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| Level 4 End-point Assessment for ST0118/AP03 Data Analyst (9770-12) |

**July 2021 Version 1.0**

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| End-point Assessment Recording Forms  **For Centres/End-point Assessment Customers/Employers** |

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Introduction

### What is in this document

Recording forms to be used by centres/End-point Assessment customers/employers including:

* Evidence Reference Matrix – Project with Presentation and Questioning
* Declaration of Authenticity – Project with Presentation and Questioning
* Evidence Reference Matrix – Portfolio of Evidence
* Declaration of Authenticity – Portfolio of Evidence
* Apprentice Portfolio Checklist – Portfolio of Evidence

This document should be used alongside the **9770-12 Data Analyst EPA Pack for Centres/End-point Assessment customers/employers.**

### How to use the forms

Centres/End-point Assessment customers/employers must use the forms provided by City & Guilds in the format laid out in this document.

**Evidence Reference Matrix – Project with Presentation and Questioning**

Apprentices must upload an evidence referencing matrix with their work-based project report. A sample referencing matrix is included in this document. To facilitate comprehensive, consistent mapping of the evidence requirements, use of the City & Guilds supplied ‘Evidence Reference Matrix’ form is strongly recommended. The apprentice and/or training provider may choose to use their own version of the Evidence Reference form, but the form must:

* clearly map evidence to the KSBs
* be confirmed as suitable by City & Guilds before it is used.

The purpose of the referencing matrix is to indicate to the City & Guilds Independent End-point Assessor (IEPA) how the project report evidences the relevant Knowledge, Skills and Behaviours (KSBs) mapped to the Project with Presentation and Questioning assessment method. It enables the IEPA to assess the evidence efficiently and effectively.

The apprentice must reference the individual pieces of evidence against the KSBs clearly, for example by identifying the evidence number, page number, file name or time stamp where appropriate. The matrix must be completed and submitted to City & Guilds to accompany the work-based project.

**Declaration of Authenticity**

The Declaration of Authenticity forms must be completed and signed by the training provider, employer and the apprentice. They must be submitted in electronic format together with the portfolio of evidence and the work-based project report.

**Evidence Reference Matrix – Portfolio of Evidence**

Apprentices must upload an evidence referencing matrix with their portfolio. A sample referencing matrix is included in this document. To facilitate comprehensive, consistent mapping of the evidence requirements, use of the City & Guilds supplied ‘Evidence Reference Matrix’ form is strongly recommended. The apprentice and/or training provider may choose to use their own version of the Evidence Reference form, but the form must:

* clearly map evidence to the KSBs
* be confirmed as suitable by City & Guilds before it is used.

The purpose of the evidence referencing matrix is to indicate to the IEPA how the evidence uploaded matches the Knowledge, Skills and Behaviours (KSBs) relevant to the Professional Discussion with Portfolio assessment method. It enables the IEPA to assess the evidence efficiently and effectively.

The apprentice must reference the individual pieces of evidence against the KSBs clearly, for example by identifying the evidence number, page number, file name or time stamp where appropriate. The matrix must be completed and submitted to City & Guilds at Gateway to accompany the portfolio of evidence.

**Apprentice Portfolio Checklist**

City & Guilds have created a portfolio checklist to help apprentices and training providers ensure that all relevant information is accounted for. The checklist is provided as support in preparation for assessment and does not need to be submitted to City & Guilds.

**Note: The evidence reference forms must be uploaded to the EPA Portal as a word processing document. This does not include the Apprentice Portfolio Checklist.**

EPA forms for ST0118/AP03 Data Analyst (9770-12)

**The following recording forms are included in this section:**

* Evidence Reference Matrix – Project with Presentation and Questioning
* Declaration of Authenticity – Project with Presentation and Questioning
* Evidence Reference Matrix – Portfolio of Evidence
* Declaration of Authenticity – Portfolio of Evidence
* Apprentice Portfolio Checklist – Portfolio of Evidence



### 9770-700: Evidence Reference Matrix – Project with Presentation and Questioning

|  | **Pass criteria (for reference only)** | **Distinction criteria**  **(for reference only)** | **Evidence type(s)** | **Evidence reference** | **IEPA comments (in preparation for Questioning)**  **IEPA only** |
| --- | --- | --- | --- | --- | --- |
| **Apprentice name:** | | | | | |
| **Knowledge, Skills and Behaviours**  K3: Principles of the data analysis life cycle and the steps involved in carrying out routine data analysis tasks. | | | | | |
|  | Outlines and applies the principles of data analysis lifecycle to the steps of data analysis. | N/A |  |  |  |
| **Knowledge, Skills and Behaviours**  K4: principles of data, including open and public data, administrative data, and research data. | | | | | |
|  | Describe the principles of data including open, public, administrative and research data and how they relate to the data used within the project. | N/A |  |  |  |
| **Knowledge, Skills and Behaviours**  K8: quality risks inherent in data and how to mitigate/resolve these. | | | | | |
|  | Identifies quality risks in data analysis and outlines methods to mitigate, escalate and/or resolve them. | Evaluates the outcomes of data analysis and suggests alternative tools/methods which would be of benefit to all stakeholders. |  |  |  |
| **Knowledge, Skills and Behaviours**  K9: principal approaches to defining customer requirements for data analysis. | | | | | |
|  | Outlines and applies the principles for defining customer requirements and implements findings in data analytics planning and outputs. | N/A |  |  |  |
| **Knowledge, Skills and Behaviours**  K11: approaches to organisational tools and methods for data analysis. | | | | | |
|  | Describes the tools and methods used by their organisation for data analysis and identifies which were used within the project with reasoning for the choices made to achieve the best outcome. | Evaluates the outcomes of data analysis and suggests alternative tools/methods which would be of benefit to all stakeholders. |  |  |  |
| **Knowledge, Skills and Behaviours**  K12: organisational data architecture | | | | | |
|  | Outlines the choice of organisational data architecture. | N/A |  |  |  |
| **Knowledge, Skills and Behaviours**  S1: Use data systems securely to meet requirements and in line with organisational procedures and legislation, including principles of Privacy by Design. | | | | | |
|  | Operates data systems in compliance with all organisational and legislative requirements including principles of Privacy by Design. | N/A |  |  |  |
| **Knowledge, Skills and Behaviours**  S2: implement the stages of the data analysis lifecycle. | | | | | |
|  | Outlines and applies the principles of data analysis lifecycle to the steps of data analysis. | N/A |  |  |  |
| **Knowledge, Skills and Behaviours**  S3: apply principles of data classification within data analysis activity, flexing approach as necessary. | | | | | |
|  | Demonstrates a reasoned application of the principles of data classification. Explains where any flexibilities in application have been applied and their purpose. | N/A |  |  |  |
| **Knowledge, Skills and Behaviours**  S4: analyse data sets taking account of different data structures and database designs. | | | | | |
|  | Analyses data sets taking account of different data structures and database designs. | Demonstrates the use of data sets with different data structures and database designs to solve problems or improve the accuracy or efficiency of data analysis. |  |  |  |
| **Knowledge, Skills and Behaviours**  S6: identify and escalate quality risks in data analysis with suggested mitigation/resolutions as appropriate. | | | | | |
|  | Identifies quality risks in data analysis and outlines methods to mitigate, escalate and/or resolve them. | N/A |  |  |  |
| **Knowledge, Skills and Behaviours**  S7: undertake customer requirements analysis and implement findings in data analytics planning and outputs. | | | | | |
|  | Outlines and applies the principles for defining customer requirements and implements findings in data analytics planning and outputs. | Analyses the requirements of the customer to produce a data analysis plan which provides an optimum solution. |  |  |  |
| **Knowledge, Skills and Behaviours**  S8: identify data sources and the risks, challenges to combination within data analysis activity. | | | | | |
|  | Demonstrates how data from different sources is combined and prepared for data analysis setting out how they identified the risks and challenges inherent in combining data within the project. | N/A |  |  |  |
| **Knowledge, Skills and Behaviours**  S12: collaborate and communicate with a range of internal and external stakeholders using appropriate styles and behaviours to suit the audience. | | | | | |
|  | Communicates and collaborates with all relevant stakeholders and adapts communication style to meet audience and situational requirements. | N/A |  |  |  |
| **Knowledge, Skills and Behaviours**  S15: select and apply the most appropriate data tools to achieve the best outcome. | | | | | |
|  | Describes the tools and methods used by their organisation for data analysis and identifies which were used within the project with reasoning for the choices made to  achieve the best outcome. | N/A |  |  |  |
| **Knowledge, Skills and Behaviours**  B3: Works independently and collaboratively. | | | | | |
|  | Describes how they work independently and collaboratively, detailing their impact on the work of others. | N/A |  |  |  |
| **Knowledge, Skills and Behaviours**  B4: Logical and analytical. | | | | | |
|  | Acts independently to establish logical and analytical solutions such as exploring new data sets or resolving issues within the data. | Evaluates the outcomes of data analysis and suggests alternative tools/methods which would be of benefit to all stakeholders. |  |  |  |

### 9770-700: Declaration of Authenticity – Project with Presentation and Questioning

The Declaration of Authenticity must be completed as appropriate and submitted to City & Guilds with the apprentice’s evidence for End-point Assessment.

|  |  |  |  |
| --- | --- | --- | --- |
| Apprentice  Name | Apprentice Name | Enrolment  Number | 1234567 |

**Apprentice declaration:**

**I confirm that all work submitted is my own, and that I have acknowledged any sources I have used.**

|  |  |  |  |
| --- | --- | --- | --- |
| **Apprentice** | Signature | **Date** | DD/MM/YY |

**Line manager declaration:**

**I confirm that all work was conducted under conditions designed to assure the authenticity of the apprentice’s work, and am satisfied that, to the best of my knowledge, the work produced is solely that of the apprentice.**

|  |  |  |  |
| --- | --- | --- | --- |
| **Line Manager** | Signature | **Date** | DD/MM/YY |

**Training provider declaration:**

**I confirm that the evidence presented by the apprentice is ready for End-point Assessment. It is valid, authentic, reliable and current and sufficient to meet the requirements of the relevant standard.**

|  |  |  |  |
| --- | --- | --- | --- |
| **Training Provider** | Name & Signature | **Assessment Date** | DD/MM/YY |

### 9770-701: Evidence Reference Matrix – Portfolio of Evidence

|  | **Pass criteria (for reference only)** | **Distinction criteria**  **(for reference only)** | **Evidence type(s)** | **Evidence reference** | **IEPA comments (in preparation for Professional Discussion)**  **IEPA only** |
| --- | --- | --- | --- | --- | --- |
| **Apprentice name:** | | | | | |
| **Knowledge, Skills and Behaviours**  K1 current relevant legislation and its application to the safe use of data. | | | | | |
|  | Explains how current, relevant legislation impacts on the safe use of data and how their role contributes to a productive, safe, and secure working environment. | N/A |  |  |  |
| **Knowledge, Skills and Behaviours**  K2 organisational data and information security standards, policies and procedures relevant to data management activities. | | | | | |
|  | Explains the relevant data policies and procedures for the organisation and identifies the data standards to be reached. | N/A |  |  |  |
| **Knowledge, Skills and Behaviours**  K5 the differences between structured and unstructured data. | | | | | |
|  | Explains the differences between structured and unstructured data. | N/A |  |  |  |
| **Knowledge, Skills and Behaviours**  K6 the fundamentals of data structures, database system design, implementation and maintenance. | | | | | |
|  | Describes the fundamentals of data structures and database system design and explains how they are implemented and maintained. | N/A |  |  |  |
| **Knowledge, Skills and Behaviours**  K7 principles of user experience and domain context for data analytics. | | | | | |
|  | Explains the principles of user experience and domain context for data analytics. | N/A |  |  |  |
| **Knowledge, Skills and Behaviours**  K10 approaches to combining data from different sources. | | | | | |
|  | Explains approaches to combining data from different sources to improve accuracy and / or efficiency and / or maximise benefits to the organisation and / or customer. | Evaluates the benefits and risks inherent in combining data from different sources. |  |  |  |
| **Knowledge, Skills and Behaviours**  K13 principles of statistics for analysing datasets. | | | | | |
|  | Explains and applies the principles of statistics for analysing datasets. | N/A |  |  |  |
| **Knowledge, Skills and Behaviours**  K14 the principles of descriptive, predictive and prescriptive analytics. | | | | | |
|  | Explains the principles of descriptive, predictive and prescriptive analytics and demonstrates how they have been applied within their own data analysis practice. | Critically evaluates the risks and benefits of predictive analytics. |  |  |  |
| **Knowledge, Skills and Behaviours**  K15 the ethical aspects associated with the use of and collation of data. | | | | | |
|  | Explains the ethical aspects associated with the collation and use of data and justifies why this is important. | N/A |  |  |  |
| **Knowledge, Skills and Behaviours**  S5 assess the impact on user experience and domain context on the data analysis activity. | | | | | |
|  | Describes impact on user experience and domain context of data analysis. | N/A |  |  |  |
| **Knowledge, Skills and Behaviours**  S9 apply organisational architecture requirements to data analysis activities. | | | | | |
|  | Describes the relevant tools or techniques used for working with the data systems architecture in their organisation. | N/A |  |  |  |
| **Knowledge, Skills and Behaviours**  S10 apply statistical methodologies to data analysis tasks. | | | | | |
|  | Explains and applies the principles of statistics for analysing datasets. | N/A |  |  |  |
| **Knowledge, Skills and Behaviours**  S11 apply predictive analytics in the collation and use of data. | | | | | |
|  | Explains the principles of descriptive, predictive and prescriptive analytics and demonstrates how they have been applied within their own data analysis practice. | Critically evaluates the risks and benefits of predictive analytics. |  |  |  |
| **Knowledge, Skills and Behaviours**  S13 use a range of analytical techniques such as data mining, time series forecasting and modelling techniques to identify and predict trends and patterns in data. | | | | | |
|  | Explains how they have applied analytical techniques for data mining and time series forecasting and other modelling techniques. | N/A |  |  |  |
| **Knowledge, Skills and Behaviours**  S14 collate and interpret qualitative and quantitative data and convert into infographics, reports, tables, dashboards, and graphs. | | | | | |
|  | Demonstrates data analysis activities involving the collation and interpretation of qualitative and quantitative data and displays results using visual representations. | Compares and contrasts visual data representation approaches and how they aid understanding by stakeholders. |  |  |  |
| **Knowledge, Skills and Behaviours**  B1 maintain a productive, professional, and secure working environment. | | | | | |
|  | Explains how current, relevant legislation impacts on the safe use of data and how their role contributes to a productive, safe, and secure working environment. | N/A |  |  |  |
| **Knowledge, Skills and Behaviours**  B2 shows initiative, being resourceful when faced with a problem and taking responsibility for solving problems within their own remit. | | | | | |
|  | Describes how they have appropriately adapted their activities to meet minor, unexpected changes at work. | N/A |  |  |  |
| **Knowledge, Skills and Behaviours**  B5 identifies issues quickly, enjoys investigating and solving complex problems and applies appropriate solutions. Has a strong desire to push to ensure the true root cause of any problem is found and a solution is identified which prevents recurrence. | | | | | |
|  | Describes how they have established an approach to identifying issues quickly, investigating and solving complex problems and applying appropriate solutions. Describes how they have ensured the true root cause of any problem is found and a solution is identified which prevents recurrence. | N/A |  |  |  |
| **Knowledge, Skills and Behaviours**  B6 demonstrates resilience by viewing obstacles as challenges and learning from failure. | | | | | |
|  | Identifies and explains challenges in their work and how they overcame them, providing an outline of lessons learned. | N/A |  |  |  |
| **Knowledge, Skills and Behaviours**  B7 demonstrates an ability to adapt to changing contexts within the scope of a project, direction of the organisation or Data Analyst role. | | | | | |
|  | Identifies areas of work where they adapted to changing contexts within the scope of a project, direction of the organisation or Data Analyst role. | N/A |  |  |  |



### 9770-701: Declaration of Authenticity – Portfolio of Evidence

The Declaration of Authenticity must be completed as appropriate and submitted to City & Guilds with the apprentice’s evidence for End-point Assessment.

|  |  |  |  |
| --- | --- | --- | --- |
| Apprentice  Name | Apprentice Name | Enrolment  Number | 1234567 |

**Apprentice declaration:**

**I confirm that all work submitted is my own and that I have acknowledged any sources I have used.**

|  |  |  |  |
| --- | --- | --- | --- |
| **Apprentice** | Signature | **Date** | DD/MM/YY |

**Line manager declaration:**

**I confirm that all work was conducted under conditions designed to assure the authenticity of the apprentice’s work, and am satisfied that, to the best of my knowledge, the work produced is solely that of the apprentice.**

|  |  |  |  |
| --- | --- | --- | --- |
| **Line Manager** | Signature | **Date** | DD/MM/YY |

**Training provider declaration:**

**I confirm that the evidence presented by the apprentice is ready for End-point Assessment. It is valid, authentic, reliable and current and sufficient to meet the requirements of the relevant standard.**

|  |  |  |  |
| --- | --- | --- | --- |
| **Training Provider** | Name & Signature | **Assessment Date** | DD/MM/YY |



### 9770-701: Apprentice Portfolio Checklist – Portfolio of Evidence

|  |  |  |
| --- | --- | --- |
| Apprentice portfolio checklist | | Tick when confirmed |
| 1. | Is all evidence signed by the apprentice and dated? \*  E-signatures are also acceptable |  |
| 2. | Is all evidence valid, authentic, current and sufficient (VACS)? |  |
| 3. | Does evidence clearly show it is the apprentice’s individual work (and if involved in team work, is it clear what specific contribution the apprentice made)? |  |
| 4. | Does the evidence clearly demonstrate the apprentice’s relevant knowledge? |  |
| 5. | Has the apprentice used the evidence reference form? And has all evidence been referenced? |  |
| 6. | Does it showcase the apprentice’s best pieces of work? |  |
| 7. | Is the majority of the evidence holistic in its nature? |  |
| 8. | Have duplicate and irrelevant pieces of evidence been removed? |  |
| 9. | Is there sufficient evidence to cover the whole of the criteria and grading descriptors that are referenced? |  |
| 10. | Are any witness testimonies or employer references tailored to the apprentice? |  |
| 11. | Has any client/customer reference information been anonymised? |  |
| 12. | Are all external sources of information appropriately documented and referenced to the original source, showing clear understanding of how they relate to the criteria? |  |
| 13. | Has the appropriate stakeholder(s) e.g. employer/training provider checked whether the apprentice’s portfolio meets all the required criteria and grading descriptors? |  |
| \* where witness testimonies are included as a piece of evidence these do not need to be signed by the apprentice but instead must be signed/authenticated as outlined in the rest of the EPA pack | | |
| **Reminder:**  You must upload the completed ‘Evidence Reference Matrix’ to EPA Pro in word format | | |

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As the UK’s leading vocational education organisation, City & Guilds is leading the talent revolution by inspiring people to unlock their potential and develop their skills. We offer over 500 qualifications across 28 industries through 8500 centres worldwide and award around two million certificates every year. City & Guilds is recognised and respected by employers across the world as a sign of quality and exceptional training.

City & Guilds Group

The City & Guilds Group operates from three major hubs: London (servicing Europe, the Caribbean and Americas), Johannesburg (servicing Africa), and Singapore (servicing Asia, Australia and New Zealand). The Group also includes ILM (management and leadership qualifications), City & Guilds Licence to Practice (land-based qualifications), the Centre for Skills Development (CSD works to improve the policy and practice of vocational education and training worldwide) and Learning Assistant (an online e-portfolio).

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