

Exploring Careers Through **Technical** Routes

Environmental Conservation



The Industry

Environmental conservation encompasses the landscape, habitat, trees, ponds and wildlife areas.

Protecting the natural environment involves talking to and educating those interested in wildlife who want information and advice on how to behave in and protect conservation areas. You may work with landowners or businesses to gain support for conservation activities or with others as part of community conservation projects. Much conservation work is funded by government agencies or charitable organisations and therefore full and accurate records of spending and benefits gained are important.

Flexible working hours involves evening and weekend work and longer hours when visitors are expected. You will work both inside (management and recording keeping) and outside (on conservation related projects) irrespective of the weather.

RSPB www.rspb.org.uk

The Wildlife Trusts www.wildlifetrusts.org

Discover Conservation www.discoverconservation.org

The Conservation Volunteers www.tcv.org.uk/jobs

Naturenet (listing of organisations involved in conservation) www.naturenet.net/orgs/

Skills and Requirements

Conservation is a wide field that requires skills in many areas. You will need to:

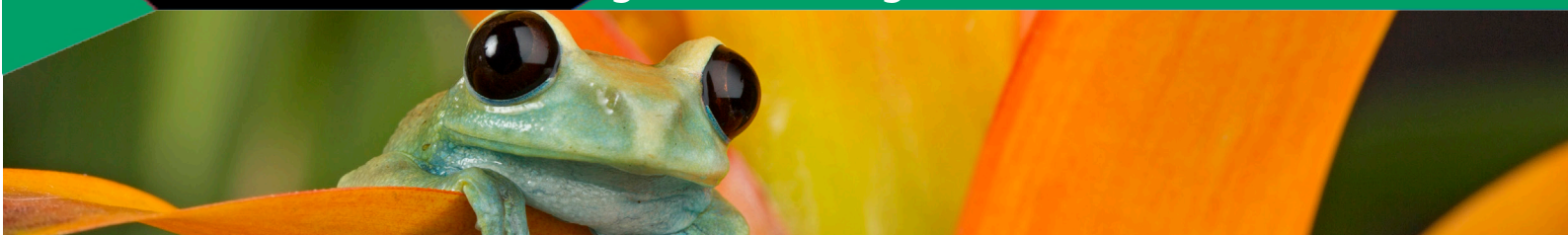
- Be a clear communicator as you will often be talking to others and sometimes giving instructions
- Show keen interest in your surroundings and nature
- Manage tasks effectively with good time management
- Be persistent and diligent to complete tasks accurately
- Learn about animal and plant life to improve your understanding of environmental issues
- Be reliable, adaptable and flexible
- Demonstrate knowledge and understanding of relevant policies and procedures on health & safety
- Deliver effective customer service to both visitors and stakeholders
- Work independently or co-operate as part of a team
- Use IT and social media
- Use statistics and handle large sets of data
- Love the outdoors, nature and protecting the environment

There are 3,000+ environmental conservation organisations in the UK and approximately 200,000 volunteers. 90% of the workforce is qualified at or above, Level 2, with more than 75% qualified to degree level.

Source: Lantra

Exploring Careers Through **Technical** Routes

Working and Learning in Environmental Conservation



Job Roles & Progression

Volunteering for organisations is one of the best ways to get experience. Join your conservation volunteer group and try for relevant and quality work experience.

Study Programme

Level 2 Environmental Conservation
Level 3 Countryside Management



Further Study

FdSc
Wildlife Conservation
Zoological Conservation

BSc (Hons) Conservation Biology,
Environmental Conservation,
Environmental Management and
Sustainability or with Business,
Ecology and Conservation



Apprenticeships

Intermediate and Advanced
Environmental Conservation



Career Roles

Nature Conservation Officer
Scientific study
Managerial roles within charitable
or government agencies
Specific roles e.g. in forestry or an
ornithologist

Calculation including problem solving

Tasks

1. Measure the height of trees in a specialist forestry area.
2. Order boundary fencing for an enclosure (boundary has been measured in yards, and fencing is sold in metric lengths).
3. Plot a graph of rainfall in a certain place over time to show visitors the importance of rain to a particular habitat or species.
4. Calculate populations of plants or species over a given area.
5. Work out the probability of a migratory species returning to a given area on an annual basis.

Links to GCSE Maths

1. **Geometry and measure** (trigonometry – angles of elevation and depression)
2. **Number** (whole numbers – multiplication, division)
Geometry and measure (units of measure – changing between units of measure)
3. **Algebra** (graphs - co-ordinates, drawing straight line graphs)
4. **Ratio** (ratio in context – simplifying ratios; percentages – calculating percentages of amounts)
5. **Probability** (finding probability - probability of events happening)

Communication, all forms

Tasks

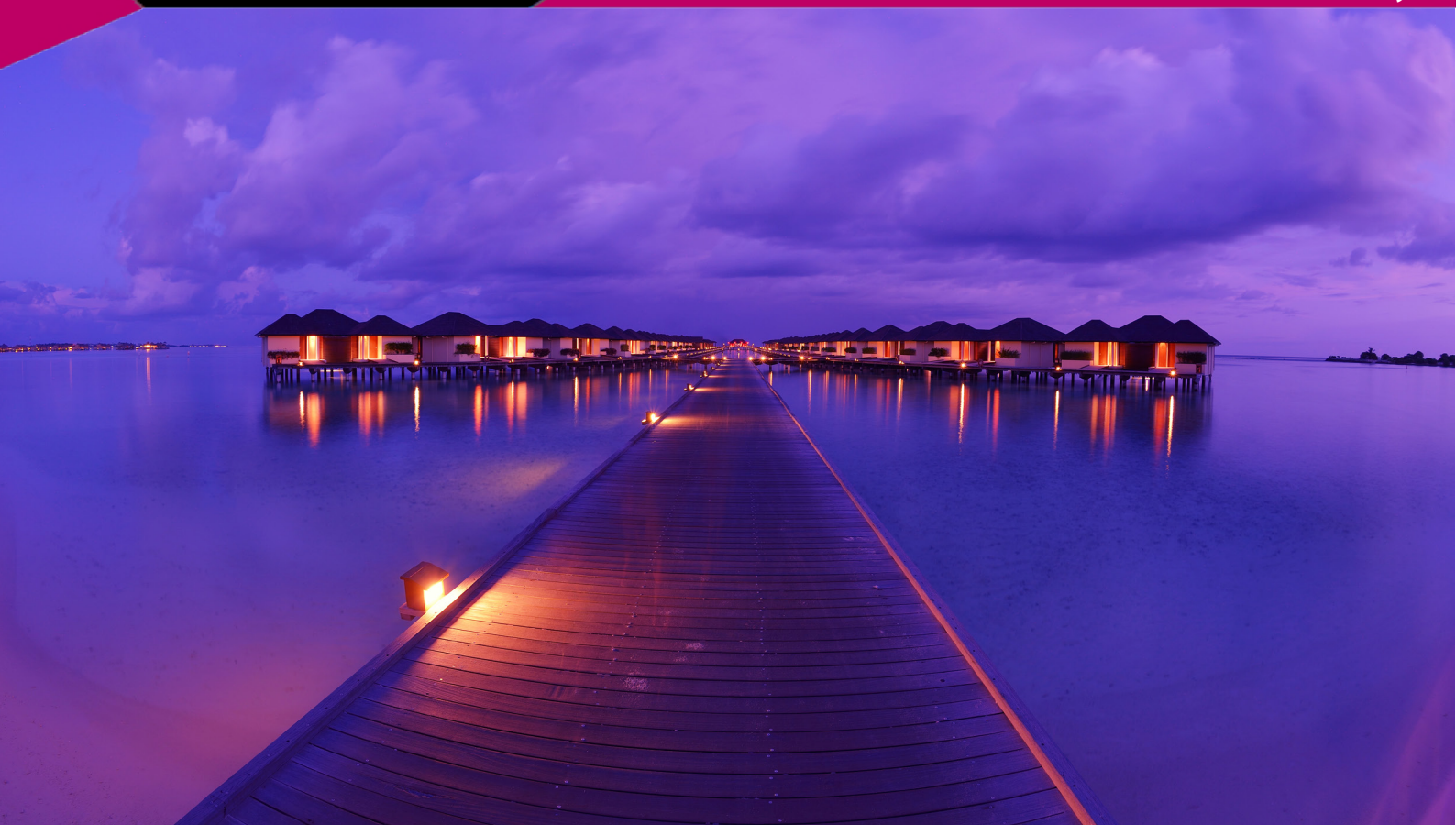
1. Provide information and advice to visitors and members of the public.
2. Write a report to satisfy funding bodies of the impact of the conservation work.
3. Listen to, understand and respond to health and safety requirements of operating a piece of machinery.
4. Deliver a presentation to an educational group on your work.
5. Keep up to date knowledge through social media of worldwide projects relating to your own work.

Links to GCSE English Language

1. **Spoken language** (speaking and listening – audience and purpose)
2. **Writing** (non-fiction – context, audience and purpose; organising information and ideas – paragraphs; literary techniques – informative language)
3. **Spoken language** (listening – to others)
4. **Spoken language** (speaking and listening – audience and purpose, individual presentation)
5. **Analysing non-fiction** (non-fiction types - information documents)

Exploring Careers Through **Technical** Routes

Travel Industry



The Industry

The travel industry is exciting! A travel agent helps customers plan and organise travel requirements to ensure they have the best trip, holiday or visit. They spend most of their time consulting customers, contacting airlines, making reservations at hotels and keeping updated with travel restrictions. They make bookings with travel suppliers including airlines, car hire companies, cruise lines, hotels, railways, travel insurance companies or package holiday operators.

When working in a high street travel agent shop, staff wear company uniforms to show the professionalism of their service. In a travel call centre dress is often more informal.

Travel agents can be offered discounts on travel. Some employers also allow staff to go on training educational visits so they can experience products firsthand to improve personal knowledge of the holidays they are organising and selling.

Association of British Travel Agents
www.abta.com
Thomson Retail

www.tuijobsuk.co.uk/work-at-tui-travel/thomson-retail/apprentices

Skills and Requirements

Travel agents spend a lot of time communicating with customers and suppliers and therefore need:

- Active listening skills, taking time to fully understand customer requirements or information that suppliers give them
- Excellent customer service skills with all types of individual customers and groups
- Strong verbal communication skills with a good telephone manner
- The ability to cope with pressure at busy times
- Commercial awareness with effective sales skills to persuade customers to make bookings
- Confident in the use of technology e.g. booking reservation systems, IT for producing itineraries
- Attention to detail e.g. when checking customer bookings for accuracy of flight times and hotel requirements etc
- Good time management

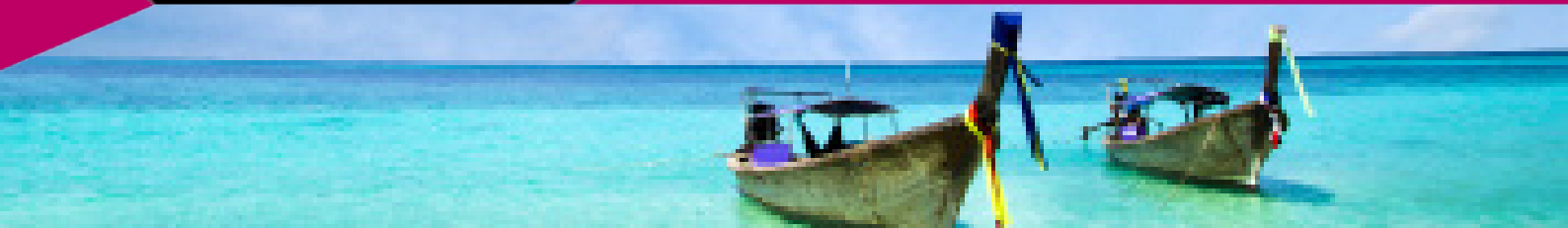
Travel knowledge is an important aspect of the job so it helps if you have a good knowledge of where places are in the world and/or have personal travel experience.

Travel and tourism is one of the UK economy's most vibrant, diverse and valuable industries, contributing a staggering £127 billion to GDP annually and sustaining over 3 million UK jobs.

Source: Association of British Travel Agents

Exploring Careers Through Technical Routes

Working and Learning in Travel



Job Roles & Progression

Travel Clerk in Travel Agency
Call handler in a call centre

Study Programme

Levels 2 and 3
Travel & Tourism



Further study

BA (Hons)
Tourism Management
Travel & Tourism
Tourism with Business
FdA Tourism Management
HND Travel & Tourism



Apprenticeships

Intermediate and Advanced
Travel Services
Retail (Travel shops)



Career roles

Travel Agency Manager
Area manager for a holiday company
Diversify to another sub sector e.g.
Tour Manager or Cruise Director

Calculation including problem solving

Tasks

1. Use a travel guide to estimate and calculate the elapsed flying time of a long haul flight.
2. Calculate the speed an aircraft will need to travel at to ensure landing on time.
3. Calculate detailed costings for a customer's holiday using at least 2 different travel brochures.
4. Exchange currency for a customer from British Pounds to Euros.
5. Plot temperatures on a graph promoting Greece as a popular destination to show a customer the best month to travel.

Links to GCSE Maths

1. **Number** (whole numbers – addition, subtraction; approximation - estimating calculations)
2. **Geometry and measure** (units of measure – speed)
3. **Number** (whole numbers – addition, subtraction)
Geometry and measure (units of measure - unit pricing)
4. **Number** (whole numbers – multiplication; decimals- converting between decimals)
5. **Algebra** (graphs)
Statistics (collecting data - types of data)

Communication, all forms

Tasks

1. Give well informed and appropriate travel advice to a range of different customers.
2. Find out the relevant documents required for a customer's trip e.g. passports and visas.
3. Call a hotel to discuss a customer's booking.
4. Read a travel book on a tourist region to give more detailed and accurate advice to customers
5. Read holiday review sites to see customer feedback and update your knowledge.

Links to GCSE English Language

1. **Spoken language** (speaking and listening - audience, context, discussion skills; personal presence - body language; voice)
2. **Analysing non-fiction** (responding to a non-fiction text - understand the questions)
3. **Spoken language** (speaking and listening - discussion skills; voice - pitch and volume, enunciation)
4. **Analysing non-fiction** (non-fiction text type - travel writing; context, - where, when, time; purpose and audience - purpose)
5. **Analysing non-fiction** (non-fiction text type - information)
Comparing texts (comparing by purpose)

Exploring Careers Through Technical Routes

Hospitality



The Industry

The hospitality industry covers accommodation, food services, health and fitness, entertainment, bars, clubs and pubs. There are opportunities across the UK and worldwide.

Its workforce is diverse with a range of careers and jobs available. This includes chefs, croupiers, housekeepers, office administrators, waiters, banqueting staff, front of house (reservations, receptionists, concierge), housekeeping and running of the day to day operations.

Hospitality is a people-orientated industry where no two days are the same; not only in terms of the hours you work, but also the work you do during those hours. Hospitality employers hire people who have great energy for work and a passion to ensure they make customers happy. They want staff who are friendly to customers and a people person with excellent customer service skills. You have to like people to work in this industry!

Springboard
www.careerscope.uk.net/industry
People 1st
www.people1st.co.uk

Skills and Requirements

Effective customer handling skills are a key requirement as high levels of customer satisfaction are essential for reputation and repeat business yet these are the most lacking in the sector according to employers. Other essential skills required include:

- Planning and organisation skills
- Being a team player who is reliable and turns up on time
- A friendly but professional work ethic
- Technical or practical skills to carry out required tasks
- Oral communication skills for speaking to and understanding customer needs and requirements
- Problem solving skills to keep the customer happy
- Flexibility to complete the tasks required in your role
- Commercial awareness to ensure the profitability of the business
- Enthusiasm and calm under pressure
- IT literate with experience of e.g. Excel, Fidelio, Word
- Impressive time management and organisational skills
- Superb telephone skills
- Awareness of data protection, equality & diversity and honesty

The hospitality and tourism sector continues to be a large employer that is experiencing significant growth – currently the 4th largest industry.

In 2015 it employed a workforce of 2.5m, a rise of 251,878 since 2009.

Source: www.people1st.co.uk

Exploring Careers Through Technical Routes

Working and Learning in Hospitality



Job Roles & Progression

Work experience is vital so any customer service experience will count as a first step into the industry.

Study Programme

Professional Cookery
Food and Beverage Service
Supervision



Further study

BA (Hons) or BSc (Hons)
Hospitality Management

FdA Hospitality Management



Apprenticeships

Intermediate
Food and Beverage Service
Hospitality Team Member
Commis Chef

Advanced
Catering and Professional Chefs
Hospitality Supervisor

Level 4 Hospitality Manager



Career Roles

Supervise and assist teams of assistants
Head housekeeper
Manage a bar or hotel
Hospitality manager in a venue
Specialise as e.g. a sommelier or a first class passenger host
Become self employed and work ad hoc at major events

Calculation including problem solving

Tasks

1. Calculate the VAT a customer will pay for their meal.
2. Collect data on customer complaints and produce a quarterly report for the kitchen manager.
3. Count and record stock in and out of the larder on a monthly basis to estimate costs for the next 12 months.
4. Conduct an annual staff survey for employee satisfaction and feed findings back to the management team.
5. Mix guests a selection of cocktails for a 21st birthday party.

Links to GCSE Maths

1. **Financial mathematics** (VAT)
Ratio, proportion and rates of change (percentages – calculating percentages of amounts)
2. **Statistics** (collecting data - data collection sheets; representing data - bar charts; **Algebra** (graphs - straight line graphs)
3. **Number** (whole numbers – addition, subtraction; approximation – estimating calculations, rounding numbers)
4. **Statistics** (collecting data - questionnaires, representing data - pie charts, analysing data - averages from tables)
5. **Number** (fractions - fractions of amounts)
Ratio, proportion and rates of change (direct and inverse proportion - calculating amounts using

Communication, all forms

Tasks

1. Handle a face to face customer complaint and turn it into a good experience for the customer.
2. Email all staff in your hotel briefing them of the impending arrival of a celebrity and the implications for the business.
3. Attend a meeting to discuss guests arriving over the weekend to ensure they all have the best customer experience.
4. Read your restaurant's reviews from different sources and summarise for the customer services manager.
5. Write a press release on your new menu for the local paper.

Links to GCSE English

1. **Spoken language** (speaking and listening; personal presence - body language, eye contact, posture, gestures)
2. **Writing** (non fiction – context - what, when, where, who, time; audience and purpose)
3. **Spoken language** (speaking and listening - audience, purpose, discussion skills)
4. **Analysing non-fiction** (non-fiction text types - articles, reviews; context - time, setting, publication; purpose - audience)
Comparing texts (compare by context)
5. **Writing** (writing non-fiction- press release; literary techniques – informative language, persuasive devices)

Exploring Careers Through **Technical** Routes

Teaching Assistant



The Industry

Teaching Assistants (TAs) work in nurseries and schools supporting children with educational and social development issues across a range of abilities. Many schools employ TAs with specialisms, e.g. literacy, numeracy or Special Educational Needs. Dress code is usually smart depending on school policy, and the types of activities you undertake each day.

Most work is in the classroom but also could include lunchtime supervision, outdoor activities or school trips. Day-to-day duties vary and can include supporting children in class with learning difficulties or disabilities, classroom activities e.g. setting up equipment, tidying up classrooms, creating displays of pupils' work or helping on school outings or at school events.

You will also find yourself working with classroom teachers and professionals to ensure the best support for children e.g. educational psychologists, speech and language therapists, social workers, parents and carers.

www.gov.uk/disclosure-barring-service-check/overview
The National Association of Teaching Assistants www.napta.org.uk

Skills and Requirements

Being a TA can be an enjoyable job if you enjoy working with children as it is so varied in its requirements. To be successful you will need to be calm and patient as well as having:

- A non-judgemental attitude and respect for diversity
- An ability to motivate and inspire children with a passion to see them succeed
- Ability to build good working relationships with both pupils and adults including parents, carers or others
- Ability to manage groups of pupils and deal effectively with challenging behaviour so other children are not disrupted from their learning
- Good organisational skills and keeping to deadlines
- Flexibility, adaptability and creativity to engage
- Good literacy and numeracy skills
- Excellent teamwork to support the teacher deliver effective teaching and learning
- A good sense of humour as children can be very funny

Because you will be working with children you must have a Disclosure and Barring Service (DBS) check which your employer will do on your behalf.

In 2015 there were 255,000 full time equivalent (FTE) teaching assistants and 232,000 FTE support.

www.gov.uk/government/statistics/school-workforce-in-england-november-2015

Exploring Careers Through Technical Routes

Working and Learning in Teaching as a TA



Job Roles & Progression

Many schools and nurseries employ trained TAs.

These jobs are highly competitive so gaining experience of working with children first is an advantage.

Study Programme

Level 2 Supporting Work in Schools
Level 3 Supporting Teaching and Learning in Schools



Further Study

FdA

Teaching Assistants (Primary)
Supporting Teaching & Learning
Learning Assistants in Secondary
Schools (English and /or Maths with
Education)



Apprenticeships

Intermediate and Advanced
Supporting Teaching and Learning
in Schools



Career Roles

Higher Level Teaching Assistant
who will help plan lessons and
supervise other support staff
Specialise e.g. Diploma in Specialist
Support for Teaching and Learning
in Schools (SEN)
Many TAs train to become a teacher

Calculation including problem solving

Tasks

1. Assist children studying Egypt to make accurate models of famous Egyptian landmarks.
2. Work out costs and timings of a proposed school trip to a local museum.
3. Get resources ready for a lesson e.g. photocopying or measuring out ingredients.
4. Help create displays of childrens' work using the size of wall and the number of displays that will fit.
5. Work out the costs of resources for each child to make their own pizza in a cookery lesson.

Links to GCSE Maths

1. **Units of measure** (using standard units – units of length)
Geometry and measure (3-dimensional shapes – pyramids; 2-dimensional shapes – areas, triangles)
2. **Number** (whole numbers – addition, subtraction, multiplication, division)
Units of measure (using standard units – units of length, time, pricing)
3. **Number** (whole numbers – addition, subtraction, multiplication, division; fractions - fraction arithmetic)
4. **Ratio, proportion and rates of change** (ratio in context – scale factors)
5. **Number** (whole numbers – addition, subtraction)
Units of measure (using standard units)

Communication, all forms

Tasks

1. Read a story and help children to understand the viewpoints from two characters' perspectives.
2. Plan a lesson on a sports topic using texts from 3 different types of media e.g. girls in rugby.
3. Meet with parents and a support worker to ensure a child with special needs gets the most appropriate levels of support.
4. Help children to plan a script for making a video to promote their course to prospective pupils.
5. Review a story as to suitability for the class by age and gender.

Links to GCSE English Language

1. **Analysing fiction** (language and structure – structural devices)
Spoken language (audience, purpose – listening to others, discussion skills)
2. **Analysing non-fiction** (non-fiction types - information documents; responding to a non-fiction text – analysing an extract)
Comparing texts (how to compare texts - context)
3. **Spoken Language** (speaking and listening – audience, purpose; personal presence – body language, eye contact)
4. **Writing** (writing non-fiction - context, audience, purpose; organising information and ideas – paragraphs; literary techniques – descriptive language, persuasive devices)
5. **Analysing fiction** (responding to a fiction text – analysing text)

Exploring Careers Through **Technical** Routes

Construction



The Industry

The UK construction industry includes a diverse range of projects from simple home repairs e.g. fixing a leak or building an extension to national projects e.g. building a sports stadium such as Wembley, a new hospital or a new underground railway tunnel.

The variety of jobs range from construction project management to craft-based roles. Some examples include: crane or machinery operators; service installers; plumbers; electricians; heating & ventilation engineers; building technicians; CAD operators to produce drawings; building control surveyors; highways maintenance; steeple jacks; tunnel operatives; site inspectors; field technicians; project managers.

You could be based in an office, on site or in a workshop in the UK. Alternatively there are many construction jobs abroad.

Agency Central
www.agencycentral.co.uk
CITB www.citb.co.uk/careers-in-construction

Skills and Requirements

Essentially you will need the ability to get on well with people, enjoy being part of a team and like working outdoors for some of the time.

Additional skills and behaviours required include:

- Being enthusiastic and committed to your work
- Having digital technology knowledge for using computer applications or technical tools
- The ability to read and interpret relevant documents
- Liking building, designing and/or making things
- Working independently to plan, organise and complete daily tasks
- Working with numbers to perform calculations
- Conveying or exchanging information verbally
- An ability to problem solve
- Evaluating information accurately to make decisions
- Working in multi disciplinary teams to ensure tasks are completed in the agreed timeframe
- A thorough knowledge of regulatory requirements
- Commercial awareness to support the business

Many trades require a CSCS card e.g. to get a labourer's card you need to have passed a course in Health & Safety in a Construction Environment.

Construction employs around 2.5 million people in the UK - that means that one in every ten jobs is in construction. They need over 16,000 more people to work in the sector between 2017 and 2021.

Source: CITB

Exploring Careers Through Technical Routes

Working and Learning in Construction



Job Roles & Progression

Employers offer work experience that give opportunities to build skills while studying to help you start out in your career e.g. as a construction trainee, a bricklayer or general labourer.

Study Programme

Levels 2 and 3
Construction, Multi Trades,
Bricklaying etc.



Further study

BSc (Hons)
Construction Management
(or with Environment, Engineering
or Project Management)
Quantity Surveying
Commercial Management



FdSc
Building Technology
Construction
Architectural Technology



Apprenticeships

Intermediate and Advanced
Construction Industries
(depending on your specialism)

Higher
Sustainable Built Environment



Career roles

Technical and managerial roles e.g.
Quantity Surveyors, Site Managers,
Technical Engineers and Architects
Many people become
self-employed or run their own
business.

Calculation including problem solving

Tasks

1. Mix materials in the correct proportions for building a wall according to the customer's requirements.
2. Calculate the costs of labour, materials and VAT to produce a customer quotation.
3. Accurately calculate materials required for hard landscaping a garden from a scaled drawing.
4. Plan and cost out a building project taking into account profit & loss and overheads.
5. Carry out a risk assessment for taking down a disused building.

Links to GCSE Maths

1. **Number** (whole numbers – addition, multiplication)
Ratio, proportion and rates of change (calculating amounts using proportions, direct and inverse proportion)
Geometry and measure (units of measure)
2. **Ratio, proportion and rates of change** (percentages)
Number (financial maths - VAT)
3. **Geometry and measure** (2-dimensional shapes)
Number (whole numbers - addition, subtraction, multiplication; decimals - multiplying and dividing decimals)
4. **Number** (financial mathematics - profit and loss)
5. **Probability** (finding probability, relative frequency)

Communication, all forms

Tasks

1. Listen to instructions from a site manager, respond correctly to any questions and carry out instructions accurately.
2. Plan a total house renovation project determining which trade will do what, when and in which order.
3. Read and respond to a complaint from a hotel where a newly laid floor is breaking up.
4. Prepare a client quotation for the installation of a new kitchen.
5. Read reports from a variety of sources about accidents at work to develop your own staff guidance booklet.

Links to GCSE English Language

1. **Spoken language** (speaking and listening – audience, purpose, discussion skills)
2. **Writing** (planning – mind map, table)
3. **Writing** (writing non-fiction – text)
Spelling, punctuation and grammar (common spelling errors)
4. **Writing** (writing non-fiction – quotation; organising information and ideas)
5. **Analysing non-fiction** (information)
Comparing texts (comparing by purpose, structure a comparison response)

Exploring Careers Through **Technical** Routes

Journalism



The Industry

There are a variety of roles in journalism including news correspondents, reporters, sub-editors, photo journalists, football reporters, music or food critics or property specialists. Traditionally journalists have been employed by local, regional, and national newspapers, radio or television. Now with increasing use of technology journalists can also work for online media companies.

The role of a journalist is diverse and can include interviewing people, producing articles for a newspaper, researching and reporting on fraud in local government or recounting events such as at a village summer fair.

Many journalists specialise with their reporting. This can include working in war zones, politics, sports or finance and some journalists work under cover to expose the truth about a product or service. Today people need and want information about everything and journalists are employed to deliver this.

How to be a Journalist 2016/17 (National Council for the Training of Journalists)
Broadcasting Journalism Training Council <http://www.bjtc.org.uk>
National Council for the Training of Journalists
<http://www.nctj.com/want-to-be-a-journalist>

Skills and Requirements

Important skills are '*excellent plain English writing, accurate note taking, proofreading skills and verbal communication skills*'

Other skills required are:

- Research and analysis with the ability to analyse and translate complex information and ideas
- Problem solving, data analysis, critical thinking
- Work task prioritisation, time management and an ability to withstand pressure
- High levels of emotional intelligence when seeking to extract information from reluctant subjects
- Resourcefulness and tenacity, and being able to overcome criticism
- Self motivation and management
- Attention to detail
- The ability to listen and to work productively in a team
- The right attitude

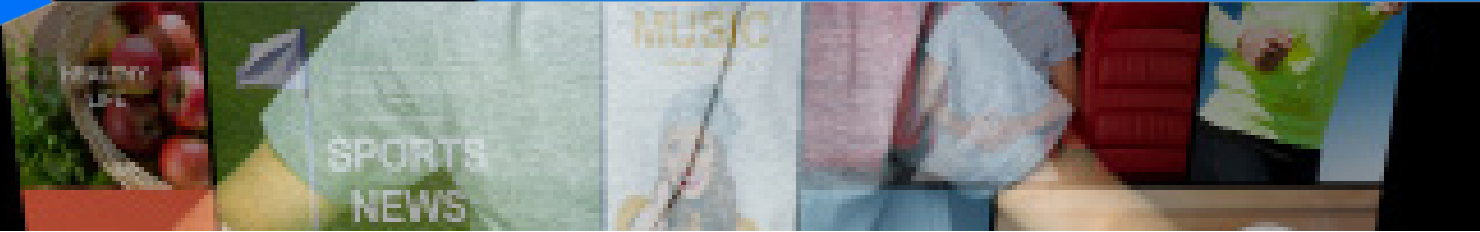
Journalists also need proficient IT and multimedia skills such as film-making and editing.

Journalism is a buoyant sector. There are approximately 64,000 people working in journalism in the UK.

Source: <http://www.pressgazette.co.uk>

Exploring Careers Through Technical Routes

Working and Learning in Journalism



Job Roles & Progression

To enter the industry you will need to build a portfolio of work so volunteer or complete relevant work experience.

You can also develop your own online presence through LinkedIn, Twitter or set up your own blog.

Study Programme

Levels 2 and 3
Business Studies



Further study

BA (Hons)
Journalism
Music Journalism
Broadcast Journalism
Multi Media Sports Journalism
English and Journalism
Fashion Journalism

FdA
Journalism
Journalism and Practical Media



Apprenticeships

Advanced Junior Journalist



Career roles

Many journalists specialise in subjects such as Education, Science, Social Media, Sport, Business, Politics, Defence or in a country e.g as an American correspondent

People working in the industry can be full time, part-time or self-employed freelancers

Calculation including problem solving

Tasks

1. Present a news magazine show reviewing a variety of sports cars to compare speeds, pros and cons of each car.
2. Monitor word count of a number of articles for a daily newspaper to ensure they fit into the allocated space.
3. Analyse third party data sets to determine their accuracy and validity for a TV show.
4. Work out the percentage change when reporting on retail sales over a month.
5. Estimate the number of people marching to Downing Street at a demonstration.

Links to GCSE Maths

1. **Geometry and measure** (units of measure - speed)
Ratio, proportion and rates of change (expressing one number as a percentage of another)
2. **Number** (whole numbers - addition, subtraction; fractions, decimals)
3. **Statistics** (collecting data - sorting data)
Solving problems (solving statistical problems)
4. **Ratio** (percentages – percentage change)
5. **Number** (approximation – estimating calculations, rounding numbers and to decimal places)

Communication, all forms

Tasks

1. Speak with a number of people about a match they have attended to give audiences a real feel for the tension and mood.
2. Produce a catchy headline that synthesises the content of an article.
3. Produce an erudite article that casts new light or insight on an idea or topic.
4. Produce a factual account of a local incident that helps readers understand the scope and scale of the event.
5. Research to analyse company or government enquiry reports to identify key information.

Links to GCSE English Language

1. **Spoken language** (speaking and listening; personal presence - eye contact, voice - pitch and volume)
2. **Writing** (writing non-fiction – organising information and ideas; literary techniques)
3. **Writing** (context, audience and purpose; writing non-fiction – an article)
Spelling, punctuation and grammar
4. **Writing** (writing non-fiction – audience and purpose; planning - a structure; organising information - paragraphs, building sentences; literary techniques - informative language)
5. **Analysing non-fiction** (context; text types - review)

Exploring Careers Through **Technical** Routes

Sport



The Industry

Sport encompasses all forms of physical activity that improves physical fitness and mental wellbeing. It covers sport and recreation from professional sport to exercise instruction. This includes leisure centres, gyms, swimming pools, stadiums, private sports clubs and a range of outdoor activities. You could participate by being a personal trainer, coach, an instructor, a referee or play sport professionally e.g. football, rugby, swimming or basketball. On the science side of sport is physiotherapy or sports science. An alternative could be to specialise in an area such as outdoor activity or running kids sports clubs in the UK or overseas.

Following the success of the London 2012 Olympic Games there continues to be an increasing demand for sport activities and more opportunities for coaches and sports development officers. Sport England says that 15.8 million adults now play sport once a week, 1.75 million more than a decade ago.

Careers in Sport <http://www.careers-in-sport.co.uk>
Sport England <https://www.sportengland.org>
SkillsActive, Sector Skills Council for active leisure, learning and well-being
www.skillsactive.com

Skills and Requirements

To work in most areas of sport you will need the following generic skills:

- Excellent communication and listening skills
- The ability to motivate others and inspire trust
- The ability to form good working relationships
- Good organisational and planning skills
- Work as a team

Additional skills are required as follows:

A **referee** needs analytical ability for giving useful feedback and flexibility to adapt teaching methods for different ages & abilities.

A **commentator** needs a clear voice and good pronunciation, confident when talking, good research skills and the ability to react quickly to unexpected situations.

Teacher/personal trainer/coach need to assess and solve problems, perseverance, determination & patience, practical skills, physical stamina, administration skills, number and leadership skills.

A **player** must train hard to improve skills & fitness, discuss tactics & mental attitudes, analyse strengths & weaknesses, get fitness advice and take advice from nutritionists about diet.

Supporting over 450,000 jobs in the UK, sport has become a £20bn industry. World class events such as the Rugby World Cup and the growth of football have made the business of sport one of the fastest growing sectors in the UK.

Source: <http://www.telegraph.co.uk/finance/11580773/Britains-sport-industry-hitting-top-form.html>

Exploring Careers Through Technical Routes

Working and Learning in Sport



Job Roles & Progression

Study Programme
Sport Levels 1, 2, 3



Further study

BSc (Hons)
Sport and Exercise
Sport, Physical Education & Development
Sport Psychology
Sport & Exercise Sciences
BA (Hons)
Sport & Fitness
Sports Business & Coaching
Sports Studies
FdSc
Sport & Exercise Science
Applied Sports Performance



Apprenticeships

Intermediate
Exercise & Fitness
Coaching (swimming and tennis)
Activity Leadership

Intermediate and Advanced
Leisure Operations & Management

Advanced
Supporting teaching and learning in P.E. School Sport
Sports Development
Exercise & Fitness-Personal Training
Outdoor Programmes
Activity Leadership
Leisure Operations
Fitness Instructing
RLSS National Pool Lifeguard



Career Roles

Manager of operations or security
Become self employed as a personal trainer.

Calculation including problem solving

Tasks

1. In a triathlon estimate the number of calories that will be burned at each stage to ensure you have sufficient food to complete the event.
2. Plan potential opportunities for goal shooting in football or passing to a team mate in rugby.
3. Analyse a tennis match performance by looking at your 1st serve positions on the court to inform future training sessions.
4. In boxing calculate the angles you need to use for effectively hitting an opponent.
5. In a dressage event ride your horse in the correct position – ankle, foot, knee, hip, elbow.

Links to GCSE Maths

1. **Number** (whole numbers - addition, multiplication; approximation - estimating calculations, rounding numbers)
Geometry and measure (units of measure - using standard units)
2. **Ratio, proportion and rates of change** (direct and inverse proportion - rates of change)
Geometry and measure (angles - types of angles)
3. **Algebra** (graphs – co-ordinates, scatter diagram)
4. **Geometry** (angles)
5. **Geometry** (angles)

Communication, all forms

Tasks

1. In badminton or squash work together with your partner to try to win a match.
2. At a village gymkhana deliver the commentary on events over the loudspeaker.
3. Write an article for a newspaper reporting on a boxing match or a horse race.
4. As the head coach brief substitute football players before sending them on to play in a match.
5. Read articles and reviews of the Grand National winning jockey and make a timeline of their career for your local college.

Links to GCSE English Language

1. **Spoken language** (speaking and listening - discussion skills)
2. **Spoken language** (speaking - audience and purpose, standard English; voice - controlling your voice, pitch and volume, enunciation)
3. **Writing** (context, audience and purpose; writing non-fiction – text; literary techniques)
4. **Spoken language** (speaking; audience, purpose; personal presence; voice)
5. **Analysing non-fiction** (text type - biography, review, newspaper articles)
Writing (organising information, signposting and linking ideas)

Exploring Careers Through **Technical** Routes

Web Development



The Industry

Web developers design, build and maintain websites and website applications. Projects are diverse and could include creating apps for smart phones, producing e-learning materials, developing a business internal website (intranet) for in-house communications, developing an on-line business tool, helping a local charity establish a website or designing web pages to support a major advertising or PR (public relations) campaign.

Developers may test sites and applications in different browsers, fix bugs in existing projects, meet with a project team (designers, developers and staff) for updates, learn about and test new technologies or build and maintain company databases.

Web developers are required in organisations such as advertising agencies, digital/social media marketing companies, website development & design agencies and sales, marketing & public relations companies.

The Tech Partnership
www.thetechpartnership.com

Skills and Requirements

To become a web developer you will need excellent technical skills and a strong attention to detail. Other key skills, knowledge and attributes include:

- Advanced skills in software programming and graphics
- Good coding skills and knowledge of computer programming languages e.g. HTML
- An ability to work well under pressure always striving to meet the objectives of the client
- Creative thinking ability
- Listening skills to understand your client's needs and solve their problems
- Effective working individually, in mixed teams, with other developers, designers and/or account managers and clients
- Clear and concise communication to understand and translate client ideas or explain technical issues to a non-technical audience
- An ability to manage complex tasks within set timeframes
- A love of and willingness to keep up to date with technology

There are in excess of 90,000 web development businesses in the UK.

Source: www.freeindex.co.uk

Exploring Careers Through Technical Routes

Working and Learning in Web Development

Job Roles & Progression

Study Programme

Computing
Graphic Design
Business Studies



Further study

BA (Hons)
Internet Design
Web Design
BSc (Hons)

Web Development/with Computing
Web Production
FdSc

Web Design and Development
FdA
Web Design

Formal professional qualifications
from Chartered Institute for IT



Apprenticeships

Advanced
Web Developer

Advanced and Higher
Software and Web Development



Career roles

Lead programmer
Project leader

A senior developer can work for an agency or become self employed

Some developers diversify into roles becoming a business analyst or a technology consultant

Calculation including problem solving

Tasks

1. Create a plan for developing a new app and calculate the cost for each element of the work.
2. Complete word count for different components of a web page to ensure all text is visible on the completed page.
3. Create coding variables which have time and or rate change components.
4. Measure the speed of website functions for a client whose system is not fully performing.
5. Determine the size of on screen objects by calculating the overall space available.

Links to GCSE Maths

1. **Number** (whole numbers - addition, subtraction, multiplication; decimals - addition and subtraction of decimals)
2. **Number** (whole numbers - addition; fractions - of amounts; decimals - multiplying)
3. **Ratio, proportion and rates of change** (time, speed)
4. **Algebra** (algebraic formulae – rearranging formulae)
5. **Geometry and measure** (2-dimensional shapes - perimeter and area shapes)

Communication, all forms

Tasks

1. Speak with a client to identify the requirements for creating their new website.
2. Collect verbal feedback from clients to gauge their satisfaction at each stage of the project plan.
3. Produce a website specification brief to clarify the client's requirements and to guide the development of the detailed project plan.
4. Communicate with potential users to test usability and perceptions.
5. Write a project brief for team members to ensure they know what is expected of them and by when.

Links to GCSE English Language

1. **Spoken language** (listening - audience, purpose, standard English)
2. **Spoken language** (speaking and listening - audience, purpose; voice)
3. **Writing** (audience; planning - a structure, mind maps, flow chart, table; organising information - building sentences; vocabulary - use precise verbs)
Spelling, punctuation and grammar (common spelling errors; punctuation)
4. **Spoken language** (speaking and listening - audience, purpose, discussion skills)
5. **Writing** (writing non fiction – a project plan; organising information; vocabulary - use precise verbs)

Exploring Careers Through Technical Routes

Motor Vehicle



The Industry

Motor vehicle is an exciting industry to work in if you love cars and are passionate about fixing things. It is continually changing with the focus on tackling emissions and improving air quality as well as the development of new technologies and ensuring that the vehicles on our roads are as safe as possible.

A vehicle mechanic works out what has gone wrong with a vehicle and then how to repair it. You could work for a garage, manufacturer's service centre, in freight or commercial transport, for a construction company, vehicle hire, breakdown organisation, fast-fit outlet or car dealership.

Daily tasks may include: cleaning vehicle and machine interiors, exteriors, engines, engine components; assessment and diagnosis of mechanical problems; using diagnostic testing; estimating how long it will take to carry out repairs.

Autocity, run by The Institute of the Motor Industry (IMI), has information about careers in the motor vehicle industry
<http://www.autocity.org.ukorg.uk>

Skills and Requirements

This is a practical hands-on job and one in which you will need to update your skills and knowledge regularly with the continual evolution of new technologies.

You will also need:

- Excellent friendly customer service skills to maintain or develop relations with customers
- The ability to carry out written and verbal instructions
- Strong practical skills and problem solving
- The ability to quickly grasp new vehicle technologies
- Physical fitness and able to work in confined spaces
- Good eyesight and to carry out colour identification of wires and paint etc.
- Ability to demonstrate knowledge and understanding of mechanical and/or electrical components
- To build good working relationships with the team
- A can do attitude to work with attention to detail
- Good timekeeping skills enabling efficient, economic and safe servicing/repair of customer vehicles
- Understanding the implications of data protection laws on sensitive customer information

The automotive industry is a vital part of the UK economy with British cars being among the world's best kept with £21.1 billion spent on service and repair every year and supporting more than 345,000 British jobs.

<https://www.smmf.co.uk/industry-topics/uk-automotive/>

Exploring Careers Through Technical Routes

Working and Learning in Motor Vehicle



Job Roles & Progression

Study Programme

Level 2

Motor Vehicle Engineering
Light Vehicle Maintenance & Repair Principles
Vehicle Technology

Level 3

Automotive Engineering
Light/Heavy Vehicle Maintenance & Repair Principles
Vehicle Technology



Further study

Level 4 Advanced Automotive Diagnostic Techniques
HNC Automotive Diagnostics & Management Principles
Level 4 Diploma Automotive Master Technicians
BSc (Hons) Automotive Engineering
BEng (Hons) Automotive Mechanical and Automotive Engineering
IMI Accreditation Automotive Technician Accreditation (ATA)



Apprenticeships

Advanced Light Vehicle Mechanic



Career roles

Senior technician, workshop supervisor, garage manager or breakdown engineer
Specialise e.g. motorsport engineering, electric and hybrid cars or tuning and modifying vehicles for higher performance
Join the armed forces
You could also set up your own business

Calculation including problem solving

Tasks

1. Prepare a customer repair quote that includes both the costs of parts and labour.
2. Maintain a daily spreadsheet of all tasks e.g. fast fit operations, diagnostics, valeting, and align to each cost centre of the business.
3. Estimate the amount of screen wash and water you will need to fill all the washers for cars being serviced in a day.
4. Find the best price for 24 new spark plugs to order from a range of suppliers.
5. Work out the payroll month by month for the staff.

Links to GCSE Maths

1. **Number** (whole numbers - addition, subtraction, multiplication, using a calculator)
Geometry and measure (units of measure - unit pricing)
2. **Number** (whole numbers - multiplication and division; decimals)
3. **Ratio** (ratio in context)
Number (approximation - estimating calculations)
4. **Number** (whole numbers - multiplication and division, using a calculator)
Ratio, proportion and rates of change (percentages)
5. **Number** (financial maths – wages and salaries)

Communication, all forms

Tasks

1. Work safely at all times in line with HSE requirements.
2. Refer a customer to the correct person if you need help with their enquiry or complaint.
3. Clarify customer and vehicle needs by referring to the vehicle data and operating procedures.
4. Use your company's recording system accurately and report on work carried out weekly.
5. Draft an email to customers on your database about a special offer on tyres.

Links to GCSE English Language

1. **Analysing non-fiction** (non-fiction text types - instruction manual)
2. **Spoken Language** (speaking and listening; personal presence - body language, eye contact; voice)
3. **Analysing non-fiction** (non-fiction text types - manual; context - publication; purpose and audience)
4. **Writing** (writing non-fiction – writing a report; organising information and ideas - paragraphs, building sentences; literary techniques - informative language; vocabulary - use precise verbs)
5. **Writing** (writing non-fiction - email; literary techniques – persuasive devices)
Spelling, punctuation and grammar

Exploring Careers Through **Technical** Routes

Hairdressing



The Industry

The hair industry is dynamic, creative, glamorous and fast paced with many exciting opportunities. Hairdressers use a range of cutting and styling methods to enhance the image, appearance and confidence of their clients.

A hairdresser may work in a salon catering for women and/or men or work in a specialist salon e.g. African-Caribbean. African-Caribbean salons use techniques such as pressing, braiding, plaiting and attaching hair extensions.

A trainee hairdresser will meet and greet customers, take coats, wash towels, replenish stock items, wash hair and generally keep the salon clean and tidy.

Many salons require six days a week working and later opening hours to accommodate business customers. The busiest day tends to be a Saturday so there could also be weekend work.

National Association of Screen Makeup artists and hairdressers <http://www.nasmah.co.uk>
Hair and Beauty Industry Authority <https://www.habia.org>
National Hairdressing Federation <https://www.nhf.info/home/>

Skills and Requirements

A passion for working with hair and be dedicated to the profession is essential. You also need:

- A keen sense of style and fashion and keeping up to date with styles and trends
- Creativity to design and interpret hairstyles
- Excellent social, customer service, communication and diplomacy skills together with a good sense of humour
- Knowledge of hairstyles, hair types and colouring with the ability to visualise change
- Enjoy being sociable and work as part of a team
- Enjoy meeting new people and having a conversation
- Enjoy working under pressure as clients may not always have a lot of time or like what you do
- Stamina as you will be on your feet all day
- Understand relevant Health and Safety laws and procedures
- Appropriate personal presentation including clothing, hair, nails and personal hygiene
- Hard working with a willingness to work flexible hours/days
- Knowledge of data protection of client records

There are over 31,000 salons in the UK employing around 180,000 people. A further 100,000 hairdressers are in training. Demand for entrants with the right skills and work attitude remains constant.

Source: <http://www.inpuyouth.co.uk/jobguides/job-hairdresser.html>

Exploring Careers Through Technical Routes

Working and Learning in Hairdressing



Job Roles & Progression

To be successful it is important to continually develop your skills. Even once you're a fully qualified you need to refresh your skills and learn new techniques. Volunteer, work part time or do work experience in a salon that offers a training programme.

Study Programme

Levels 2 and 3
Hairdressing or Barbering



Further Study

FdA
Hairdressing Management
Specialist Hair and Media Make-up
HND Hair, Beauty and Make-up Management
Level 4 Hairdressing Techniques
BA (Hons) Specialist Hair and Media Make-up



Apprenticeships

Intermediate and Advanced
Hairdressing or Barbering



Career roles

Senior stylist or salon manager
Trainer or assessor
Specialise e.g. hair stylist, colour technician or trichologist
Own your own salon (*hairdressing and barbering businesses are the most popular independent start up business*) or become self employed (*44% of people working in hairdressing and barbering are self-employed*)
Work in film or television

Calculation including problem solving

Tasks

1. Estimate the total number of foils needing to be cut for highlighting a particular client's hair.
2. Research alternative suppliers of a hair shampoo to find the most cost effective one.
3. Calculate percentage price reductions for each hair stylist to boost business during a quiet week.
4. Mix hair dyes for a customer in the correct proportions based on the stylist's instructions.
5. Cut a client's hair into a bob, estimating and choosing the correct angle that the scissors make.

Links to GCSE Maths

1. **Number** (whole numbers - addition, multiplication, division; approximation - rounding numbers, estimating calculations)
2. **Number** (whole numbers - addition, multiplication)
3. **Number** (whole numbers - subtraction)
Ratio, proportion and rates of change (decreasing an amount by a percentage)
4. **Ratio, proportion and rates of change** (direct and inverse proportion - calculating amounts using proportions)
Geometry and measure (units of measure)
5. **Geometry and measure** (angles)

Communication, all forms

Tasks

1. Conduct a customer consultation to carry out a safe colour treatment.
2. Create a salon service menu showing customers the salon opening times, services, stylists and prices.
3. Handle a disgruntled client who has waited 45 minutes because the stylist is running late with her appointments.
4. Write a report for the salon manager on customer feedback over the past month.
5. Talk to a client and explain the benefits of the shampoo you are using to wash their hair.

Links to GCSE English Language

1. **Spoken language** (speaking and listening)
Writing (writing non-fiction – a form; organising information)
2. **Writing** (writing non-fiction – a leaflet; literary techniques – persuasive devices)
Spelling, punctuation and grammar
3. **Spoken language** (speaking and listening - audience and purpose; personal presence- eye contact; voice)
4. **Writing** (writing non-fiction – a report; planning - a structure; vocabulary - use precise verbs)
5. **Spoken language** (speaking and listening - audience and purpose, discussion skills, persuasive language)

Exploring Careers Through **Technical** Routes

Legal Secretary



The Industry

A legal secretary provides administrative support and services for lawyers, solicitors and legal executives. Every law firm, financial company or barrister's chamber requires a good legal secretary to ensure the office runs smoothly and efficiently thus enabling employers to focus on serving clients.

Legal secretaries help produce legal documents such as wills, contracts and court papers, deal with enquiries from clients, prepare court forms and statements, deliver and collect documents and attend court or police cells with solicitors.

As well as opportunities to work in solicitors' offices or a barrister's chamber you could also work for law courts, local authorities, estate agents or the police.

If you're working in a small local firm you could develop experience in a wide range of legal matters, however in larger firms you will tend to specialise in one particular area of law.

Institute of Legal Secretaries and PAs (ILSPA)
The Chartered Institute of Legal Executives (CILEx) www.cilex.org.uk

Skills and Requirements

Legal secretaries require general office skills as well as specialised skills unique to the legal profession. These include:

- Experience of office work
- A good work ethic with the ability to handle the pressure of a busy office
- Familiarity with legal terminology, court filing rules, basic legal procedure and law office protocol
- Drive, initiative and versatility with an ability to manage your workload and keep to deadlines
- Excellent computer skills showing proficiency with word processing, spreadsheets, legal research, presentations and time/billing software
- Discretion to handle confidential client files and data
- A pleasant and friendly attitude to people
- Excellent written communication skills with attention to detail e.g. spelling, proofreading
- Compassion as clients will entrust your law firm with issues that are personal or critical

The market for legal secretaries is becoming ever more competitive, and salaries will continue to increase for as long as there is a shortfall. More and more, companies are putting structured progression systems in place to ensure they keep the best staff for as long as possible.

Source: <http://www.hays.co.uk>

Exploring Careers Through Technical Routes

Working and Learning as a Legal Secretary

Job Roles & Progression

Temporary office work is a good way of getting relevant work experience to enter this career

Study Programme

Levels 2 and 3
Business Studies



Further study

Level 2 Legal Secretaries
(legal secretarial skills technical qualification)
Level 3 Legal Secretaries
(to move into the legal field)
Levels 3 and 4
Business & Administration
(to further develop secretarial skills)
Higher Diploma
Administrative & Secretarial
Procedures



Apprenticeships

Advanced Legal Services
(until 2018)
Apprenticeship in Law (Paralegal)
and Apprenticeship in Law
(Chartered Legal Executive)



Career roles

Senior secretary
Personal assistant for a top lawyer
Legal executive, Paralegal or
Licensed Conveyancer
Train as a solicitor or barrister

Calculation including problem solving

Tasks

1. Calculate how long it will take a taxi to get to a court hearing in order to get the lawyer there on time.
2. Plan your daily tasks to ensure all priorities and deadlines are met.
3. Track the total amount of time each lawyer spends on a case and calculate totals for invoicing purposes.
4. Prepare a client's invoice based on the services they have received including VAT where applicable.
5. Estimate the total expenses a lawyer has incurred over a month, and calculate the exact total.

Links to GCSE Maths

1. **Number** (subtraction; multiplication)
Geometry and measure (units of measure - speed, time)
2. **Number** (approximation - estimation)
Ratio (direct and inverse proportion - calculating amounts using proportion)
3. **Number** (whole numbers - addition, multiplication; converting between fractions, decimals and percentages)
Ratio (sharing in a given ratio)
4. **Number** (whole numbers - addition)
Ratio (percentages - calculating amounts using proportions; calculating percentages of amounts, increasing an amount by a percentage)
5. **Number** (whole numbers - addition, subtraction, multiplication; approximation - estimating calculations)

Communication, all forms

Tasks

1. Discuss and prepare the documents your lawyer requires to take to a court hearing.
2. Talk to a bereaved client whilst waiting for the lawyer to be ready to see them.
3. Take accurate minutes at a partners' meeting.
4. Prepare a court form and collect statements from the relevant parties concerned.
5. Research a topic as directed by a lawyer.

Links to GCSE English Language

1. **Spoken language** (speaking and listening - audience and purpose, discussion skills)
2. **Spoken language** (speaking; personal presence - body language; voice)
3. **Writing** (writing non-fiction - minutes; vocabulary - use precise verbs, literary techniques - informative language)
Spelling, punctuation and grammar
4. **Spoken language** (speaking and listening);
Writing (writing non-fiction; vocabulary - to create a particular effect)
5. **Analysing non-fiction** (non-fiction text type; context - examples of context)
Comparing texts (how to compare texts - structuring a comparison response)

Exploring Careers Through Technical Routes

Fire Service



The Industry

Firefighters respond to emergency situations protecting people, the environment and property from all types of accidents and emergencies. They also work closely with the local community to increase levels of fire safety awareness to help prevent fires and accidents happening in the future.

There are two types of firefighter. Wholtime firefighters work for the fire service full time and usually in urban areas. Retained firefighters are on-call responders who usually live/work within a mile of the fire station and respond to pagers when an emergency call is received (rural areas). A fireman works unsocial hours and can work up to 42 hours a week in a shift pattern. This could mean working two day shifts, two night shifts and then having four days off.

Employers include the civil airport and port fire services, forest industry and industrial fire services protecting private companies in e.g. chemical, pharmaceutical, nuclear or oil.

Fire and Rescue Recruitment <http://www.fireservice.co.uk/recruitment/>
Prospects <https://www.prospects.ac.uk/job-profiles/firefighter>
Success at School <https://successatschool.org>

Skills and Requirements

You must be aged 18 or over to become a firefighter and go through the standard national selection process (National Firefighter Selection and a Personal Qualities and Attributes (PQA) test to check your suitability.

You also need to:

- Be physically fit enough to carry heavy equipment and breathing apparatus and to move debris or carry victims
- Be clean shaven to wear breathing apparatus
- Have the ability to clearly communicate conditions at an emergency scene
- Have courage e.g. to enter a burning building
- Be able to make quick and smart decisions in an emergency to potentially save lives
- Be able to stay calm and professional under pressure with a reassuring manner even when dealing with people who are badly injured and/or distressed
- Have the physical stamina to stay at disaster scenes for long periods of time to rescue and treat victims
- Have clear vision in both eyes and good hearing
- Be able to operate a range of tools and equipment

Approximately 42,300 full time equivalent (FTE) Fire and Rescue Service (FRS) staff were employed in England in 2016
In England, there are 46 fire and rescue services run by fire and rescue authorities (FRA)

Source: <https://www.gov.uk/government>

Exploring Careers Through Technical Routes

Working and Learning in the Fire Service



Job Roles & Progression

It is not possible to do actual work experience due to health and safety requirements. You can however be an observer in a fire station or attend an open day.

You need to keep fit and gain as much information as possible about both the role and the fire & rescue service in general to pass the recruitment tests.



Study Programme

Levels 2 and 3
Uniformed Public Services



Further study

BSc (Hons)
Fire & Leadership Studies
Fire & Rescue

Fire Service College
specialist courses
Institution of Fire Engineers (IFE)
professional qualifications
Heavy Goods Vehicle (HGV) licence
for driving fire engines



Apprenticeships

Emergency Fire Service Operations
Level 2 Firefighter and Community
Safety



Career Roles

Manager: Crew, Watch or Station
Specialise in a particular area of the
fire and rescue service

Calculation including problem solving

Tasks

1. Calculate how much time you have in a fire according to the air in your tank.
2. Collate data from previous fire reports in your area to prepare an informative talk on the dangers of a rubbish fire.
3. Calculate the fire flow formula (gallons per minute) to determine the % amount of water required to extinguish a fire.
4. Estimate the angle and steepness of a slope at a fire scene to decide on the potential effects of fire spread.
5. Plot the number of kitchen fires by area over a 6 month period on a graph for promotional purposes.

Links to GCSE Maths

1. **Number** (whole number - addition, subtraction, multiplication, division)
2. **Statistics** (collecting data - data collection sheets, sorting data; representing data - frequency diagrams, bar charts)
3. **Number** (whole number - multiplication); **Ratio, proportion and rates of change** (percentages - finding a percentage)
4. **Geometry and measure** (angles - types of angles; Pythagoras' Theorem)
5. **Number** (whole numbers - addition) **Statistics** (representing data - frequency diagrams, scatter graphs)

Communication, all forms

Tasks

1. Comfort an injured person who is being cut out of their car after a road traffic accident.
2. Brief your team on the way to a fire according to the information you have been given.
3. Give a presentation at a community event on the dangers of a rubbish fire.
4. Write an information leaflet to distribute to houses in an area after a series of kitchen fires.
5. Study a manual on the different sizes of hoses to instruct other colleagues on which one to use when and how.

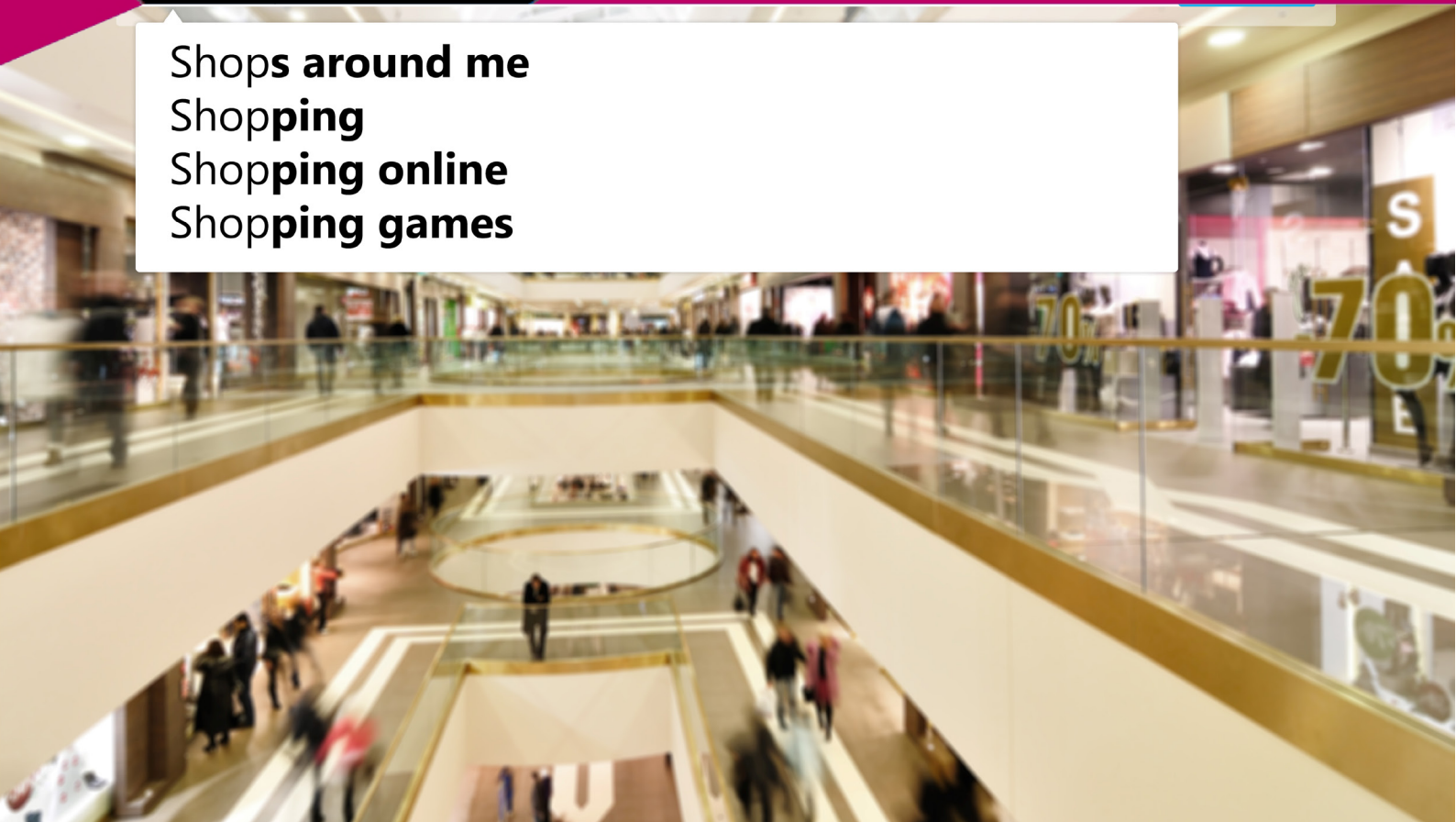
Links to GCSE English Language

1. **Spoken language** (speaking; personal presence; tone; voice)
2. **Spoken language** (speaking and listening; discussion skills)
3. **Spoken language** (speaking - audience and purpose); voice - presentation)
4. **Writing** (context, audience and purpose - audience, purpose; writing non-fiction - writing a leaflet; planning - planning a structure; organising information and ideas - building sentences; literary techniques - informative language)
5. **Analysing non-fiction** (non-fiction text types - manual; context - time, publication)

Exploring Careers Through Technical Routes

Marketing

Shops around me
Shopping
Shopping online
Shopping games



The Industry

Marketing is the successful promotion of a product or service by identifying what customers want (product and price) and how to make it accessible (promotion and place).

You may be organising a marketing campaign, co-ordinating and producing marketing materials, organising and attending an event or exhibition, collating a database or creating/ updating online content. Other tasks could include writing and designing printed advertisements, leaflets or posters or producing advertising for cinema, radio and TV.

The work could include PR (public relations), getting press coverage for products and securing sponsorship deals, digital marketing, search engine optimisation (SEO), online advertising and social media that engages a target audience and promotes the brand using for example, Twitter, Facebook, or LinkedIn.

Professional Marketing competencies

<http://www.cim.co.uk/more/professional-marketing-competencies/>
 Chartered Institute of Marketing <http://www.cim.co.uk>
 Advertising Association <http://www.adassoc.org.uk>

Skills and Requirements

You can either work for an organisation doing in-house marketing or a marketing creative agency. Increasingly knowledge of digital marketing and use of social media is becoming a key requirement. Other valuable skills for a career in marketing include:

- IT skills (MS office packages, Adobe and use of social media)
- An ability to consider and understand customers' needs and wants
- Creative and imaginative e.g. designing the packaging of goods, promotional campaigns, company websites, literature
- Maths to analyse data, numbers and information so you can plan relevant activities
- Communication skills to talk directly to audiences e.g. through a magazine article or a TV advert
- A writing ability that is understandable and expressive
- Negotiation, persuading, initiative and logical thinking
- Highly effective interpersonal communication
- Languages as marketing is becoming an increasingly global business

Creative Skillset has revealed that 153,000 people work in the marketing and advertising industry, with graduates making up more than 70% of the workforce. The majority of these opportunities are in the overarching area of marketing, with jobs also available in advertising, PR and event management.

Source: https://creativeskillset.org/creative_industries/advertising_and_marketing_communications

Exploring Careers Through Technical Routes

Working and Learning in Marketing

Job Roles & Progression

Study Programme

Level 2 Principles of Marketing
Level 3
Business Studies
Creative Marketing with Entrepreneurship



Further study

Over 800 marketing courses
BA (Hons) Marketing
Marketing and PR
Social Media
Advertising and Marketing Communications
International Marketing
English and Media
Beauty Promotion
Dance & Movement Studies
Marketing Fashion Design
Marketing and Production
Football Business and Marketing
FdA
Business Marketing
Digital Marketing



Apprenticeships

Intermediate Marketing
Advanced
Marketing, Digital Marketing & Social Media
Higher
Marketing, Advertising and Marketing Communications



Career roles

Specialise e.g. promotion or digital marketing management
Design agency
Corporate in-house marketing

Calculation including problem solving

Tasks

1. Conduct a regional market research survey on a selected topic and present a findings report using graphs.
2. Organise the most appropriate and cost effective way to transport display equipment to an exhibition.
3. Calculate the costs of a promotional campaign taking into account profit & loss and overheads.
4. Collate word count for different sections of the website.
5. Determine the number of leaflets to order based on costs and target market analysis.

Links to GCSE Maths

1. **Statistics** (collecting data - questionnaires; representing data - graphs and charts)
Algebra (graphs - drawing straight line graphs)
2. **Number** (whole numbers - addition, subtraction, multiplication, division; decimals - addition, subtraction, multiplication, division of decimals)
Problem Solving (solving number problems)
3. **Number** (financial mathematics - profit and loss)
4. **Number** (whole numbers - addition; using a calculator)
5. **Number** (whole numbers - addition, subtraction; approximation - rounding numbers);

Communication, all forms

Tasks

1. Work in your team to develop and agree a marketing promotions plan.
2. Make a presentation pitch to a prospective client on a marketing strategy for a new product.
3. Create digital copy to persuade customers to take advantage of a special offer.
4. Read through promotional materials to ensure they are accurate and up to date.
5. Write an article for a magazine on a product that describes it using a picture.

Links to GCSE English Language

1. **Writing** (planning - planning a structure)
Spoken language (speaking and listening - discussion skills)
2. **Spoken language** (audience and purpose; speaking and listening - individual presentation; personal presence; voice - pitch and volume)
3. **Writing** (context, audience and purpose; writing non-fiction - an article; organising information and ideas - paragraphs; literary techniques - persuasive language)
4. **Analysing non-fiction** (non-fiction text types - information leaflet; context - example of context; language and structure)
Spelling, punctuation and grammar
5. **Writing** (writing non-fiction - an article; literary techniques - descriptive language)
Spelling, punctuation and grammar

Exploring Careers Through Technical Routes

Social Care



The Industry

Social care is about providing physical, emotional and social support to help those people in need to develop and maintain their independence, dignity and control.

The adult social care sector offers a range of careers with various job roles, flexible working patterns and different opportunities.

Care workers are the front line staff in all care settings. They can work in a residential care home, as domiciliary care looking after people in their own homes or out in the community.

Their work is outlined by a care plan which has been developed by a social worker/care manager to meet the assessed needs of the person requiring care or support. Duties vary depending on the requirements of their client as well as any associated individual comfort and wellbeing. Their aim is to help people in their care live as independently as possible.

Core Skills in Social Care

www.skillsforcare.org.uk/Documents/Learning-and-development/Core-skills/What-are-core-skills-in-social-care.pdf

Skills and Requirements

Social care employers are required by law to ensure staff are *'suitability qualified, competent, skilled and experienced'* and that they receive *'appropriate support, training and professional development'* to enable them to carry out their work.

Source: Health and Social Care Act 2008, Regulations 2014.

In order to provide compassionate care and support it is essential to have the correct values and attitudes. In addition you need to have:

- Ability to use core skills accurately (English, number, digital)
- Well developed employability skills e.g. teamwork
- An ability to plan your on-going learning & development and to manage your own health & wellbeing
- The ability to carefully follow specific care/routine requirements (both verbal and written) or procedures without deviation
- An understanding of other people's feelings at all times
- An understanding of the importance of confidentiality and data protection
- The ability to treat people with respect and dignity

The number of adult social care jobs in 2015 was estimated at 1.55 million. An increase of 1% and 12,500 jobs since 2014. The social care sector will have half a million extra jobs available by 2030

Source: www.skillsforcare.org.uk/Home.aspx

Exploring Careers Through Technical Routes

Working and Learning in Social Care



Job Roles & Progression

To give you a start in becoming a care worker, personal assistant, activities co-ordinator or involved in community support try to gain work shadowing, volunteering or becoming a part time helper.

Study Programme

Levels 2 and 3
Health & Social Care



Further study

Level 4 Adult Care
Level 5 Leadership for Health & Social Care

BA (Hons)
Social Work, Health & Social Care

- or with Management
Step Up to Social Work
- alternative degree

FdSc
Health & Social Care



Apprenticeships

Intermediate and Advanced
Health & Social Care



Career Roles

Management role e.g. care manager
or registered manager
Professional role e.g. social worker

Calculation including problem solving

Tasks

1. Monitor the time taken for each of your daily tasks to calculate the total daily time you spend on each patient.
2. Work out the body mass index of a patient and record on forms, tables and charts.
3. Do a weekly grocery shop for a domiciliary patient recording the total money spent and change required to return to them.
4. Give prescribed medications to a patient in the different required measurements.
5. In order to successfully plan your visits for a day estimate how long it will take you to travel between all your clients.

Links to GCSE Maths

1. **Number** (whole numbers - addition, subtraction, order of operations; decimals - adding and subtracting decimals)
2. **Number** (whole numbers - multiplication)
Algebra (graphs - co-ordinates, drawing straight line graph)
3. **Geometry and measure** (units of measure - unit pricing)
Number (whole numbers - addition, subtraction)
4. **Ratio, proportion and rates of change** (direct and inverse proportion - calculating amounts)
5. **Number** (whole numbers - addition, subtraction, multiplication, division; decimals - adding and subtracting decimals; approximation - estimating calculations)

Communication, all forms

Tasks

1. In collaboration with other professionals on the team undertake and write up a patient's assessment.
2. Maintain a patient's record accurately and prepare a report for legal action.
3. Keep a diary of your hourly activities for a week and record each of them on a flow chart.
4. Write a story for a patient who needs cheering up about something they are interested in and spend time with them reading the story.
5. Prior to your first patient visit research using information from different sources.

Links to GCSE English Language

1. **Writing** (non-fiction - form; context, audience and purpose - context, purpose)
2. **Writing** (writing non-fiction - a report);
planning - planning a structure, bullet points, editing and proofreading; literary techniques - informative language)
3. **Writing** (writing non-fiction - a diary; planning - flowchart)
4. **Writing** (writing non-fiction - writing a story; planning - planning a structure; vocabulary - to create effect)
Spoken language (speaking - audience and purpose; voice - enunciation)
5. **Comparing texts** (comparing by context and effectiveness)

Exploring Careers Through **Technical** Routes

HGV driving



The Industry

Do you like driving, travelling around the country and working on your own work? Work as an HGV driver for a manufacturer, a distributor or a road haulage firm driving commercial vehicles over 7.5 tonnes including articulated lorries, tankers, transporters and trailer wagons. You could work from depots, distribution centres or warehouses picking up and dropping off deliveries to businesses, factories, shops or restaurants.

Apart from driving your duties may include: maintaining your vehicle; adhering to health, safety and security procedures; assessing your vehicle for safety and general faults; planning delivery schedules and routes with transport managers; supervising/loading/unloading goods onto vehicles safely; ensuring goods are secured and transited safely; reporting breakdowns or traffic delays to a dispatcher; navigating to destinations; completing delivery paperwork and log books.

Skills for Logistics <http://www.skillsforlogistics.co.uk>
The Road Haulage Association <https://www.rha.uk>
Chartered Institute of Logistics and Transport in the UK
<https://www.ciltuk.org.uk/Careers/CareersInformation/CareerProfiles/LGVDriving.aspx>

Skills and Requirements

You must be over 18 and hold a full car driving licence. Other knowledge and skills required include:

- A good geographical knowledge of the UK/region
- Ability to liaise well with customers and staff
- Knowledge of tachograph legislation and Transport Working Time Regulations
- Reliability, honesty, trustworthy and hardworking
- Good timekeeping and planning skills
- The ability to complete record sheets and paperwork accurately
- Good numeracy and literacy skills
- Willingness to work alone and concentrate for long periods of time even when under pressure
- A keen awareness of health and safety issues and rules of the road e.g. highway code
- IT for operating in-cab technology
- Flexibility as hours can be anti social with overnight stays in the cab
- Physically fit with good eyesight and colour vision
- Driver Certificate of Professional Competence (CPC)
- Basic motor maintenance would also be useful

The road haulage sector is the single largest segment of the logistics industry and estimated to be worth £42bn a year. One fifth of the current LGV workforce will reach retirement age in the next 10 years which is approximately 75,000 drivers.

Source: <https://theloadstar.co.uk/party-parliamentary-freight-group-hgv-driver-shortage-crisis/>

Exploring Careers Through Technical Routes

Working and Learning in HGV driving



Job Roles & Progression

Study Programme

Levels 2 and 3
Heavy Vehicle Maintenance & Repair Competence



Further Study

Initial Driver CPC
theory and hazard awareness
case study questions and answers
practical driving test
practical demonstration test



Apprenticeships

Level 2
Primary Transport
Driving Goods Vehicles

Supply Chain Specialist Large Goods Vehicle (LGV) Driver

Level 3
Driving Goods Vehicles



Career Roles

Advisory Dangerous Goods by Road Certificate (ADR) to drive hazardous goods e.g. toxic chemicals by tanker

LGV instructor
Freight transport planner
Operations manager
Distribution manager

Calculation including problem solving

Tasks

1. Plot the route and calculate your mileage for a journey from the depot to five customers and back.
2. Estimate the amount of foreign currency you need to take to fill your tank at an overseas drop for your return journey to the UK.
3. Work out the probability of a traffic jam on a motorway based on previous data to use the quickest route to your destination.
4. Calculate the weight of your cargo to decide on the best way of loading.
5. Check your weekly pay slip for accuracy.

Links to GCSE Maths

1. **Number** (whole numbers - addition; decimals - adding decimals)
Geometry and measure (units of measure - using standard units)
2. **Number** (approximation - estimating calculations, rounding to decimal places)
Geometry and measure (units of measure - using standard units; speed)
3. **Probability** (finding probability)
4. **Number** (whole numbers - division)
Geometry and measure (units of measure - density)
5. **Number** (Financial mathematics - wages and salaries)

Communication, all forms

Tasks

1. Report a breakdown to your transport manager.
2. Ensure the customer is happy with their delivery on drop off.
3. Complete a job record following your week of travel.
4. Assess your truck before a journey in terms of safety and general faults and record this on your vehicle maintenance log.
5. Read the manual for a new cab radio to ensure you can operate it accurately.

Links to GCSE English Language

1. **Spoken language** (speaking and listening - audience and purpose)
2. **Spoken language** (audience and purpose; personal presence; voice)
3. **Writing** (writing non-fiction - writing a report; literary techniques - informative language; vocabulary - use precise verbs)
4. **Writing** (context, audience, purpose; writing non-fiction - writing a report; expanding your vocabulary)
5. **Analysing non-fiction** (non-fiction text type - manual, information; responding to a non-fiction text - understanding)