

Keeping personal data secure

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

Version number	Purpose/Change	By	Date
1.0	Published by Effini	Emma Nylk	17 June 2022

Lesson Description

Lesson Overview	How to keep your personal data and online accounts secure by using strong passwords, password managers and Multi-Factor Authentication. How to protect your devices with anti-virus software, firewalls, and VPNs.
Topic	Data Security
Book Chapter(s)	Data Security

NPA level	4, 5, 6
PDA level	7, 8
Data skills for work level	Data management

Lesson Contents

This lesson consists of:

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

Learning Intentions

We will be looking at how you can keep your personal data secure, specifically,

- How to choose and test a good password
- How to use a password manager and multi-factor authentication including biometrics
- How to protect personal devices with anti-virus software, firewalls and VPNs
- How to protect information you share online

Success Criteria

Note: For level 5/6 of the NPA, learners need to be able to *explain* rather than *describe* the criteria below.

I can *choose and test* a good password.

I can *describe* what a password manager and multi-factor authentication including biometrics.

I can *describe* what is anti-virus software and firewalls.

I can *describe* what a VPN is and know why to use one.

I can *explain* the risks of sharing personal information online.

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)	WD7.2e, WD8.1h	DC4.2d, DC4.1e, DC5.1e, DC5.2d, DS5.2d, DC6.1e, DC6.2d	DM2.1, DM2.2, DM2.3
Outcome description(s)	WD7.2e Legal and ethical considerations WD8.1h Data management including security,	DC4.2d - Describe simple methods of managing and securing data. DC4.1e - State the rights and responsibilities of data subjects and data owners DC5.1e - Describe the rights and responsibilities of data subjects and data owners. DC5.2d - Explain methods of managing and securing data DS5.2d - Describe methods of securing and managing data DC6.1e - Explain the rights and responsibilities of data subjects and data owners DC6.2d - Explain methods of data management and data security	DM2.1 - Data protection regulation, DM2.2 - Keeping data secure DM2.3 - Data sharing and publication
Level	7, 8	4, 5, 6	Data management
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

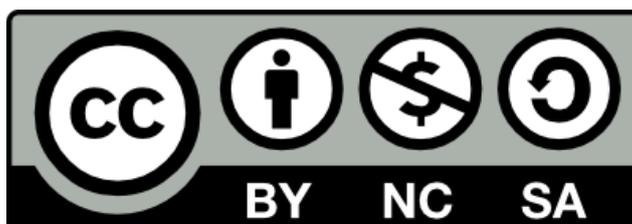
The worksheet associated with this lesson is available either in Excel or as a PDF that can be printed. The answer worksheet is available in both formats too.

Worksheet section ID	Description	Task-type	Number of questions
1.1	Personal data & passwords	Recall	2
1.2	Personal data & passwords	Define	2
1.3	Personal data & passwords	Apply	2
1.4	Personal data & passwords	Active	1
2.1	Multi-factor authentication	Recall	3
2.2	Multi-factor authentication	Rephrase	1
2.3	Multi-factor authentication	Active	3
3.1	Keeping your device secure	Active	4
4.1	Protecting your data online	Recall	2
4.2	Protecting your data online	Rephrase	2
4.3	Protecting your data online	Active	1
Total			23

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

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