DEVELOPING DIGITAL LITERACY AND DIGITAL SKILLS AMONG ROMA PUPILS

Curriculum for the second and third period of education in elementary school

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Prepared by: Rahela HOJNIK KELENC

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1. DEFINITION OF THE SUBJECT

The Covid-19 pandemic limited the possibilities for people-to-people interaction and had a major impact on the traditional delivery of education, and it created new challenges for educators as teaching moved overnight from the classroom to the digital environment, for which no one, teachers or students, was fully prepared. Primary school students had the biggest problem with the sudden transition to distance learning, who had the least developed digital competences of all individuals in school, and in many cases their parents were unable to help them with their distance education because of their poorly developed digital competences.

The Covid-19 pandemic has shown that in today's society we can no longer function smoothly without developed digital literacy and digital skills, which are integrated into all areas of our lives, from the start of our education onwards. In order to be successful in today's society, we need to understand both the functioning of ICT and the processes and concepts on which this technology is based. Developed digital skills and digital literacy are the basis for successful and inclusive learning, and at the same time mean unhindered integration into the wider social community. Laptops, smartphones, tablets and other portable digital devices have become easily accessible and often essential for almost everyone to use. As a result, information and communication technology (ICT) and its use are now an integral part of modern life. Given that the school system is closely linked to general social change, the digital transformation of society requires the urgent implementation of ICT in education in terms of developing students' digital competences and new teaching and learning strategies using digital tools.

The way the course works encourages creativity, collaboration and a particular way of thinking and acting. The knowledge acquired in this subject is transferable and applicable to all areas of human activity. They will also benefit students in other subjects and in later life. Digital literacy is part of the European Reference Framework of the 8 key competences and is now classified as a basic literacy, alongside native language skills and mathematical skills.

2. GENERAL OBJECTIVES

In the subject, students:

- build on their basic knowledge of digital devices, focusing on the desktop computer and its basic components, the laptop, the tablet and the mobile phone,
- know the different parts of a laptop and how they work,
- improve their knowledge of how to use the Internet and its possibilities, with a focus on e-etiquette,
- build on their knowledge of browsing the Internet and learn how to distinguish reliable from unreliable sources and the importance of keywords when searching for information,

- understand the concept of copyright when using Internet resources,
- learn about the usefulness and benefits of email, how to add attachments and photos to emails, and how to forward emails to new recipients,
- learn about Word and its features, with a focus on creating and editing text,
- learn about PowerPoint and how to make a presentation independently,
- learn about the concept and function of online classes and online classrooms used for distance learning,
- learn about the concept of video call/meeting and use video call/meeting applications independently (at least 3),
- develop the ability and responsibility to work as part of a group and build a positive self-image,
- are aware of the limitations of computer technology,
- learn about abstraction and simplification,
- develop creativity, precision and logical thinking,
- develop and enrich their vocabulary and take care of correct expression and professional terminology,
- understand the pitfalls of the Internet, how to use the Internet safely and the restrictions that apply to children.

3. COURSE STRUCTURE

The course consists of 5 modules:

1. Module 1: Digital Devices.
2. Module 2: Internet and e-etiquette.
3. Module 3: E-mail.
4. Module 4: Writing and formatting texts.
5. Module 5: Video calls/meetings.

The course is aimed at students in grades 4 to 9 of primary school, and should comprise 20 hours in each grade – in 4nd grade, students should learn the basics of each module, especially Modules 1 and 2; in 5th grade, they should learn Module 3; in 6th grade, Modules 4 and 5; and in 7th, 8th and 9th grade, they should build on their basic knowledge of each module.

Recommendation to teachers:

In 4th, 5th and 6th grade, students should be introduced to basic concepts and basic use of digital skills, while in 7th, 8th and 9th grade more emphasis should be placed on developing digital skills and digital literacy.

They should also allow students to try out digital devices for themselves and, of course, to combine digital devices – computer, tablet and mobile phone. Teachers should place a strong emphasis on understanding online safety and on finding and verifying the credibility of information that students find online. They should also warn students about the pitfalls of using the Internet, communicating with strangers, protecting personal data and, above all, the pitfalls of excessive use of and dependence on digital

devices. They should also make students aware of the opportunities to further explain learning content on YouTube, and let them know when to use digital devices and the Internet for learning.

The course is also suitable for cross-curricular integration with both natural and social sciences.

4. OPERATIONAL OBJECTIVES AND CONTENT
SECOND AND THIRD EDUCATIONAL PERIODS

AREA/TOPIC (MANDATORY AND/OR OPTIONAL)

Module 1: Digital devices					
4th Grade	*5th Grade*	*6th Grade*	*7th Grade*	*8th Grade*	*9th Grade*
Operational objective (the topics covered are colored differently according to the grade in which they are to be taught)					
Students:					

- Distinguish between digital devices and know their basic function.
- Know the parts of a desktop computer and their purpose.
- They can name and explain what each part of a computer is used for: monitor, speaker, central processing unit, printer, keyboard and mouse as basic parts of a desktop computer.
- Use keyboard and mouse independently.
- Use individual commands using the keyboard.
- They know how to turn the mobile phone on and off.
- Understand why excessive use of digital devices can be bad for their health.
- Use all digital devices independently, without needing the teachers help.
- Combine the use of different digital devices.
- Know the pitfalls of the Internet, communicating with strangers on different social networks, the consequences of sharing personal information.
- Understand what it means to be addicted to online devices and the consequences of this addiction.
- They are aware that to participate actively in the modern world, it is necessary to have developed digital skills and be digitally literate, and to be able to define both concepts; know the basic definition of digital literacy.

Module 2: Internet and e-etiquette					
4th Grade	*5th Grade*	*6th Grade*	*7th Grade*	*8th Grade*	*9th Grade*
Operational objective (the topics covered are colored differently according to the grade in which they are to be taught)					
Students:					

- Can explain what the Internet is and what we use it for.
- Learn about the benefits of the Internet.
- Know the rules of decent behavior on the Internet.
- Know the role and importance of social networks.
- Know the basics of communication on social networks and the importance of the messages they share with others.

- Understand why it is important to be clear when communicating on social networks.
- They understand that what they put on the World Wide Web is permanent.
- Learn how to protect privacy online.
- Know how to behave politely, responsibly and with respect for others on the Internet.
- Know at least 2 browsers on the Internet.
- Know how to use a browser independently.
- Independently search for the information they need online.
- They learn to distinguish between credible and non-credible information they find online.
- Understand the concept of a keyword.
- Use keywords independently and confidently when searching for information online.
- Understand why they need to remember usernames and passwords.
- They can access the online classroom independently.
- They are able to navigate the online classroom and find the subject and learning material being covered.
- Know their personal data and the dangers (pitfalls) of publishing it.
- Understand the pitfalls of excessive use of digital devices and the Internet.
- Know the important applications that can also be used for learning purposes.
- Understand the concept of copyright in the use of Internet resources.
- They are confident using email, browsers, online classrooms, searching for information on the web, communicating on social networks.

Module 3: E-mail.					
4th Grade	*5th Grade*	*6th Grade*	*7th Grade*	*8th Grade*	*9th Grade*

Operational objective (the topics covered are colored differently according to the grade in which they are to be taught)

Students:
- Learn about the function of email.
- Understand what it means to communicate by email and its benefits.
- Open an email account.
- Learn how to send and receive emails.
- Know how to add different attachments to an email message.
- Know when to respond to an email and when not to.
- Send emails independently.
- Distinguish between formal and informal emails.
- Know how to write formal and informal emails.
- Understand that emails can be checked on almost any digital device.
- Know how to log in to emails on different devices.
- They are aware that if they check their emails on a foreign device, they must log out after use.
- They understand what spam is.
- They know how to delete emails.
- They know how to save email messages.
- They know how to sort emails into individual folders.

Module 4: Writing and formatting text, the use of PowerPoint					
4th Grade	*5th Grade*	*6th Grade*	*7th Grade*	*8th Grade*	*9th Grade*
Operational objective (the topics covered are colored differently according to the grade in which they are to be taught)					
Students: • Learn about the Word text editor. • Know how to write a short text in Word. • Name the text in Word and save it on the desktop or in a folder of their choice. • Know how to delete text. • Know the different fonts and writing options. • Know how to format text. • They can insert a picture into a text. • They can insert a table and graph into a text. • Know how to create a table and graph. • Know how to use headings and the body of the text. • Know how to insert a text box. • Know how to insert a web clip. • Know how to insert an equation and a symbol. • Know how to use shapes. • Know how to make indents – left and right edges. • Understand what a page break means. • Know how to insert notes. • Know how to number pages. • Know how to insert and update the table of contents. • Know how to set the language of verification. • Know how to use comments. • Know where to look to see how many letters/words are in the text. • Use Work independently – independently write and edit text based on a pre-designed task. • They know what PowerPoint is for. • They know what a slide is. • They know how to set up the slide. • They know how to reset a slide. • Know how to make a presentation. • Know what a plan means in PPT. • Know how different animations can be used. • Know how to insert images, tables, videos into PPTs … • Understand and use transitions in PPT. • Use PowerPoint independently – independently write and edit text based on a pre-designed task.					

Module 5: Video call/meeting					
4th Grade	*5th Grade*	*6th Grade*	*7th Grade*	*8th Grade*	*9th Grade*

Operational objective (the topics covered are colored differently according to the grade in which they are to be taught)
Students: • Know what a video call/meeting is. • Know the Zoom app. • Know the Teams app. • Know Skype. • Know WhatsApp. • Understand the meaning of a group call in Messenger, Viber applications… • Use video calling/meeting apps. • Use group calling apps. • Learn to explain the concept and purpose of a video call/meeting. • They can explain how a video call/meeting works and what it is for. • Learn how to join and leave a video call/meeting in Zoom and Teams and the basic functions of both apps. • Independently join and leave a video call/meeting in Zoom and Teams and know the basic functions of both apps. • Confidently use video calling/meeting ang group calling apps. • Know how to organize a video call/meeting in Teams or Zoom. • Know the role of the moderator.

5. KNOWLEDGE STANDARS

The minimum knowledge standards are written in bold print.

Knowledge standards and **minimum knowledge standards**
Knowledge standards at the end of the second educational period.
• **The student distinguishes between digital devices and know their basic function.** • **The student knows the parts of a desktop computer and their purpose.** • The student can name and explain what each part of a computer is used for: monitor, speaker, central processing unit, printer, keyboard and mouse as basic parts of a desktop computer. • **The student independently uses the keyboard and mouse.** • The student knows how to turn off and on all digital devices available to him. • **The student understands and explains why the excessive use of digital devices can have a bad effect on his health.** • The student uses all digital devices independently, without the need for assistance from the teacher. • **The student can explain what the World Wide Web is and what we use it for.** • The student explains the benefits of the Internet. • The student explains the rules of decent behavior on the Internet. • **The student knows the role and importance of social networks.** • **The student knows how to protect his privacy online.** • The student uses a web browser independently.

- **The student independently accesses the online classroom.**
- The student orients himself in the online classroom and searches for the subject and learning material being discussed.
- The student can explain the concept of a keyword.
- **The student explains why he/she needs to remember usernames and passwords.**
- The student can explain the pitfalls of excessive use of digital devices and the Internet.
- **The student can explain the function of e-mail.**
- The student explains what it means to communicate by e-mail and what the advantages of email are.
- **The student opens and e-mail account.**
- **The student sends and receives e-mails.**
- The student is able to add different attachments to an e-mail message.
- The student explains when to respond to an e-mail and when not to.
- **The student know what Word text editor is for.**
- The student can write a short text in Word.
- **The student knows how to name and save text in Word on the desktop or in a folder of his/her choice.**
- **The student knows how to delete the text.**
- The student uses different fonts and writing options.
- The student knows how to format a text.
- **The student inserts a picture into the text.**
- The student inserts a table and a graph into the text.
- The student creates a table and a graph.
- The student knows how to use headings and the body of the text.
- The student knows how to insert a text box.
- The student can insert a web clip.
- The student can insert an equation and a symbol.
- The student knows how to use shapes.
- **The student knows PowerPoint.**
- The student can explain what a slide is.
- **The student knows how to set up a slide.**
- **The student can explain what a video call/meeting is.**
- **The student knows the Zoom app.**
- The student knows the Teams app.
- The student knows Skype.
- The student knows WhatsApp.
- **The student can explain what a group call is in Messenger, Viber …**
- **The student explains the concept and purpose of the video call/meeting.**
- The student joins and leaves a video call/meeting in Zoom and Teams and knows the basic functions of both apps.

Knowledge standards and **minimum knowledge standards**
Knowledge standards at the end of the third educational period.

- The student uses individual commands using the keyboard.
- The student combines the use of different digital devices.

- **The student knows the pitfalls of the Internet, communication with strangers on different social networks, the consequences of sharing personal information.**
- **The student understands and is able to explain what addiction to online devices means and what the consequences of said addiction are.**
- The student is aware that in order to participate actively in the modern world, it is necessary to have developed digital skills and to be digitally literate, while being able to define both concepts; know the basic definition of digital literacy.
- **The student knows and presents the basics of communication on social networks and the importance of the messages exchanged with others.**
- The student explains why it is necessary to be clear when communicating on social networks.
- **The student understands that what is published on the World Wide Web is permanent.**
- The student knows how to behave politely, responsibly and respect others on the Internet.
- **The student knows at least 2 internet browsers.**
- **The student independently searches for the necessary information online.**
- The student distinguishes between credible and non-credible information found online.
- The student uses keywords independently and confidently when searching for information on the web.
- **The student knows his/her personal data and the dangers of publishing it.**
- **The student knows important applications that he/she can also use for learning purposes.**
- The student understands and can explain the concept of copyright in the use of Internet resources.
- The student uses email, browsers, online classroom, searches for information on the web, communicate on social networks independently and confidently.
- **The student sends e-mails independently.**
- The student distinguishes between formal and informal e-mails and explains the difference between them.
- The student can write formal and informal e-mails.
- The student understands that e-mails can be checked on almost any digital device.
- The student is able to log in to e-mails on different devices.
- The student explains why on a foreign device, if he checks e-mail messages, he must log out after using it.
- The student understands what spam is.
- **The student knows how to delete e-mail messages.**
- The student knows how to save e-mail messages.
- The student knows how to sort e-mail messages into individual folders.
- The student knows how to make indents – left and right edges.
- The student explains what a page break means and uses it.
- The student knows how to insert notes.

- **The student knows how to number the pages.**
- **The student can insert a table of contents and update it.**
- The student can set the proofing language.
- The student knows how to use comments.
- The student knows where to look to see how many letters/words the text contains.
- The student uses Word independently – writes and edits the text independently based on a pre-prepared task.
- **The student knows how to reset the slide.**
- **The student can prepare a presentation.**
- The student explains or shows what a plan means in PPT.
- The student explains or shows how different animations can be used.
- The student shows how to insert a picture, tables, videos into the PPT…
- The student understands and uses transitions in PPT.
- The student uses PowerPoint independently – writes and edits a presentation independently based on a pre-prepared task.
- **The student independently uses applications for video calls/meetings.**
- **The student independently uses applications for group calls.**
- The student can explain how a video call/meeting works and what it is for.
- **The student independently logs in and out of a video call/meeting in the Zoom and Teams application and know the basic functions of both apps.**
- The student is proficient in using applications for video calls/meetings and group calls.
- The student can organize a video call/meeting in the Teams or Zoom application.
- The student knows the role of the moderator/facilitator of a meeting/video call.

6. DIDACTIC RECOMMENDATIONS

6.1 ACHIEVING THE OBJECTIVES OF THE SUBJECT

The teacher's key role in teaching is to create a supportive learning environment and circumstances that enable students to discover, build and shape knowledge and to develop criticality and responsibility.

The objectives of the curriculum are to introduce and develop basic digital literacy and digital skills and to understand the basis of both concepts. At the same time, it provides students with a basic introduction to basic digital devices, especially those they will encounter in their lives, and how to use them. In the course Developing Digital Literacy and Digital Skills among Roma Pupils, we create conditions in which Roma pupils (and others) can acquire the basics of digital literacy and digital skills, which will enable the further development of digital competences, and the desire to continue learning them. At the same time, we want to encourage independent research among the students.

Lessons should be based on students' active learning, and it is recommended that the focus should be on student activities that enable this to happen. It is advisable to take into account the background knowledge of each individual student, which is crucial for acquiring new, better quality knowledge through constructivist teaching. We suggest that the individual learning units be designed so that they can be completed in 45 minutes, following the principle from easy to difficult. We recommend that individual units are oriented towards a single activity.

The main guiding principle for teaching should be to think about how to take different didactic approaches as a challenge, with room for innovative approaches to teaching as well as for achieving minimum standards of knowledge. Through thoughtful lesson planning and the selection of appropriate activities, ensure that students acquire content knowledge, which you build on by practicing procedures and skills. At the same time, remember to develop a positive attitude towards digital literacy and digital skills.

The teacher's role should also be to create the conditions that motivate pupils to acquire new knowledge and encourage them to make sense of what they have learned outside school, in their everyday lives. Use examples from everyday life that students can make sense of, so most of your lessons should be experimental.

Lessons should communicate and inculcate a positive attitude towards oneself, others and the environment, and students should develop curiosity and maintain objectivity, criticality, accuracy and systematicity.

6.2 INDIVIDUALISATION AND DIFFERENTIATION

Differentiate lessons for students according to their abilities and other specificities in the planning, implementation and testing phases. Pay particular attention to specific groups and individuals.

Keep the following concepts in mind:

- Discovering and working with gifted students.
- The concept of working with children with learning difficulties.
- The concept of working with students with deficits in specific areas of learning.

6.3 CROSS-CURRICULAR CONNECTION

The curriculum offers several possibilities for cross-curricular planning and delivery of lessons. Cross-curricular connection is not only about linking content (related concepts), but also about enabling students to develop skills that are useful in different contexts.

The subject can be linked to various other subjects in the second and third educational periods.