



# Technical Skill Focus – Stronger Passwords

## SuperCyberKids Lesson Plan

### Lesson 2 – Game-based Learning

Call: ERASMUS-EDU-2022-PI-FORWARD

Type of Action: ERASMUS-LS

Project No. 101087250



Co-funded by  
the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency. Neither the European Union nor the granting authority can be held responsible for them.

<b>Project ref. number</b>	101087250
<b>Project title</b>	<b>SCK - SuperCyberKids</b>
<b>Document title</b>	Technical Skill Focus – “Stronger Passwords” – Lesson 2 Game Based Learning
<b>Document Type</b>	Lesson Plan
<b>Document version</b>	V1, 10/12/2024
<b>Previous version(s)</b>	V1
<b>Language</b>	English
<b>Author(s)</b>	Giorgia Bassi, IIT-CNR Ilaria Matteucci, IIT-CNR
<b>With contributions by:</b>	<author, section(s)>

# Table of Contents

1	Target info	3
2	Lesson 2 – Game Based Learning	4

# 1 Target info

**Main tool:** Video game “Nabbovaldo and the blackmail from cyberspace” and standard group games.

**Learning Context:**


- Ages 10-13
- 20-25 students
- 1 hour
- Location: classroom with projector or screen visible to all students
- Resources:
  - Internet-connected computer for instructor
  - NABBOVALDO game with lesson materials
  - Whiteboard
  - Paper and writing instruments for students


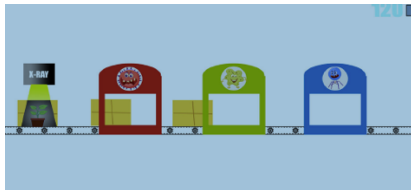
**Objectives:**

- The game introduces children to strategies for protecting against cyber attackers.
- The game introduces children to detecting and implementing actions against basic cyber-attacks.
- The game introduces children to understanding basic cyber threats.
- The game introduces children to basic prevention technologies.
- The game introduces children to using software tools to protect digital devices.
- The game introduces children to strategies to protect their personal information while surfing the web.

## 2 Lesson 2 – Game Based Learning

**Methodological premise:** For educational use of Nabbovaldo videogame in the classroom, it is recommended to assign the task of playing the videogame (a single player) independently at home. This allows pupils to focus on specific characters and scenes during the lesson in the class, even simply by referring to their pictures. the lesson will then take place according to a flipped classroom approach.

Activity	Time	Details	Learning Goal	Extras
Introduction	3 min	<p>Indicate to class that the topic for the day is going to be about how to create strong password.</p> <p>Elicit one example of bad behavior to the board, e.g. a weak PIN to access to the own device.</p> <p>Introduce vocabulary: password, credentials, firewall, malware, privacy</p>	Introduction of the lesson focus	
Group game	15 min	<p>Place the students in small groups (4 students) and ask them to come up with a song they like and consider the first letter of the words that compose one sentence of its text in order to create an acronym.</p> <p>The teacher asks each group to share the acronym and the other groups have to guess the song.</p> <p>The teacher explains that each acronym could be the starting point to create a good password (complex but easy to remember).</p>	Password	
Nabbovaldo - Chapter 2	10 min	<p>Introduce the videogame Nabbovaldo by presenting main characters.</p> <p>Chapter 2 - Social Club Scene (characters: Men in Black). The Teacher introduces the importance of guaranteeing different access to different contents according to the rights of the person that is asking for the target resource. The different rights are presented as different passwords (credentials)</p> 	<ul style="list-style-type: none"> <li>• Authentication mechanisms</li> <li>• Password</li> </ul>	
Group game	15 min	<p>The teacher introduces basic concepts about cryptography, such as the "Caesar cipher".</p> <p>Place the students in small groups (4 students) and give them a sentence in plain text that has to be encrypted and then decrypted by using Caesar cipher (a paper artifact made of two concentric rings).</p>	Encryption mechanisms	

				
Nabbovaldo - Chapter 2	10 min	<p>Meme House: Protection by firewalls/Firewall minigame</p> <p>The mini-game consists of "sterilizing" in the right way a series of packages that proceed along a conveyor belt, some of which contain viruses</p> 	Firewall and browsers	
Review	5 min	<p>Teacher: "Today we learned about stronger password, how can we create a strong password?"</p> <p>"What is a password?"</p> <p>"What is cryptography?"</p> <p>"How can you use both cryptography?"</p>	Reinforcing the learning objectives	