**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

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