

Art Programming Basics - Reference to Finnish National Curriculum (2014), Ages 13-15

Learning objectives in Mathematics (p. 374-375)

- T7: To encourage the student to apply mathematics in other school subjects and in the society.
- T9: To guide the student to apply ICT in mathematics and problem solving.
- T16: To support the student in understanding geometrical concepts and the relations between them.
- T20: To guide the student to develop their algorithmic thinking and skills of applying mathematics and programming to solve problems.

Learning Objectives in Visual Arts (p. 426-427)

- T1: To encourage the student to observe art, environment and other visual culture and use diverse methods of producing visual content.
- T2: To encourage the student to discuss their and others' perceptions and justify his/her opinions.
- T3: To inspire the student to express their observations and thoughts visually in different contexts using different tools and ways of producing information.
- T4: To guide the student to apply different materials, technologies and ways of expression and to deepen their skills of producing visual content.
- T5: To guide the student to use inquiry-based approach in independent and collaborative work.

Transversal competence goals (p. 281-285)

- **L1: Thinking and learning to learn.**

“Cross-curricular, inquiry-based and active work on the phenomena of students’ interest is important not only for thinking skills, but also for motivation to learn and post-primary education choices.”

- **L4: Multiliteracy**

“Media literacy is deepened by participating and working with different media. Students are encouraged to express their views through a variety of means of communication.”

- **L5: ICT knowledge**

“Students are encouraged to use ICT on their own initiative in a variety of learning tasks and to choose the appropriate working methods and tools for different tasks. The aim is to deepen their understanding of the use and operation logic of various hardware, software and virtual services.”

“Students learn to systematize, organize and share files and to make various digital products independently and together. Programming is practiced as a part of studying various subjects”

- **L6: Working life skills and entrepreneurship**

In active learning situations, students learn to design work processes, set hypotheses, experiment with different alternatives, to draw conclusions and to find new solutions as circumstances change.