HELLO RUBY

EDUCATION

OVERVIEW

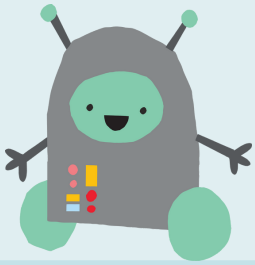
Hello Ruby Education is a novel approach to ICT education from Finland.

The programme is targeted for preschool and grades 1–5 to support understanding of ICT concepts, responsible and effective use of ICT, and creatively producing digital content.

Hello Ruby Education supports students' positive attitude towards ICT, and guides students in understanding the importance of ICT in their lives and more broadly in society.

The Hello Ruby programme explores topical and relevant ICT units including responsible use of computers, artificial intelligence, coding and digital storytelling.

Our vision is to equip young students with the skills and attitude to excel in our constantly changing information society.



Students who enter into the world of Hello Ruby are guided to become innovative and capable builders of our digital future.

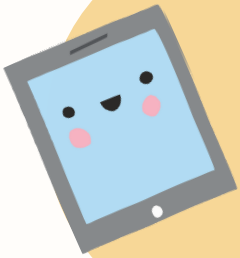
This programme develops:

- Technical competences
- Critical and logical thinking
- Problem-solving skills
- Creativity
- Ability to innovate

Upon completion of the programme students are able to:

- Understand the core concepts of computers and the internet
- Use ICT in a responsible and effective manner
- Create digital content
- Master the basics of computational thinking
- Understand the core concepts and uses of AI.

DELIVERY



All programme materials can be found on the digital platform, which provides separate access portals for teachers, and for students along with their parents.

The digital platform also contains a portfolio which serves as the main assessment tool. The purpose of the portfolio is to provide an opportunity to practise formative assessment for both the teacher and the students, share the work with parents, and to enable the students to return to their work later - even during later grades.

At the end of each academic year, a reflection and presentation of the lessons learnt is exhibited in a showcase event.

Additionally, the students are provided with Home Adventure activities for each grade.

The diverse working methods focus both on individual and collaborative work. The lesson plans highlight action-based and project-based assignments. Moreover, reflective and open-ended discussions are emphasised.

ASSESSMENTS

Formative Assessment

During the academic year, the teacher provides continuous and supportive feedback. The students practise versatile self and peer assessment methods as an essential part of each lesson, including using the digital portfolio.

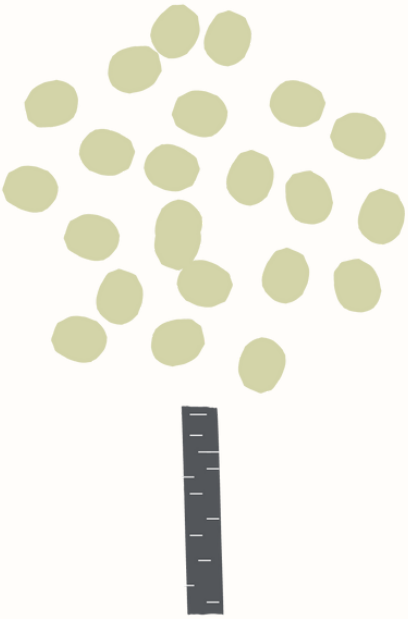
Formative assessment makes the learning process visible, promotes learning, and helps the pupils to understand:

- what they are expected to learn
- what they have already learned
- how they can promote their own learning and improve their performance.

Summative Assessment

At the end of the academic year, the students are awarded certificates for the completion of the programme for that grade level. The summative assessment is based on pass / no pass.

The success of students' work and performance is discussed in as versatile a manner as possible. Students are informed of the learning objectives, and are guided to reflect their progress both individually and with peers.



STRUCTURE

Unit 1: Understanding core concepts

The first unit concentrates on clarifying the core concepts of computers and the internet.
The learning activities are implemented offline.

What is a computer

- Variety of computers
- Peripherals
- Computer components
- 3D printing
- Hardware and software

Operating systems

- Most common operating systems
- Compatibility between operating systems
- Using peripherals

Computer operations

- On/off
- Charging
- Log in/log out
- Input/output
- File management
- Software applications
- Troubleshooting

Intranet/ Internet

- Routers
- Servers
- Clouds
- Digital platforms
- Search engines
- Request/ response
- Digital footprint
- Online security

Unit 2: Responsible and effective use of ICT

The second unit concentrates on responsible and effective use of ICT.
The learning activities are implemented both offline and online.

Recommended use of ICT (offline)

- Passwords
- Respectful interaction in digital environments
- Healthy use of ICT

Computer and Internet

- Peripherals
- Software
- Computer operations

Critical thinking in media contexts (offline)

- Interpretation
- Analysis
- Evaluation

Information management

- Gathering
- Evaluation
- Structuring and storage

The programme is inspired by the Hello Ruby book series, created by the Finnish author, illustrator and programmer Linda Liukas. To date the series of four books has been published in almost 40 languages all over the world.

Unit 3: Artificial Intelligence

The third unit concentrates on the core concepts and uses of AI.
The learning activities are implemented offline and online.

- Machine learning
- Applications of AI (tools, everyday AI)
- Ethical and effective usage

Unit 4: Coding

The fourth unit concentrates on developing computational thinking skills both offline and in visual coding environments.

Computational thinking skills

- Problem decomposition
- Pattern recognition
- Logical reasoning
- Algorithmic thinking
- Debugging techniques

Coding

- Coding languages
- Coding environments

Unit 5: Production and creativity

The fifth unit concentrates on creating digital content. The learning activities are implemented offline and online. Furthermore, a reflection and presentation of the lessons learned is exhibited in a showcase event.

Digital storytelling

- Creating a script
- Editing media files
- Multimedia production

Showcase event

- Reflection
- Presentation

EDUCATION

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