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COMPUTATIONAL THINKING - LESSON SCRIPT

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Lesson information: Subject: Geography
Duration: 2x45 min
Grade/level: 3rd grade of middle school/3rd educational stage
Age: 15-16
Topic: The model of a map of Poland.

The curriculum specifications and requirements: The core curriculum of teaching Geography for the 3rd educational stage. Point 4. Location and the environment of Poland.
Pupil:

- characterizes the location of Poland in the world and in Europe on the basis of different maps, describes the administrative division of Poland, gives names and points names of voivodeships on the map.

The aims of the lesson: Pupil:

- knows the administrative division of Poland
- knows the capitals of voivodeships
- knows the area, population, population density in every voivodeship

Previous knowledge: There is no section in the core curriculum of teaching Geography for the 2nd educational stage (grades 4-6) concerning voivodeships.

The forms of work:

- working in pairs
- teamwork

The methods of work:

- decomposition
- modelling
- practical method
- demonstration
- cooperation on the project

Teaching aids:

- the ICT classroom with the access to the Internet (one computer for two students)
- the teacher's computer with projector and interactive board

- Inkscape program on each computer

The range of using ICT:

- searching for and processing information
 - presenting information in a graphic way, as a text or computer program
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The course of lesson:

- Teacher activities
- Pupil activities
- The schedule

1. Introduction - organisational activities.
Greeting the pupils, checking the register, giving the topic of the lesson and introducing the aims of the lesson.
2 min
 2. Reminding information about the location of Poland in the world and in Europe
(<http://www.epodreczniki.pl/reader/c/140282/v/latest/t/student-canon/m/iCkddUjtx4>) . The teacher displays the map of the world from <https://www.google.pl/maps> and enlarges it to the scale which contains the countries in Europe. Students point the location of Poland.
2 min
 3. Introduction to the administrative division of Poland
http://www.epodreczniki.pl/reader/c/140282/v/27/t/student-canon/m/i2N8kGWP80#i2N8kGWP80_d5e193
The teacher tells that the biggest unit of administrative division in Poland is a voivodeship. Next the teacher shows the map of Poland with the division into voivodeships (<http://www.mapyonline.pl/> lub http://www.epodreczniki.pl/reader/c/140282/v/27/t/student-canon/m/i2N8kGWP80#i2N8kGWP80_d5e244).
5 min
 4. Stating the problem:
Making a map of Poland divided into voivodeships.
Students are divided into groups. There are 16 voivodeships in Poland. On the basis of the size of the group the teacher matches the determined amount of voivodeships with the group.
5 min

Students make models of particular voivodeships in the graphic program Inkscape (they create the picture of voivodeship by copying contours or they cut indicated voivodeship from the available picture). Files should be saved with png or gif extension.
30 min
 5. Creating the map of Poland from the prepared voivodeships.
Students log on the Google platform. The teacher creates multimedia presentation "Voivodeships of Poland" on the Google disc and makes it available for students. Students insert their files with voivodeships' pictures and create one slide with the map of Poland. Next students search for information about the name of voivodeship city, the area of voivodeship, the population. Each group create one slide with the description of the voivodeship. Each group create an additional slide with above description of voivodeship. Students insert link to the indicated slide into the contour of voivodeship.
40 min
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6. Evaluation

Students start the display of presentation and test the correctness of task. The teacher projects created map on the board and checks it.

5 min

Specific information:

- Programs
- Links
- Etc

An interactive map can be created with the use of Scratch. It is more time-consuming because the student can add his own sprite (a picture of voivodship) , click Remix and Share and give a link to the next student .

Inkscape can be downloaded at:

<https://inkscape.org/en/download/>

All materials on e-podreczniki.pl are available under CC-BY 3.0 licence.

Attachments:

- Worksheets
- Programs
- files necessary
- Etc

<https://scratch.mit.edu/projects/159474359/>

The contour map of Poland (theMapOfPoland.png)
