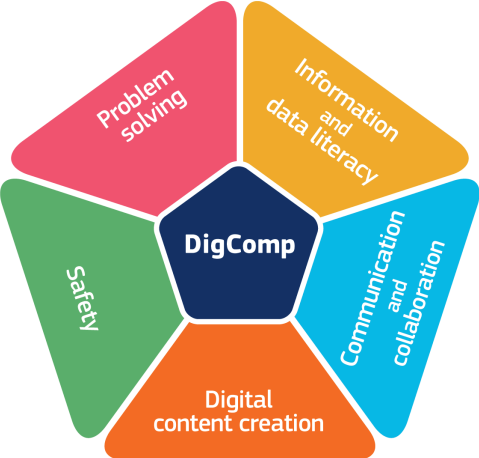


## RECOMMENDATIONS FOR ACHIEVING PROFICIENCY LEVELS OF CHILDREN/PUPILS AS THEY DEVELOP THEIR DIGITAL COMPETENCE

	<p><b>Information and data literacy</b> refers to the knowledge, skills and attitudes involved in developing the ability to acquire, evaluate, store, retrieve and manage data and information.</p>	<p><b>Communication and collaboration</b> refers to the knowledge, skills and attitudes involved in developing the ability to communicate and collaborate through interaction while using digital technologies to share and co-create information and content, to respect copyright law, to encourage proactive citizens to practice netiquette, maintain their reputation and manage their digital identity.</p>	<p><b>Creating digital content</b> refers to the knowledge, skills and attitudes involved in developing the ability to develop digital content, upgrade the existing content, understand and observe copyright and licensing rules and engage in programming.</p>	<p><b>Security</b> refers to the knowledge, skills and attitudes involved in developing the ability to protect devices, digital data, personal data and privacy as well as to look after one's health and wellbeing.</p>	<p><b>Problem solving</b> refers to the knowledge, skills and attitudes involved in developing the ability to solve technical problems, provide technological responses, use digital technology creatively and maintain awareness of digital competence development.</p>
<p><i>Handbook: Facilitating learners' digital competence - Expert background and recommendations, NEIS, 2023</i></p>					

## RECOMMENDATIONS FOR ACHIEVING CHILDREN'S DIGITAL COMPETENCE PROFICIENCY LEVELS IN PRE-SCHOOL EDUCATION

The development of children's digital competence begins as soon as they come into contact with digital technology. In the field of pre-school education, the development of digital competence begins at the basic, first and second levels according to DigCimp 2.2 (Vuorikari et al., 2022), as children perform simple tasks using digital technology in concrete situations through imitation, with the guidance of educators or even independently if a digital device is not connected to the internet.

*The definition is indicative and individual learning groups can be followed by working at a higher level in certain fields if they show a higher level of proficiency in achieving digital competence (Handbook: Facilitating learners' digital competence - Expert background and recommendations, NEIS, 2023)*

<p>In the field of INFORMATION AND COMMUNICATION literacy, children in specific situations (e.g. before a trip) recognise the need to find the desired data, information or digital content in digital environments. With simple searching, children can find, for example, data on the weather, location and landmarks etc. with the guidance of educators.</p>	<p>In the field of COMMUNICATION AND COLLABORATION, children in specific circumstances (communication with a child who has been absent for a longer period of time or connecting with a group of children from a distant kindergarten etc.) recognise simple digital means of communication and collaborative digital tools and use them together with educators. In the process, educators teach children how to recognise digital identity, how to maintain their reputation, which personal data to protect and how to communicate respectfully.</p>	<p>In the field of CREATING DIGITAL CONTENT, children can recognise and use simple ways to create digital content in various formats in order to express themselves creatively. By altering the existing digital content, children can create new content according to their own ideas. By doing so, children can learn simple rules of citing authors and sources as well as using licences. Children also become familiar with the use of simple commands and can use these to perform tasks on the computer.</p>	<p>In the field of SECURITY, children gradually recognise the impact of digital technology on humans and the environment. They also learn how to handle digital devices safely in digital environments. They learn which personal data need to be protected, how to recognise risks and how to act in unpleasant situations, whom to turn to for help and protection, and how to protect their privacy, their reputation and the reputation of others. While using digital technology, they can look after their health and wellbeing. They can also learn how to handle digital technologies properly in order to protect the environment.</p>	<p>In the field of PROBLEM SOLVING, children can recognise simple technical problems, familiarise themselves with simple digital tools and find simple solutions. They become familiar with simple ways of adjusting the digital environment according to their needs and purposes. They become familiar with simple digital tools and digital environments for creating, altering or improving the existing things they use on their own or in a group with the guidance of educators. They observe and recognise where and how they can make improvements in the digital field. They are included in the creation, assessment and self-assessment of proofs in the development process and learning (video recordings, photographs, audio recordings and their e-portfolios etc.).</p>
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## RECOMMENDATIONS FOR ACHIEVING PUPILS' DIGITAL COMPETENCE PROFICIENCY LEVELS IN THE FIRST AND SECOND EDUCATIONAL PERIOD OF PRIMARY SCHOOL

A child's first steps in the development of digital competence are made in contact with digital technology already before entering primary school. **In the first educational period of primary school**, the planned development of digital competence continues at the basic, first and second level according to DigComp 2.2 (Vuorikari et al., 2022), as children already perform simple tasks using digital technology in concrete situations through imitation, with the guidance of others, educators, teachers or even independently.

*The definition is indicative and individual learning groups can be followed by working at a higher level in certain fields if they show a higher level of proficiency in achieving digital competence (Handbook: Facilitating learners' digital competence - Expert background and recommendations, NEIS, 2023)*

<p>In the field of INFORMATION AND COMMUNICATION LITERACY, pupils can recognise the need to find the desired data, information or digital content in digital environments. They can find them with simple searching and they can describe the path taken in their search. In the mean time, they learn how to access the data again, as well as information or digital content that was accessed previously. While searching, they learn to recognise the credibility and reliability of everyday sources of data, information and digital content. They can save any information found previously for further use and simply organise it in folders or another simple environment.</p>	<p>In the field of COMMUNICATION AND COLLABORATION, pupils in given circumstances can recognise and use simple digital means of communication and collaborative digital tools and share data or information. Meanwhile, they become familiar with simple ways of citing authors and/or sources. With guidance and by using digital technologies, they recognise how they can participate in their environment with their initiatives as citizens. As they participate in digital environments, they can recognise digital identity, describe how to maintain their reputation, which personal data they need to, how to recognise their digital trace and how to interact with other participants respectfully.</p>	<p>In the field of CREATING DIGITAL CONTENT, pupils can recognise and use simple means to create digital content in various formats in order to express themselves creatively. By altering existing digital content, pupils can create new content according to their own ideas. By doing so, they learn simple rules related to the citation of authors and sources and the use of licences. They become familiar with the use of simple commands and can use these to perform simple tasks on the computer.</p>	<p>In the field of SECURITY, children can recognise the impact of digital technology on humans and the environment. They also learn how to handle digital devices safely in digital environments. They learn which personal data need to be protected, which data they can share with others in digital environments, how to recognise risks and how to act in unpleasant situations, whom to turn to for help and protection, how to protect their digital identity, their privacy, reputation and the reputation of others. For social inclusion, they can use simple digital technologies. While using digital technologies, they can look after their health and wellbeing. They can also recognise how to use digital technologies properly in order to protect the environment.</p>	<p>In the field of PROBLEM SOLVING, pupils can recognise simple technical problems, they become familiar with simple digital tools and they can search for simple solutions. They become familiar with, and use, simple ways of adjusting their digital environment according to their needs and purposes. They become familiar with simple digital tools and digital environments for creating, altering and improving things that exist and use them on their own or within a group. They observe and recognise where and how they can make improvements in the digital field.</p>
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## RECOMMENDATIONS FOR ACHIEVING PUPILS' DIGITAL COMPETENCE PROFICIENCY LEVELS IN THE SECOND EDUCATIONAL PERIOD OF PRIMARY SCHOOL

In the **second educational period of primary school**, children develop digital competence at the medium, third level according to DigComp 2.2 (Vuorikari idr., 2022) as they use digital technologies while independently performing simple tasks and solving simple problems.

*The definition of the level achieved is indicative and depends on the learning group and individuals within the group and their digital competence proficiency level.*

<p>In the field of INFORMATION AND COMMUNICATION LITERACY, pupils can describe what they find in digital environments and why. While performing a simple search of data, information or digital content, they can explain how they found them, how to access them and navigate between them. They can evaluate the sources used as well as the data, information or digital content found. They can also save and organise them in a simple way and in a structured environment with the ability to retrieve them again as required.</p>	<p>In the field of COMMUNICATION AND COLLABORATION, pupils can use common ways of interaction in order to communicate and collaborate. While engaging in communication and collaboration, they are able to behave respectfully and culturally in various social situations. They can use the means of communication, digital tools or digital environments appropriate for the situation. They can use common digital technologies for sharing data, information or digital content. In doing so, they observe ethical conduct and use common ways of citing authors and sources. For proactive citizenship, they use the services available for this purpose. They maintain their reputation and reputation of others, they can protect their digital identity and they can manage their digital trace.</p>	<p>In the field of CREATING DIGITAL CONTENT, pupils can create various digital content in common formats usual for documents, photographs, video recordings, etc. Using digital tools, they can alter the digital content already created by including new ideas while citing sources and authors in the usual manner and using licences ethically. They can use and explain common commands for solving simple problems related to a computer system.</p>	<p>In the field of SECURITY, pupils are becoming familiar with the impact of digital technology on humans and the environment. They know how to handle digital devices safely in digital environments. By acting properly in digital environments, they protect their personal data and they are familiar with simple privacy statements in which they agree with the use of personal data in the digital environment. They can share data ethically and protect their own privacy and the privacy of others as well as their digital identity and reputation. While using digital technology, they can look after their health and wellbeing. They also know how to protect the environment by handling digital technologies properly.</p>	<p>In the field of PROBLEM SOLVING, pupils can recognise common technical problems and eliminate them by addressing them in the usual way. They can use common ways of adjusting their digital environment according to their needs and purposes. They can use common digital tools and digital environments to create, alter and improve the existing things they use on their own or within a group. They can monitor their own development in the digital field and improve it.</p>
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## RECOMMENDATIONS FOR ACHIEVING PUPILS' DIGITAL COMPETENCE PROFICIENCY LEVELS IN THE THIRD EDUCATIONAL PERIOD OF PRIMARY SCHOOL

In the **third educational period of primary school**, pupils develop digital competence at the medium, fourth level according to DigComp 2.2 (Vuorikari et al., 2022) as they independently use digital technologies while performing new tasks and solving new problems.

<p>In the field of INFORMATION AND DATA LITERACY, pupils can explain what they search for in digital environments and why. They can find data, information or digital content through simple searching in digital environments, they can explain how to access them and navigate between them and they can explain their search strategy. They can analyse sources, data, information or digital content, compare and assess them from the perspective of credibility and applicability. They can organise the results of their searches and save them in a structured environment for further use.</p>	<p>In the field of COMMUNICATION AND COLLABORATION, pupils can select various means of communication, digital tools and digital environments for interaction in the society according to their needs. While doing so, they behave respectfully and culturally in communication and collaboration in various social situations. In sharing sources, data, information or digital content, they can select the most appropriate digital technologies, having regard to ethical conduct and using conventional methods of citing sources and authors. For practicing proactive citizenship, they learn how to use proper digital services. They can maintain their own reputation and reputation of others, they can protect their digital identity, they can distinguish digital identities and manage their own digital trace which they create using various digital tools and digital environments.</p>	<p>In the field of CREATING DIGITAL CONTENT, pupils ethically create and edit digital content in various formats while citing sources and authors properly and practise the proper use of licences. They can alter the digital content already created by using fresh ideas, proper digital tools and proper digital environments, which they discuss with others. They can use commands to solve a given or specific problem related to a computer system.</p>	<p>In the field of SECURITY, pupils are becoming familiar with the impact of digital technology on humans and the environment. They can handle digital devices safely, also in digital environments, and can properly select the manner of protecting their devices and digital content. They can protect personal data and privacy by appropriate conduct in digital environments, they are familiar with privacy statements on the use of collected personal data. They discuss the issues of protecting health and the environmental with others. While using digital technology, they can look after their health and wellbeing. They protect the environment by properly handling digital technologies.</p>	<p>In the field of PROBLEM SOLVING, pupils can distinguish various technical problems and find solutions to eliminate them. They can explain their selection of digital tools and digital environments and they can adjust them according to their needs and purposes. In order to create, alter or improve the things that already exist, they can select the most appropriate means from among the existing digital tools and digital environments. They can solve complex problems in digital environments individually or within a group.</p>
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## RECOMMENDATIONS FOR ACHIEVING DIGITAL COMPETENCE PROFICIENCY LEVELS OF PUPILS IN SECONDARY SCHOOL

In **secondary school**, pupils develop their digital competence at high, fifth or sixth levels according to DigComp 2.2 (Vuorikari idr., 2022) as they independently use and assess digital technologies for solving complex problems while also helping others.

<p>In the field of INFORMATION AND DATA LITERACY, pupils can estimate what to search for in digital environments and explain why. They can search for data, information or digital content in digital environments and they can explain how to access them and navigate between them and they can also modify their searching strategy as required. They can critically assess the credibility and reliability of sources, data, information or digital content and organise and save them in such a way they can retrieve and save them in a structured environment as easily as possible.</p>	<p>In the field of COMMUNICATION AND COLLABORATION, pupils can select and adjust appropriate digital means of communication, digital tools and digital environments for social interaction. By doing so, they behave respectfully and culturally when communicating and collaborating in various social situations. As they create and share sources, data, information or digital content, they can select and adjust the most appropriate digital technologies. By doing so, they can take into account their ethical conduct and they can use the appropriate manner of citing sources and authors. In order to engage in proactive citizenship, they can use the relevant digital services. They can maintain their own reputation as well as the reputation of others, they can protect their digital identity, they can distinguish various digital identities and manage their own digital trace which they create by using various digital tools and digital environments.</p>	<p>In the field of CREATING DIGITAL CONTENT, pupils can ethically create and edit digital content in the most suitable format, cite sources and authors properly and use licences correctly. They can alter the digital content already created adequately when using new ideas, the correct digital tools and proper digital environments. They can use commands for solving a given or specific problems related to a computer system.</p>	<p>In the field of SECURITY, pupils are becoming familiar with the impact of digital technologies on humans and the environment. They can handle digital devices in digital environments safely and they can select the proper methods for protecting their devices and digital content. Through responsible behaviour in digital environments, pupils can protect their personal data and privacy and they can use privacy statements properly on using personal data. While using digital technology, they can look after their health and wellbeing. They protect the environment by handling digital technologies responsibly.</p>	<p>In the field of PROBLEM SOLVING, pupils can recognise the seriousness of technical problems and come up with proper solutions to eliminate them. They can select the most relevant digital tools or digital environments and adjust them in order to create, alter or improve the existing things. They can solve complex problems in digital environments individually or within a group. They can assess their digital competence and plan their own development.</p>
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