Data management

This planning document is intended to support teachers who are delivering the NPA/PDA Data Science or for students who are learning independently. It also aligns with the Data Skills for Work framework.

Contents

Version Control

Version number	Purpose/Change	By	Date
1.0	Published by effini	John Bell	17 Feb 2023

Lesson Description

Lesson Overview	The areas of data management and the activities organisations undertake. Why it's important to manage data, and what happens when data is not managed well.
Topic	Quality and management
Book Chapter(s)	Quality and management

NPA level	6
PDA level	8
Data skills for work level	Data management, Core, Analysis

Lesson Contents

This lesson consists of:

- A lesson plan (this document)
- A PowerPoint/PDF presentation, 'Data Management'
- Question worksheet (for learners) on 'Data Management' in Excel/PDF
- Answers worksheet (for teachers) on 'Data Management' in Excel/PDF

Learning Intentions

We will be learning about how organisations care for their data, specifically

- **What data management is** and the various aspects of it
- Why it is **important to manage data** within an organisation
- What **data management activities** organisations need to undertake
- What the consequences of ***not* managing data** can be

Success Criteria

I can *describe* the areas of data management

I can *explain* why it is important for organisations to manage data

I can *describe* some data management activities organisations undertaken

I can *describe* some consequences of not managing data

Knowledge Prerequisites

Learners should know:

- what data is
- data can be transformed into valuable information
- data can be used to solve problems and find answers to questions
- data should be cared for

Learners should complete the **Caring for Data** lesson before undertaking this lesson.

Lesson Requirements

	PDA	NPA	Data Skills for work
Qualification	Yes	Yes	Yes
Outcome ID(s)	WD8.1e, WD8.1h, WD8.2f, CD8.1f	DC6.2d, DS6.2c	C2.1, A1.2, DL1.2
Outcome description(s)	WD8.1e – Data quality WD8.1h – Data management WD8.2f – Data quality including data bias CD8.1f - Data quality and data bias	DC6.2d - Explain methods of data management and data security, DS6.2c - Explain data management and data security techniques	C2.1 – Vocabulary used in data science and analytics A1.2 – Data quality DL1.2 – Data risks and challenges
Level	8	6	Data leadership, Core, Analysis
Software language	N/A	N/A	N/A
Required equipment /software for student	Lesson: PowerPoint/PDF, Worksheet: Excel/PDF	Lesson: PowerPoint/PDF, Worksheet: Excel/PDF	Lesson: PowerPoint/PDF, Worksheet: Excel/PDF

Task-types

In the worksheet for this lesson, there are up to 6 task-types to that become increasingly challenging to support the students learning. Based on the student's previous knowledge it is possible to select the task-types that are relevant to their stage.

Task-type	Description
1. Recall	To be able to recognise definitions or procedures.
2. Define	To be able to define definitions or procedures.
3. Rephrase	To be able to use their own words to describe definitions or procedures.
4. Apply	To be able to apply definitions or procedures to problem-solving activities.
5. Create	To be able to apply definitions or procedures and create their own solutions to a defined problem.
6. Active	Using knowledge from the lesson which they apply to scenarios they have researched/designed themselves.

Worksheet

The worksheet associated with this lesson is available either in Excel or as a PDF that can be printed. The answer worksheet is available in both formats too.

Worksheet section ID	Description	Task-type	Number of questions
1.1	Data Management & Governance	Recall	2
1.2	Data Management & Governance	Rephrase	2
2.1	Data Security, Quality and Document and Content Management	Recall	1
2.2	Data Security, Quality and Document and Content Management	Apply	2
3.1	Data Architecture, Modelling and Design	Recall	2
3.2	Data Architecture, Modelling and Design	Rephrase	1
3.3	Data Architecture, Modelling and Design	Apply	3
4.1	Data Storage and Operations, Integration and Interoperability	Recall	2
4.2	Data Storage and Operations, Integration and Interoperability	Apply	1
Total			**16**

How you can use this lesson

This lesson has been created by effini in partnership with The Data Lab.

Alternative format

If you require this document in an alternative format, such as large print or a coloured background, please contact

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