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Digitisation at school

Basic Digital Education & Digital Action Plan in Austria

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Self Driving

Digitisation affects all aspects of life

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Digitisation is causing disruptive change(s) in our world ...

... including the world of our children and that of our schools!

Children grow up in a digitised world

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Digital transformation at school



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Actions of the 8-Point Plan



Actions of the 8-Point Plan



Digital devices for students

- Years 5-8
 - ca. 80,000 devices per year
 - 75% financed by government
- Equal opportunities for students as regards the availability of mobile devices
- Schools choose one type of device:
 - Notebook/Chromebook
 - Tablet

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Maps Navigation

App Store

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Focus on pedagogy Developing digital competences vs. digital-inclusive didactics





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Focus on pedagogy Developing digital competences

Primary schools

Lower secondary schools Upper secondary schools

- "Learn to think, learn to solve problems"
- Integrated in subjects
- Compulsory subject Digital Education
- Dedicated lessons





Various subjects on informatics

• Dedicated lessons





Compulsory Activity Basic Digital Education since 2018

- Autonomous implementation within certain parameters:
 - Type of implementation (within specially designated lessons or integrated into existing subjects)
 - Amount of lessons (between 2 and 4 lessons per week within lower secondary school)



New compulsory subject from 2022 onwards

- 5th to 8th grade
- Total of at least 4 additional lessons within lower secondary school
- Increase of the total number of lessons per week in lower secondary education by 4 lessons
- Need for teachers: **150 new teaching posts**

Main aspects of curriculum I

- Basic Digital Education aims at promoting media competence and informatics competence in order to enable students to orientate themselves and act in a responsible manner in the 21st century.
- Concept based on the Frankfurt Triangle:
 - How do digital technologies work? (T)
 - What social interactions result from their use? (G)
 - Which options for interaction and action do students have? (I)

Main aspects of curriculum II

- Five competence domains are used to help structure the descriptors:
 - Orientation
 - Information
 - Communication
 - Production
 - Action



Step-by-step introduction of the new compulsory subject

- Initiative on digital learning devices
- Utmost degree of consistency and commitment regarding the development of digital competences -> timely introduction of the new compulsory subject
- Introduced simultaneously for the 5th, 6th and 7th grades as of the school year 2022/23

Teacher training and qualification

- Short-term: MOOC "Digital Basic Education"
- Medium-term: University course at University Colleges of Teacher Education
 - Starting from Academic Year 2022/23
 - 30 EC in scope
 - Opportunities regarding the recognition of already acquired qualifications
- Long-term: Introduction of new teacher training programme at teacher training institutions

Example of the consistent development of competences

Area of competence Information: Dealing responsibly with data, information and information systems

- **1st grade:** "Students can name different search engines and explain how a search engine works in general." (T)
- 2nd grade: "Students can carry out simple Internet searches using the basic functions of a search engine and assess the quality of the information found on the basis of fundamental criteria." (I)

Example of the consistent development of competences

Area of competence Information: Dealing responsibly with data, information and information systems

- **3rd grade:** "Students can explain conditions, advantages and disadvantages of personalised search routines for their own lives and for society respectively." (G)
- 4th grade: "Students can explain the risks of collecting, analysing and linking user data with regard to carelessness, misuse and surveillance and can behave responsibly." (G)

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The filter bubble phenomenon



Illustration: <u>Measuring the Filter Bubble: How Google is</u> <u>influencing what you click (spreadprivacy.com)</u>

Example of the consistent development of competences

Area of competence **Production:** Creating and publishing content digitally, designing algorithms and programming

- 1st grade: "Students can understand and execute clear instructions for action (algorithms) as well as formulate them by themselves". (T)
- **2nd grade:** "Students can create programs that contain sequences, events, and loops, as well as test and debug them (detect and correct errors)." (T)

Example of the consistent development of competences

Area of competence **Production:** Creating and publishing content digitally, designing algorithms and programming

- **3rd grade:** "Students can design and iteratively develop programs that combine control structures, including nested loops and compound conditionals." (T)
- 4th grade: "Students can demonstrate elements of computational thinking in examples and use them to solve problems. They know how to implement approaches to solving problems in programming language." (T)

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Creating with Scratch



Illustration:

https://de.coursera.org/projects/introduction-tobasic-game-development-using-scratch

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Thank You For Your Atten

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