**Data misuse**

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.

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# Version Control

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| --- | --- | --- | --- |
| Version number | Purpose/Change | By | Date |
| 1.0 | Published by effini | Emma Nylk | 27 Jul 2022 |
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# Lesson Description

|  |  |
| --- | --- |
| **Lesson Overview** | How data can be misused by individuals, organisations and society.  How data misuse can be malicious or accidental. |
| **Topic** | Data Ethics |
| **Book Chapter(s)** | Data Ethics |

|  |  |
| --- | --- |
| **NPA level** | 4, 5, 6 |
| **PDA level** | 7, 8 |
| **Data skills for work level** | Data management, Core |

# Lesson Contents

This lesson consists of:

* A lesson plan (this document)
* A PowerPoint/PDF presentation, ‘Data misuse’
* Question worksheet (for learners) on ‘Data misuse’ in Excel/PDF
* Answers worksheet (for teachers) on ‘Data misuse’ in Excel/PDF

# Learning Intentions

We will be looking at **how data can be misused**, specifically,

* What is data misuse
* What is malicious data misuse and how it can happen
* What is accidental data misuse and how it can happen

# Success Criteria

I can *explain/describe/state* what is meant by data misuse

I can *explain/describe/state* what malicious data misuse is and how it might happen

I can *explain/describe/state* what accidental data misuse is and how it might happen

Learners need to explain/describe/state the success criteria based on the level they are studying at. Please review the lesson requirements to determine the appropriate level for the learners.

# 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

# Lesson Requirements

|  |  |  |  |
| --- | --- | --- | --- |
|  | **PDA** | **NPA** | **Data Skills for work** |
| **Qualification** | Yes | Yes | Yes |
| **Outcome ID(s)** | CD7.2g, WD8.1i, WD8.2g | DC4.1b, DC5.1b, DC6.1b | C1.4, C2.1, DM1.1 |
| **Outcome description(s)** | CD7.2g - Explain the features of effective data communication - ethical considerations,  WD8.1i - Ethical implications of business requirements,  WD8.2g - Ethical issues in data sourcing and extraction | DC4.1b - State how data is used and misused by individuals, organisations and society,  DC5.1b - Describe how data is used and misused by individuals, organisations and society.,  DC6.1b - Explain how data is used and misused by individuals, organisations and society. | C1.4 - Use and misuse of data by individuals, organisations and society  C2.1 – Vocabulary used in data science and analytics  DM1.1 – Making ethical decision using data |
| **Level** | 7, 8 | 4, 5, 6 | Data management, Core |
| **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 | Malicious data misuse | Recall | 1 |
| 1.2 | Malicious data misuse | Rephase | 2 |
| 1.3 | Malicious data misuse | Apply | 1 |
| 1.4 | Malicious data misuse | Active | 1 |
| 2.1 | Accidental data misuse | Define | 1 |
| 2.2 | Accidental data misuse | Apply | 1 |
| 2.3 | Accidental data misuse | Active | 2 |
| **Total** | | | **9** |

# How you can use this lesson

This lesson has been created by effini in partnership with Data Education in Schools and Skills Development Scotland.

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A picture containing text, clipart

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# 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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