

# Ethical use of data

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.

*This lesson has opportunities for class discussions/group work projects around the case studies related to ethical use of data, for example on slide 8 (the trolley problem), slide 19 (Amazon recruitment tool).*

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## Version Control

Version number	Purpose/Change	By	Date
1.0	Published by effini	Emma Nylk	25 Aug 2022

## Lesson Description

<b>Lesson Overview</b>	What are ethical data risks and how to identify them What are data ethics frameworks.
<b>Topic</b>	Data Ethics
<b>Book Chapter(s)</b>	Data Ethics

<b>NPA level</b>	6
<b>PDA level</b>	7, 8
<b>Data skills for work level</b>	Data management, Core

## Lesson Contents

This lesson consists of:

- A lesson plan (this document)
- A PowerPoint/PDF presentation, 'Ethical use of data'
- Question worksheet (for learners) on 'Ethical use of data' in Excel/PDF
- Answers worksheet (for teachers) on 'Ethical use of data' in Excel/PDF

## Learning Intentions

We will be looking at the **ethical use of data**, specifically

- What are ethical data risks
- How to identify ethical risks
- What are data ethics frameworks and how they can be used to prevent ethical risks

## Success Criteria

I can *explain* what is meant by data ethics

I can *explain* what are data ethical risks

I can *explain* how to identify data ethical risks

I can *explain* what is a data ethics framework and how it protects 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
- how data can be misused by individuals, organisations and society

## Lesson Requirements

	<b>PDA</b>	<b>NPA</b>	<b>Data Skills for work</b>
<b>Qualification</b>	Yes	Yes	Yes
<b>Outcome ID(s)</b>	CD7.2g, WD8.1i, WD8.2g, WD8.3h, CD8.3e	DC6.2f, DS6.1g	C1.4, C2.1, DM1.1, DM3.1, DM3.3, DL1.2, DL2.3
<b>Outcome description(s)</b>	<p>CD7.2g - Explain the features of effective data communication - ethical considerations,</p> <p>WD8.1i - Ethical implications of business requirements,</p> <p>WD8.2g - Ethical issues in data sourcing and extraction</p> <p>CD8.3e - Ethical considerations in the communication, visualisation and presentation of data</p>	<p>DC6.2f - Explain the concept of data ethics</p> <p>DS6.1g - Explain data ethics, including data bias, with reference to national and international standards and frameworks.</p>	<p>C1.4 - Use and misuse of data by individuals, organisations and society</p> <p>C2.1 – Vocabulary used in data science and analytics</p> <p>DM1.1 – Making ethical decision using data</p> <p>DM3.1 – Data standards</p> <p>DM3.3 – Data governance processes</p> <p>DL1.2 – Data risks and challenges</p> <p>DL2.3 – Data processes and culture</p>
<b>Level</b>	7, 8	6	Data management, Core, Data Leadership
<b>Software language</b>	N/A	N/A	N/A
<b>Required equipment /software for student</b>	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
<b>1. Recall</b>	To be able to recognise definitions or procedures.
<b>2. Define</b>	To be able to define definitions or procedures.
<b>3. Rephrase</b>	To be able to use their own words to describe definitions or procedures.
<b>4. Apply</b>	To be able to apply definitions or procedures to problem-solving activities.
<b>5. Create</b>	To be able to apply definitions or procedures and create their own solutions to a defined problem.
<b>6. Active</b>	Using knowledge from the lesson which they apply to scenarios they have researched/designed themselves.

## Worksheet

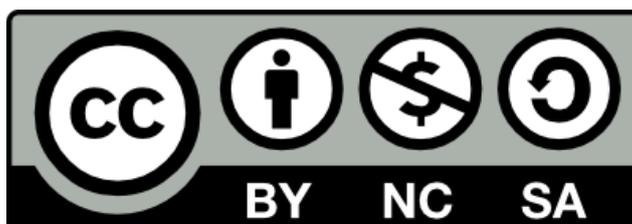
The worksheet associated with this lesson is available either in Excel or as a PDF that can be printed. The answer worksheet is available in both formats too.

Worksheet section ID	Description	Task-type	Number of questions
1.1	Data ethics risks	Recall	1
1.2	Data ethics risks	Rephrase	1
1.3	Data ethics risks	Apply	2
1.4	Data ethics risks	Active	1
2.1	Data frameworks	Define	1
2.2	Data frameworks	Apply	4
<b>Total</b>			<b>10</b>

## 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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## 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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