Programme Guide

DATA SPECIALIST LEVEL 3

QA.com

DIGITAL AND DEGREE APPRENTICESHIPS

Building tech careers in the workplace

We offer digital and degree apprenticeships that focus on the most in-demand tech skills including; cyber, IT, software development, data and digital marketing, along with others in project management and senior leadership.

With programme pathways from Level 3 – Level 7, we help learners to progress and grow within your company, helping you retain talent and build capabilities.

Our award-winning approach to blended learning enables apprentices to develop further and faster, adding immediate value to their roles, whilst our interactive portal with real-time dashboards and trigger alerts enable managers to effectively and efficiently track progress.

Experience: 30,000 apprenticeships placed

An unrivalled talent pool: 100,000 apply to join our programmes every year

Award-winning: Recipient of the Gold Award at the Learning Tech Awards 2020 for our apprenticeship delivery model

Proven: We have the highest overall pass rate among UK tech training providers*

*based on end-point assessments by the BCS 2020

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ROLE PROFILE

DATA SPECIALIST

Data Specialists are found in all sectors where data is generated or processed such as finance, retail, education, health, media, manufacturing and hospitality.

The broad purpose of the occupation is to source, format and present data securely in a relevant way for analysis using basic methods; to communicate outcomes appropriate to the audience; analyse structured and unstructured data to support business outcomes; blend data from multiple sources as directed and apply legal and ethical principles when manipulating data.

In their daily work, an employee in this occupation interacts with a wide range of stakeholders including colleagues, managers, customers and internal and external suppliers. They would typically work as a member of a team; this may be office based or virtual.

Data Specialists need:

- Strong interest in data and technology
- A methodical, step-by-step approach to resolving issues
- Business skills like effective communication, teamwork and task/time management
- The adaptability to do a range of work—sometimes complex and non-routine in different environments
- The ability to work under direction, use discretion and determine when to escalate issues

JOB ROLE SUITABILITY

As an employer is it important to assess whether a candidate (a new hire or existing employee) is working in a suitable job role to successfully complete their programme.

The checklist has been created to help you assess whether your apprentice will be in a position to demonstrate all of the following Data Specialist's duties, during their programme.

Job roles this programme is a great match for:

- Data Technician
- Junior Data Analyst
- Marketing Executive
- Financial Analyst
- Sales Support
- HR Analyst

Checklist

1	Source data from a collection of already identified trusted sources in a secure manner
2	Collate and format data to facilitate processing and presentation for review and further advanced analysis by others
3	Present data for review and analysis by others, using required medium for example tables, charts and graphs
4	Blend data by combining data from various sources and formats to explore its relevance for the business needs
5	Analyse simple and complex structured and unstructured data to support business outcomes using basic statistical methods to analyse the data.
6	Validate results of analysis using various techniques, e.g cross checking, to identify faults in data results and to ensure data quality
7	Communicate results verbally, through reports and technical documentation and tailoring the message for the audience
8	Store, manage and share data securely in a compliant manner
9	Collaborate with people both internally and externally at all levels with a view to creating value from data
10	Practise continuous self learning to keep up-to-date with technological developments to enhance relevant skills and take responsibility for own professional development

ENTRY REQUIREMENTS

The entry requirements for this programme are as follows:

- 3 GCSEs (or equivalent) at grades 4+ (A-C) in any subject
- GCSE Maths and English (or equivalents) at grades 3+ (D or above)
- Prospective apprentices must not hold an existing qualification at the same or higher level as this apprenticeship in a similar subject

Experience (if the learner can't meet the qualification requirements):

Those working in a role (for at least 6 months) where data is used on a regular basis and able to demonstrate working towards Level 2 in Maths and English.

FINDING NEW TALENT

We offer an extensive attraction and recruitment service for employers who are looking to use apprenticeships to bring new talent into their organisation.

We use multiple channels and tactics to attract people who are interested in and are passionate about building a career in tech. Our recruitment model combines vigorous AI assessments with 1-2-1 interviews to ensure we select apprentices of the highest calibre.

We are committed to increasing diversity in tech and to help achieve this, we work closely with special interest groups including; Code First: Girls, Stemettes and Young Professionals to ensure apprentices from all backgrounds are given the same opportunities, and to support us to close the gender and diversity gap in tech.

Proactively engaged with over **4,000** sixth forms/colleges and universities, attending careers fairs to ensure we reach talent first

QA attracts **100,000 applicants** a year for its apprenticeship and tech academy roles and has nearly 200,000 in its candidate database

Significantly higher than average gender balance with **37%** of our apprenticeship starts being female, compared to an industry average of 19%

14.2% of our applicant pool indicated they have a BAME background - higher than the industry average of 13.3%

DIVERSITY AND INCLUSION

We're passionate about diversity in tech

It's our mission to help eradicate the gender gap, and make sure equal opportunities are given to applicants from all backgrounds. We do this through our long-standing partnerships, QA-driven initiatives and use of trending tools and software.

Diversity-first candidate attraction

We've invested in using augmented copy checking tools to ensure language is inclusive, open to all and free from bias.

We use inclusive imagery throughout our campaigns – producing visual content that promotes diversity and inclusion.

Diversity partnerships

We forge partnerships with like-minded organisations who share our vision on STEM gender equality including Code First: Girls, Stemettes and Young Professionals.

We make tech skills accessible to all

We run free tech workshops including '**Teach the Nation to Code**' and '**Teach the Nation to Cloud**' so anyone can explore technology career opportunities.

Promoting inclusivity

We nurture relationships with influencers, schools, colleges and universities via events and interactive sessions to ensure learners from all backgrounds are given the same opportunities.

Skills Scans

Every candidate goes through Skills Scans where their knowledge and skills are measured and mapped against apprenticeship standards. This process ensures the right learner is placed on the right programme at the right time, which we know contributes towards a successful completion and a good learner experience.

A BLENDED APPROACH TO LEARNING

How we deliver

QA apprenticeships are designed to immerse the apprentice in their job role and provide more flexibility for the employer.

Allowing individuals to learn through a combination of project and lab work, live events, self-research, self-paced learning and peer-to-peer learning.

The required 20% off-the-job training is a crucial part of the competency development. The latest apprenticeship standard can also now contribute to the off-the-job training, helping to ensure a positive ROI is achieved in relation to salary costs, productivity, efficiency and innovation.

LEARNER SUPPORT

Safeguarding at QA

Safeguarding means ensuring the safety and wellbeing of our learners.

At QA, this means ensuring our polices and processes promote and protect learner wellbeing and that while you are on programme, and that while on programme, we teach learners about the types of risk facing modern day British citizens.

This includes cyber risks, mental and physical health information, risks of radicalisation or grooming and much more.

Prevent at QA

Prevent is part of the Government's counter-terrorism strategy.

At QA, this means we teach our staff and learners about the four British values: democracy, rule of law, individual liberty and respect and tolerance.

We also work with Prevent partners to identify people at risk of being or causing terror related harm.

Mental Health at QA

Emotional and mental wellbeing is an important component of successful learning.

Understanding how to protect mental health and promote emotional wellbeing is part of modern British citizenship.

Ways to access support if you are worried for yourself or someone else:

- Call us – anytime 07808 050273
- Email: safeguarding@qa.com
- Contact your Digital Learning Consultant (DLC), tutor or account manager
- Speak to any member of QA staff onsite

DIGITAL BY DESIGN APPRENTICESHIP PROGRAMMES

Digital by Design programmes

QA Digital by Design apprenticeships provide a greater focus on online learning together with using live interaction where it adds the most value for learners.

It means that there is a single learner journey which brings teaching, coaching, learning and assessment into a single, repeatable flow for every module. This ensures that from the beginning of the programme there is a clear focus on successful completion of the end-point assessment (EPA).

In Digital by Design, these three elements will work together:

- The content
- The service and support
- The technology

Discover, practise and apply

All QA apprenticeships use a guided discovery approach to learning, as opposed to traditional methods of delivery such as live events. This shifts the emphasis from content delivery to our learners and their context, resulting in the apprentice feeling empowered to take ownership of their learning experience through the "Discover, Practise, Apply" model.

DISCOVER

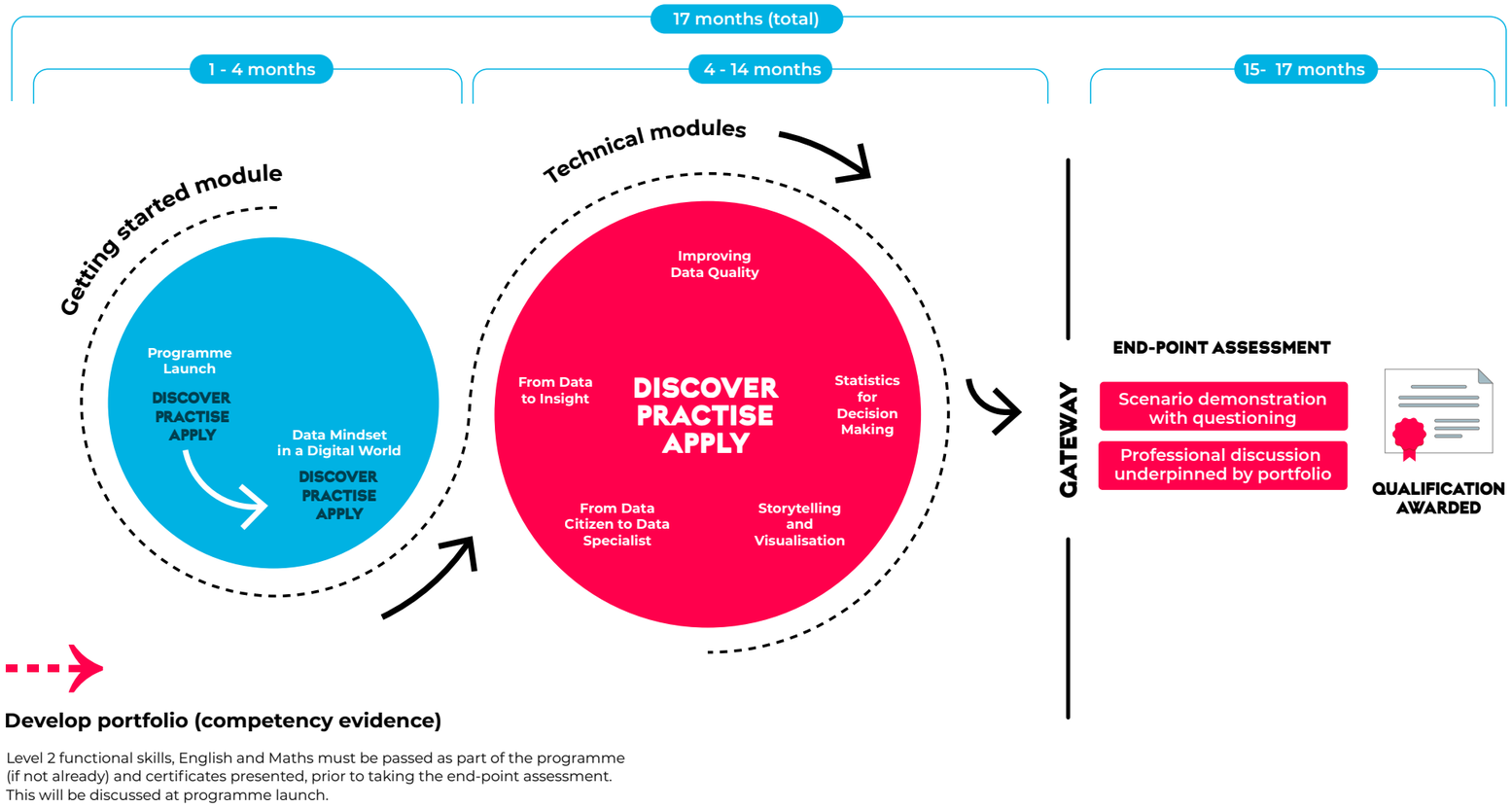
Learners will learn the theory, by exploring subjects online and in the live events.

PRACTISE

Learners will practise their new-found knowledge by completing activities - online, in the live events and (most importantly) directly at work in their day-to-day role.

APPLY

Learners will apply what they've discovered and practised at work. They will actively contribute to your organisation whilst building their portfolio of evidence (showing how they've applied their new skills) to gain their qualification.



Level 2 functional skills, English and Maths must be passed as part of the programme (if not already) and certificates presented, prior to taking the end-point assessment. This will be discussed at programme launch.

THE LEARNER'S JOURNEY

Programme timeline | Duration: 17 Months **| Gateway:** 14 Months

GETTING READY TO START

PROGRAMME LAUNCH

MONTH 1

- **Start Module 1:** Data Mindset in a Digital World
- Safeguarding Module
- H&S: Workstation Assessment
- Functional Skills: Maths and English Diagnostics
- **Check-in session**
- Functional Skills: Maths and English Learning
- **End Module 1:** Data Mindset in a Digital World
- **Start Module 2:** From Data to Insight

MONTH 2

- **Employer Check-in**

MONTH 4

- **End Module 2:** From Data to Insight
- **Start Module 3:** Improving Data Quality

MONTH 5

- Functional Skills: Speaking, Listening and Communicating Exam Preparation
- Functional Skills: Maths and English (Reading and Writing) Mock Exams
- Functional Skills: Speaking, Listening and Communicating Exam
- Functional Skills: Maths Exam
- Functional Skills: English (Reading) Exam
- Functional Skills: English (Writing) Exam
- **Employer Reflection (1 of 2)**

MONTH 7

- **End Module 3:** Improving Data Quality
- **Start Module 4:** Statistics for Decision Making

MONTH 10

- **End Module 4:** Statistics for Decision Making
- **Start Module 5:** Storytelling and Visualisation

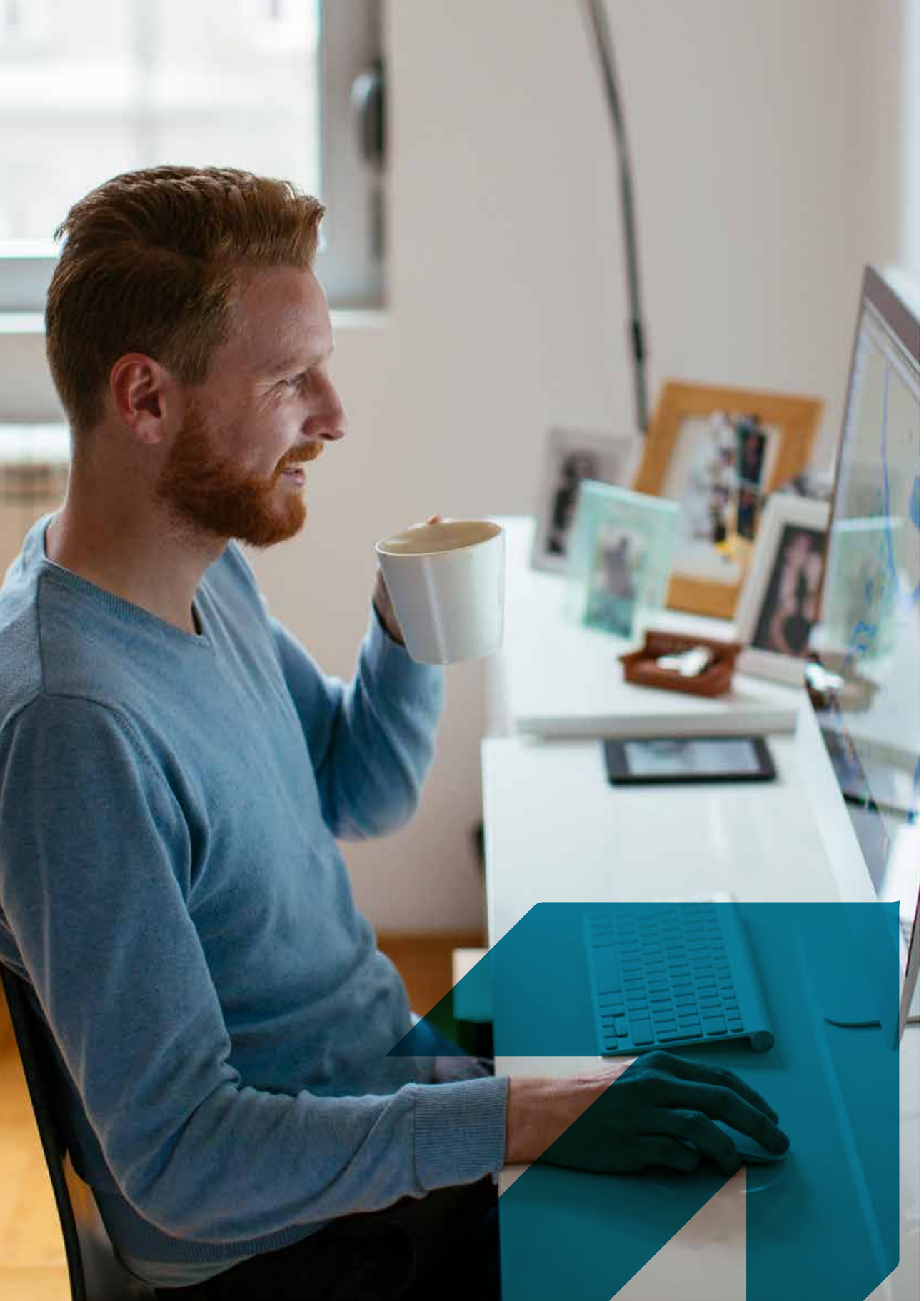
MONTH 12

- **End Module 5:** Storytelling and Visualisation
- **Start Module 6:** From Data Citizen to Data Specialist

MONTH 14

- **Employer Reflection (2 of 2)**
- **End Module 6:** From Data Citizen to Data Specialist
- **Portfolio Consolidated**
- **End-point Assessment Preparation**

Qualification Awarded



GETTING STARTED MODULE

The modules in our Data Specialist apprenticeship equip learners with the advanced technical skills they need for their role. Each module develops the core set of skills they must be able to do well to be competent.

In each module, learners will 'discover', 'practice' and 'apply' what they've learned. This helps them put their newly-found knowledge into action back at work.

There are 6 modules to complete with the following learning outcomes.

Module 1: Data Mindset in a Digital World

Programme Launch
(Synchronous session online)

- Learn about the programme and structure
- Calendar of apprenticeship events
- Setting expectations
- Complete first data insights activity

Discover. Practise. Apply.

This module will focus on the importance of data, what is a data citizen and how data is driving digital transformation.

This module also provides foundational knowledge of data types, data sources and the extracting of data.

Topics covered:

- Data Types & Formats
- Architecture & Platforms
- Data in a Digital World
- The Digital Landscape
- Accessing & Extracting Data
- Sourcing Data
- Migrating Data

Live Session: 2 days | **Module Duration:** 6 weeks

TECHNICAL MODULES

The technical modules focus on the knowledge and skills required of a Data Specialist in detail. After each module learners will 'apply' what they've learned at work on current projects.

Module 2:
From Data to Insight

This module will focus on the way in which we collate, format and blend data from multiple sources and to develop your skills in identifying trends that will support you in evidence-based decision making.

This module also explores the role of data within business, the manipulation of data and linking of data sources.

Topics covered:

- Importance of data formats
- Collate, format and save data
- Good data management
- Presentation tools
- Communication tools
- Collaborative working technologies
- Effective filtering
- Blending data
- Data manipulation
- Identifying trends

Live Session: 3 days **|** **Module Duration:** 12 weeks

Module 3:
Improving Data Quality

This module will focus on the practical aspects of how to validate data that you have sourced, what are the common issues found in data and how to cross check your data to ensure its validity.

This module also explores legal and regulatory requirements, how to clean data and how you would audit the results of your data.

Topics covered:

- Data quality issues;
- Misclassification
- Duplicate entries
- Spelling errors
- Obsolete data
- Compliance issues
- Interpretation/ translation of meaning
- Validating data
- Importance of data accuracy
- Legal and regulatory requirements;
- Data protection
- Data security
- Intellectual Property Rights (IPR)
- Data sharing
- Marketing consent
- Personal data definition
- The ethical use of data

Live Session: 2 days **|** **Module Duration:** 12 weeks

Module 4:
Statistics for Decision Making

This module will focus on the future of data, how emerging technologies will support business growth across the globe and data standards & legislation.

This module also explores topics such as how we use statistical methods to remove bias, how data affects brand awareness and wider considerations such as the significance of customer issues.

Topics covered:

- Emerging technologies
- Evidence based decision making
- Business value and brand awareness
- Cultural awareness/diversity
- Data accessibility
- Developing for different audiences
- Algorithms
- Statistical methods
- Data modelling
- Normalising data

Live Session: 3 days **|** **Module Duration:** 12 weeks

Module 5:
Storytelling and Visualisation

This module will focus on how to have useful data conversations, how to communicate insights based on audience and how to identify the correct medium to use when telling your data story.

This module also explores communication methods including how to communicate meaning and how to produce vivid and effective technical documents.

Topics covered:

- Communication methods
- Formats and techniques; written, verbal, non-verbal, presentation, email, conversation, audience and active listening
- Range of roles within an organisation, including: customer, manager, client, peer, technical and non-technical
- Value of data to business
- Creating a narrative
- Communicating meaning
- Technical documentation

Live Session: 2 days **|** **Module Duration:** 12 weeks

Module 6:
From Data Citizen to Data Specialist

This module will focus on the future of data, how emerging technologies will support business growth across the globe and your personal development as a data specialist.

This module also explores how you can use different learning tools/techniques and the breadth and sources of knowledge to develop your skills and understanding.

Topics covered:

- The future of data
- Learning techniques
- Learning tools
- Personal development

Live Session: 2 days **|** **Module Duration:** 6 weeks

Gateway and end-point assessment
Consolidation, preparation and assessment (Online)

This final component will get learners ready to go through the 'gateway'.

The apprenticeship gateway is an internal QA process. It will ensure that your learner's work is ready to be assessed by EPAO. This exists to increase their chances of success.

At this pre-gateway stage learners will:

- Consolidate and submit their portfolio
- Conduct a mock EPA

In addition to the items above, learners must have successfully completed all the Functional Skills exams (except exempt learners).

Once learners have met all the above criteria, they will go through the gateway. When approved, it takes up to 3 months from gateway to achievement.

During this time, learners will:

- Complete the scenario demonstration and questioning
- Complete their professional discussion, which is underpinned by their portfolio

Qualifications earned

- Data Technician Level 3 Apprenticeship

LEARNING OUTCOMES

Apprentices will be assessed on 3 key areas; their ability to convey knowledge, their ability to demonstrate practical skills and their capability of displaying professional workplace behaviour. These will be developed during an apprentice's learning journey, with the goal of displaying all of these competencies during their assessment.

These knowledge, skills and behaviour points ensure rounded development, as the standards provide a greater emphasis on the importance of both technical and soft skills in the workplace.

KNOWLEDGE

- K1: Range of different types of existing data. Common sources of data - internal, external, open data sets, public and private. Data formats and their importance for analysis. Data architecture - the framework against which data is stored and structured including on premises and cloud
- K2: How to access and extract data from a range of already identified sources
- K3: How to collate and format data in line with industry standards
- K4: Data formats and their importance for analysis management and presentation tools to visualise and review the characteristics of data communication tools and technologies for collaborative working
- K5: Communication methods, formats and techniques, including: written, verbal, non-verbal, presentation, email, conversation, audience and active listening range of roles within an organisation, including: customer, manager, client, peer, technical and non-technical
- K6: The value of data to the business how to undertake blending of data from multiple sources
- K7: Algorithms, and how they work using a step-by-step solution to a problem, or rules to follow to solve the problem and the potential to use automation
- K8: How to filter details, focusing on information relevant to the data project
- K9: Basic statistical methods and simple data modelling to extract relevant data and normalise unstructured data
- K10: The range of common data quality issues that can arise e.g. misclassification, duplicate entries, spelling errors, obsolete data, compliance issues and interpretation/ translation of meaning
- K11: Different methods of validating data and the importance of taking corrective action
- K12: Communicating the results through basic narrative
- K13: Legal and regulatory requirements e.g. data protection, data security, Intellectual Property Rights (IPR), data sharing, marketing consent, personal data definition and the ethical use of data
- K14: The significance of customer issues, problems, business value, brand awareness, cultural awareness/ diversity, accessibility, internal/ external audience, level of technical knowledge and profile in a business context
- K15: The role of data in the context of of the digital world including the use of eternal trusted open data sets, how data underpins every digital interaction and connectedness across the digital landscape including applications, devises, IoT, customer centricity
- K16: Different learning techniques, learning techniques and the breadth and sources of knowledge

SKILLS

- S1: Source and migrate data from already identified different sources
- S2: Collect, format and save datasets
- S3: Summarise and explain gathered data
- S4: Blend data sets from multiple sources and present in format appropriate to the task
- S5: Manipulate and link different data sets as required
- S6: Use tools and techniques to identify trends and patterns in data
- S7: Apply basic statistical methods and algorithms to identify trends and patterns in data
- S8: Apply cross checking techniques for identifying faults and data results for data project requirements
- S9: Audit data results
- S10: Demonstrate the different ways of communicating meaning from data in line with audience requirements
- S11: Produce clear and consistent technical documentation using standard organisational templates
- S12: Store, manage and distribute in compliance with data security standards and legislation
- S13: Explain data and results to different audiences in a way that aids understanding
- S14: Review own development needs
- S15: Keep up to date with developments in technologies, trends and innovation using a range of sources
- S16: Clean data i.e. remove duplicates, typos, duplicate entries, out of date data, parse data (e.g. format telephone numbers according to a national standard) and test and assess confidence in the data and its integrity
- S17: Operate as part of a multi-functional team
- S18: Prioritise within the context of a project

BEHAVIOUR

- B1: Manage own time to meet deadlines and manage stakeholder expectations
- B2: Work independently and take responsibility
- B3: Use own initiative
- B4: A thorough and organised approach
- B5: Work with a range of internal and external customers
- B6: Value difference and be sensitive to the needs of others

HOW TO GET READY FOR THE END-POINT ASSESSMENT

We want to deliver memorable learning experiences, whilst developing learners with well-rounded skillsets, ready to meet their professional requirements.

To ensure we are achieving this goal consistently, it is important for learners, digital learning consultants and employers to work together to ensure learners are supported to succeed in their apprenticeship's end-point assessment (EPA).

In this section we outline a number of guidelines which intend to provide a framework so that this can be achieved in a consistent way.

Preparation for the end-point assessment starts from day one.

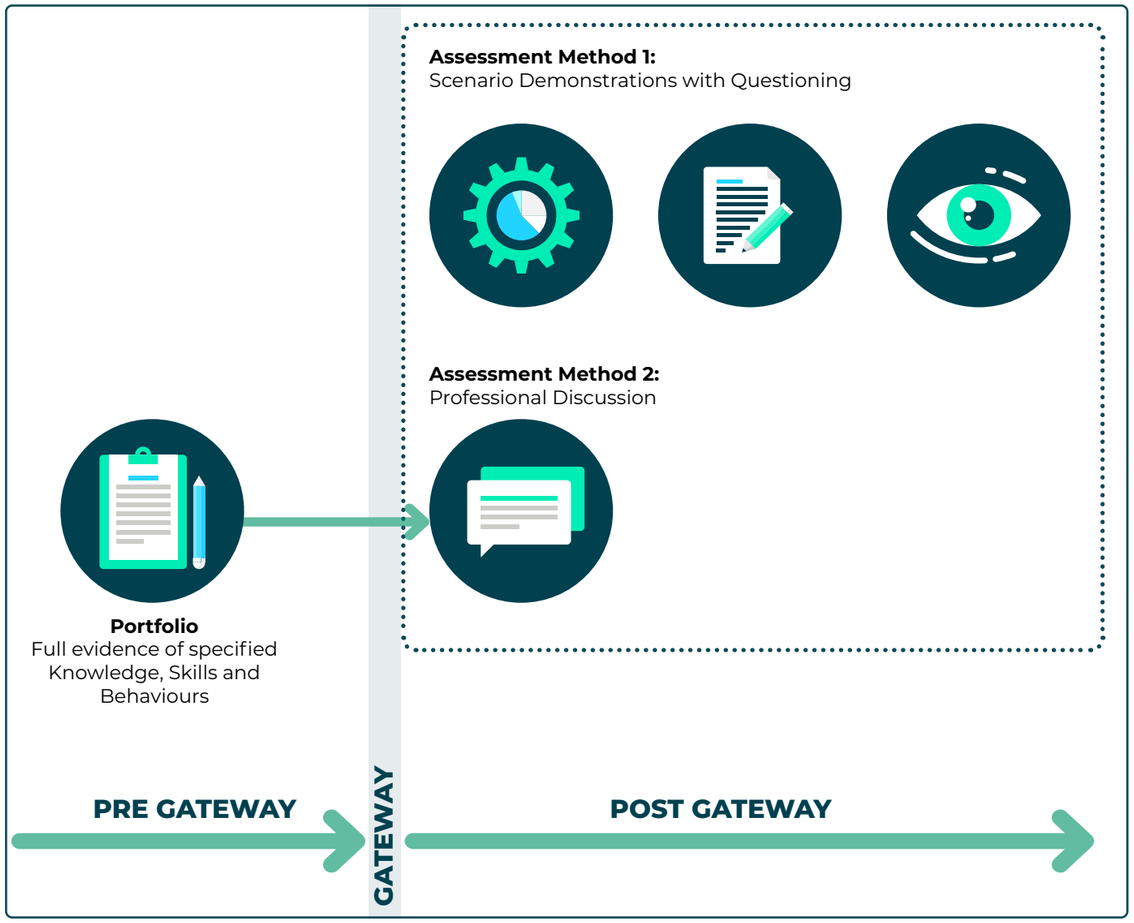
STAYING ON-TRACK THROUGHOUT THE PROGRAMME

Learners and employers should start preparing for EPA from the start of the programmme. Employers will need to ensure that learners are given the right opportunities at work to develop and prove the knowledge, skills and behaviours in the standard.

For this reason, it is very important to keep learners, digital learning consultants and employers informed about the programme progress. It is critical to the success of the apprenticeship programme that all of the above work together to ensure that each learning journey is kept on-track avoiding further interventions (and time commitment) whenever possible.

To help learners with this, we have created two guiding documents – a programme timeline, and a progress review map – so progress can be checked against it, at any time. Any progress deviations above 15% will be reviewed on a case-by-case basis. This is to ensure the apprenticeship is progressing in a timely manner.

HOW THE EPA IS GRADED



EXPANDING YOUR TECHNICAL SKILLS WITH cloud academy

Our apprentices are given full access to our proprietary Cloud Academy platform for the duration of their programme.

Cloud Academy brings the very latest and up-to-date content to our apprentices through single units, courses and comprehensive learning paths to really build on the core learning outcomes defined within the programme. Furthermore, apprentices are able to prepare for the full suite of vendor qualifications across AWS, GCP and Azure and much more.

Cloud Academy users also benefit from Hands-On Labs, Lab Challenges and Lab Playgrounds providing a safe, sandbox environment in which our learners are able to practise in real time through guided walkthroughs or through their own exploration.

Check out the Training Library - Cloud Academy.

Funded by

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matrix

Apprenticeships

FOR MORE INFORMATION, PLEASE CONTACT

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