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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, circle
The curriculum specifications and requirements:	<p>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.”</p>	
The aims of the lesson:	<ul style="list-style-type: none"> ● Pupils recognize circle and the parts of it. ● Pupils recognize the radius and diameter of the circle. ● Pupils are able to calculate the radius with diameter and vice versa. ● Pupils are able to draw circles with compass. ● Pupils are able to draw circles with computer (Scratch). 	
Previous knowledge:	<ul style="list-style-type: none"> ● Pupils know the concept of line, point, angles and different polygons. 	
The forms of work:	<ul style="list-style-type: none"> ● Study discussion ● Working in pairs ● Individual working 	
The methods of work:	<ul style="list-style-type: none"> ● Kahoot quiz ● Study discussion ● Exercises on paper, pencil and compass 	

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- Drawing with Scratch (computer)

Teaching aids:	<ul style="list-style-type: none"> ● The document camera and projector for presentation of the subject ● Computers for pupils to use of Scratch. ● Lego Mindstorm robot for educated pupils to draw forms.
The range of using ICT:	<ul style="list-style-type: none"> ● Presenting, ● Practising ● solving problems
The course of lesson:	<ol style="list-style-type: none"> 1. Introduction <ul style="list-style-type: none"> ○ Checking previously learned knowledge with Kahoot quiz. ○ Pupils with own smartphones or tablets <p>10 min</p> 2. The concept of circle <ul style="list-style-type: none"> ○ Discussing and getting to know the parts of circle <p>5min</p> 3. Radius and diameter of the circle <ul style="list-style-type: none"> ○ Getting familiar with concepts ○ Calculating the radius using the diameter and vice versa ○ Study discussion with document camera and projector. <p>10min</p> 4. Practising to draw a circle with compass <ul style="list-style-type: none"> ○ Worksheet: Drawing circles and measuring the radius and the diameter of the circle. (attachment), pencil and compass ○ Meanwhile the teacher puts Scratch instructions to the screen and shares the Scratch guide <p>10 min</p> 5. Drawing circles with Scratch (Windows laptops taken ready before the lesson starts) <ul style="list-style-type: none"> ○ Working individually or in pairs <p>10 min</p>
Specific information:	<ul style="list-style-type: none"> ● www.kahoot.it ● https://scratch.mit.edu/
Attachments:	<ul style="list-style-type: none"> ● Worksheet: Drawing circles and measuring the radius and the diameter of the circle (attachment) ● Scratch instructions about drawing: Hei, Me koodataan!, Readme.fi 2015. ● Common knowledge about coding basis: Reseptit OPSin käyttöön, PS-kustannus 2016