**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 1](#_Toc125729699)

[Lesson Description 2](#_Toc125729700)

[Lesson Contents 2](#_Toc125729701)

[Learning Intentions 3](#_Toc125729702)

[Success Criteria 3](#_Toc125729703)

[Knowledge Prerequisites 3](#_Toc125729704)

[Lesson Requirements 4](#_Toc125729705)

[Task-types 5](#_Toc125729706)

[Worksheet 6](#_Toc125729707)

[How you can use this lesson 7](#_Toc125729708)

[Alternative format 7](#_Toc125729709)

# 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.

© 2022. This work is licensed under a [*CC BY-NC-SA 4.0 license*](https://creativecommons.org/licenses/by-nc/4.0/legalcode)*.*

A picture containing text, clipart

Description automatically generated

You are free to:

* **Share** – copy and redistribute the material in any medium or format
* **Adapt** – remix, transform and build upon the material

Under the following terms:

* **Attribution** — You must give [appropriate credit](https://creativecommons.org/licenses/by-nc/4.0/), provide a link to the license, and [indicate if changes were made](https://creativecommons.org/licenses/by-nc/4.0/). You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use.
* **NonCommercial** — You may not use the material for [commercial purposes](https://creativecommons.org/licenses/by-nc/4.0/).
* **ShareAlike** — If you remix, transform, or build upon the material, you must distribute your contributions under the [same license](https://creativecommons.org/licenses/by-nc-sa/4.0/) as the original.

# Alternative format

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

**hello@effini.com**

**or**

**4th Floor, The Bayes Centre**

**47 Potterrow**

**Edinburgh**

**EH8 9BT**