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Erasmus+
Programme Your Future



COMPUTATIONAL THINKING - LESSON SCRIPT

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Lesson information:	Subject:	Mathematics
	Duration:	45 min
	Grade:	4th and 5th
	Age:	10-11
	Topic:	Geometry, identifying polygons, classifying triangles
The curriculum specifications and requirements:	Finnish curriculum 2014, Grades from 3rd to 6th: S4 Geometry and measuring: “Getting familiar with points, segments, straights and angles. Practicing to draw, measure and classify angles.” “Classifying forms to polygons and to other forms, as well as exploring their properties. Taking a closer look to triangles, rectangles and a circle.”	
The aims of the lesson:	<ul style="list-style-type: none"> ● Pupils recognize different types of polygons. ● Pupils recognize different types of triangles. ● Pupils will get familiar with triangle and quadrilateral properties. ● Pupils are able to draw different polygons with computer (Scratch). 	
Previous knowledge:	<ul style="list-style-type: none"> ● Pupils know the concept of line, point and different angles. ● Pupils have an ability to measure and draw angles. 	
The forms of work:	<ul style="list-style-type: none"> ● Study conversation ● Brainstorming in pairs ● Individual working 	
The methods of work:	<ul style="list-style-type: none"> ● Study discussion ● Exercises on paper, pencil and protractor 	

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- Drawing with Scratch (computer)

Teaching aids:

- The document camera
- Projector for presentation
- Computers for pupils to use of Scratch.

The range of using ICT:

- Presenting
- Practising
- Programming
- Solving problems

The course of lesson:

- Teacher activities
- Pupil activities
- The schedule

1. Introduction
 - Checking previously learned knowledge, study conversation with pictures, document camera and projector

5 min
 2. Different types of polygons
 - Discussing and combining different types of polygons
 - Getting familiar with different kind of angles of polygons

5min
 3. Different types of triangles
 - Comparing and naming different types of triangles, showing with projector and document camera.

5min
 4. Polygon properties
 - Discussion about angles in different polygons. Finding connection between adding an angle and total sum of angles.
 - Discussion in pairs, drawing with document camera and projector.

5min
 5. Practising to calculate angles of polygons
 - Worksheet (attachment), pencil and protractor
 - Meanwhile the teacher puts Scratch instructions to the screen and shares the Scratch guide

15min
 6. Drawing polygons with Scratch (Windows laptops taken ready before the lesson starts)
 - Working individually or in pairs
 - **Advanced student peer support**

10min
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Specific information:

- Programs
- Links
- Etc

- Scratch: <https://scratch.mit.edu/>

Attachments:

- Worksheets
- Programs
- files necessary
- Etc

- Worksheet: Practising to calculate the angles of polygons (attachment)
 - Scratch instructions about drawing: Hei, Me koodataan!, Readme.fi 2015.
 - Common knowledge about coding basis: Reseptit OPSin käyttöön, PS-kustannus 2016
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