled in IT and like compiling information, this could be the role for you

Statisticians are concerned with the collection, analysis, interpretation, and presentation of quantitative information. They work in a range of sectors, including:

- education
- the environment
- finance
- forensics
- government
- health
- market research
- sport
- transportation.

As a statistician, you will design and manage experiments and surveys and deal with the initial collection of data. You'll process and analyse the data in context, looking for patterns to help make decisions. You will then advise on findings and recommend strategy.

Statisticians often work in teams, usually including professionals from other disciplines. Strong analytical and IT skills are essential, as are interpersonal and communication skills in order to share findings with your colleagues and clients.

creating audio, programming, localisation, testing, editing, and producing.

RESPONSIBILITIES

Statisticians interpret data and communicate results to their clients, often with the aid of mathematical techniques and software. In this role you'll ensure that complex statistical concepts are explained in a way the client can understand and advise on strategy. Some studies take only a few months to complete, while others require years of work.

Your general tasks may include:

- consulting with clients and agreeing what data to collect and how it should be gathered - taking into account any ethical and legislative considerations
 - designing experiments, trials, or surveys to produce the required data
 - collecting and analysing the data
 - interpreting the data and making sure that the right decisions are made based on the results
 - monitoring data collected throughout its shelf life
 - presenting results to others, such as senior managers, regulatory authorities, and clients
 - advising policymakers on key decisions based on results
 - carrying out research, often as part of a team
 - writing reports and articles for publication
 - presenting findings at conferences both in the UK and abroad.
- Depending on your area of work you may also be involved in:
- providing projections of future student numbers, allowing for changes in the birth rate, and assessing how many teachers will be needed in the sector
 - designing experiments to assess the associated side effects of drugs
 - designing, implementing, and analysing clinical studies
 - monitoring, reporting and modelling disease outbreaks
 - collecting data to monitor levels of air pollution
 - collecting data to measure the toxicity of food additives
 - recommending whether certain items should be included in food production, such as folic acid in bread making
 - checking quality control standards in industry
 - designing experiments to improve the quality of new products
 - predicting demand for products and services
 - analysing data to forecast trends for pension providers
 - teaching statistical methods and the theory of statistics.

SALARY

- As a statistician outside of London, you'll typically start on a salary of around £26,000 (statistical officer) or £29,000 (assistant statistician).
- Salaries for experienced statisticians range from £44,000 to £50,000. Salaries for those based in London are higher.

Income figures are intended as a guide only

WORKING HOURS

Most statisticians work full time hours.

Flexible working hours are common.

Paid overtime is occasionally available.

Part-time work, home working and career breaks are also possible.

QUALIFICATIONS

Employers typically look for graduates with a degree that has a statistical or quantitative component.

Examples include:

- economics
- geography
- mathematics
- psychology
- statistics.

SKILLS

You will need to have:

- mathematical ability and computer literacy
- a clear understanding of statistical terms and concepts
- analytical skills
- written and oral communication skills
- problem-solving skills
- the ability to communicate results and findings to non-statisticians
- the ability to influence others
- a practical and strategic approach to work
- a high level of accuracy and attention to detail
- the capability to plan your work and meet deadlines
- the capacity to work alone and within teams.

CAREERS ACTIVITIES TO TRY...

Careers activities don't always have to take place within the classroom or while you are at school. There are many careers activities which can take place at home which you can complete by yourself.



Your Careers Leader can provide you with a copy of these activities which can be downloaded [HERE](#).

CAREERS RELATED ACTIVITY LINKED TO STEM



Download activities

There are many different pathways available to students for them to enter the world of work.

Whether you know exactly what job you want to do and how to get there, or whether you aren't sure just yet, the activities contained within this document will help you to expand your understanding of different job roles and industry sectors.

Work your way through the various Careers related activities contained within this document. At the start of EACH section you will be required to watch a short video or follow a web link to support your activity. Click on the links to the video / website next to each activity section. You should be able to watch the short video on your computer or mobile phone.

The focus of these careers activities is STEM and the potential careers related to this industry sector.

ACTIVITY PART 1 IGNITE YOUR FUTURE

WHAT IS STEM?

- In your own words can you explain what STEM stands for?
- Having watched the video can you list as many of the INDUSTRY SECTORS as you can which were highlighted in the video?
- Can you list at least 10 job roles which you think could link to these industry sectors?

ACTIVITY PART 2 JOB ROLES FOCUSING ON SCIENCE AND LINKING TO LABOUR MARKET INFORMATION

In this section you will learn a little more about just a few of the job roles which link to the Science subjects you may study at school. You will also begin to understand how using Labour Market Information can help plan your career pathway.

Using the link above can you research the following job roles:

- 1) Adult Nurse
- 2) Vet
- 3) Research Scientist
- 4) Chemical Engineer

By using the link above, can you research each of the job roles and then write down in the sections below the following information:

- 1) Can you list at least 3 x qualifications you would need to hold for this role?
- 2) What would the average starting salary be for this role?
- 3) Can you list at least 5 key skills this job would require?
- 4) Can you list at least 2 x employers in Worcestershire who may offer this job role?

ADULT NURSE

1.

2.

3.

4.

 Download activities

VET

1.
2.
3.
4.

CHEMICAL ENGINEER

1.
2.
3.
4.

RESEARCH SCIENTIST

2.
3.
4.

ACTIVITY PART 3

JOB ROLES FOCUSING ON TECHNOLOGY AND LINKING TO LABOUR MARKET INFORMATION

In this section you will learn a little more about just a few of the job roles which link to the Technology. You will also begin to understand how using Labour Market Information can help plan your career pathway.

Using the link above can you research the following job roles:

- 1) Forensic Scientist
- 2) Web Developer
- 3) Cyber Security Analyst
- 4) Cad Technician

By using the link above, can you research each of the job roles and then write down in the sections below the following information:

- 1) Can you list at least 3 x qualifications you would need to hold for this role?
- 2) What would the average starting salary be for this role?
- 3) Can you list at least 5 key skills this job would require?
- 4) Can you list at least 2 x employers in Worcestershire who may offer this job role?

FORENSIC SCIENTIST

1.
2.
3.
4.



Download activities

WEB DEVELOPER

1.
2.
3.
4.

CYBER SECURITY ANALYST

1.
2.
3.
4.

CAD TECHNICIAN

1.
2.
3.
4.

MANUFACTURING ENGINEER

1.
2.
3.
4.

ACTIVITY PART 4**JOB ROLES FOCUSING ON ENGINEERING AND LINKING TO LABOUR MARKET INFORMATION**

In this section you will learn a little more about just a few of the job roles which link to the Engineering. You will also begin to understand how using Labour Market Information can help plan your career pathway.

Using the link above can you research the following job roles:

- 1) Manufacturing Engineer
- 2) Architect
- 3) Civil Engineer
- 4) Design Engineer

By using the link above, can you research each of the job roles and then write down in the sections below the following information:

- 1) Can you list at least 3 x qualifications you would need to hold for this role?
- 2) What would the average starting salary be for this role?
- 3) Can you list at least 5 key skills this job would require?
- 4) Can you list at least 2 x employers in Worcestershire who may offer this job role?

ARCHITECT

1.
2.
3.
4.

CIVIL ENGINEER

1.
2.
3.
4.

DESIGN ENGINEER

1.
2.
3.
4.



THANK YOU
FOR READING
CHOICES

CHOICES

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