SCENARIO		
Title	**Division of geometric figures**	
Summery	Students create a script that will assign individual geometric shapes to groups.	
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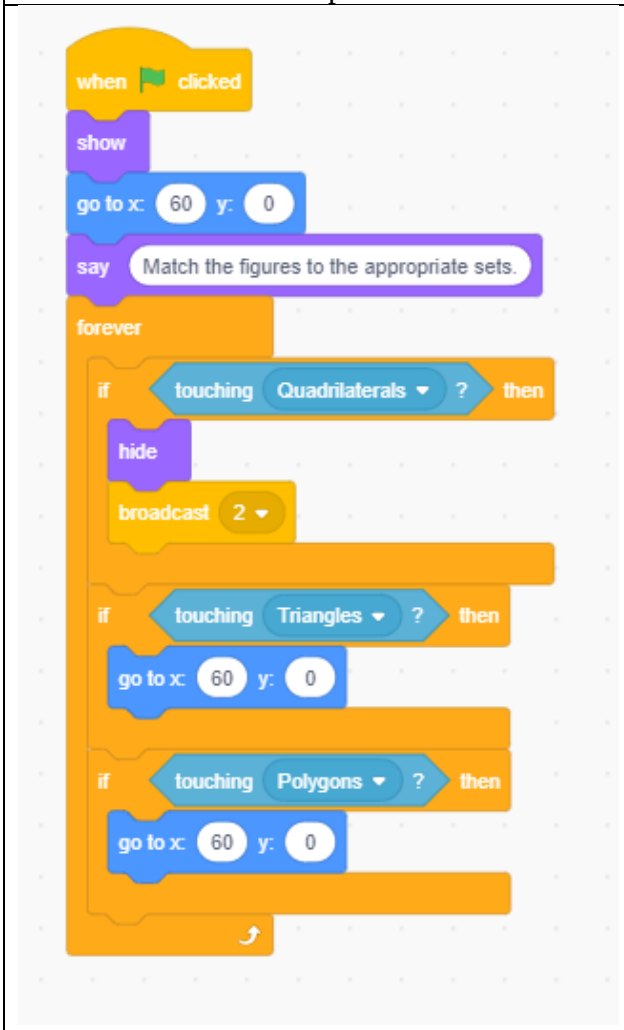
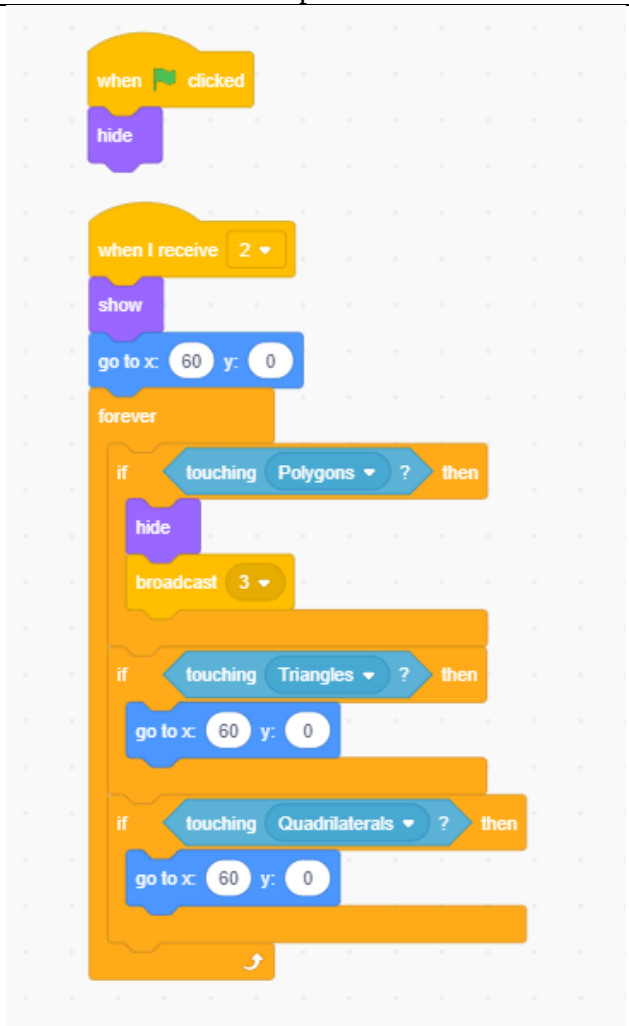
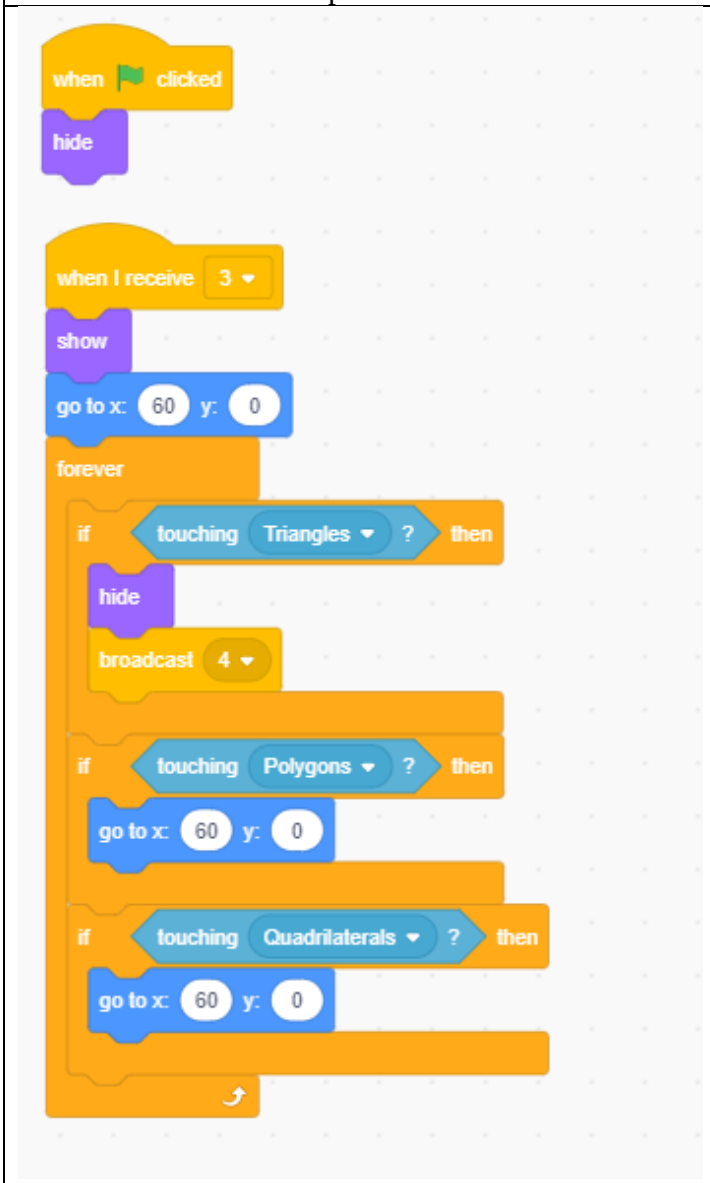
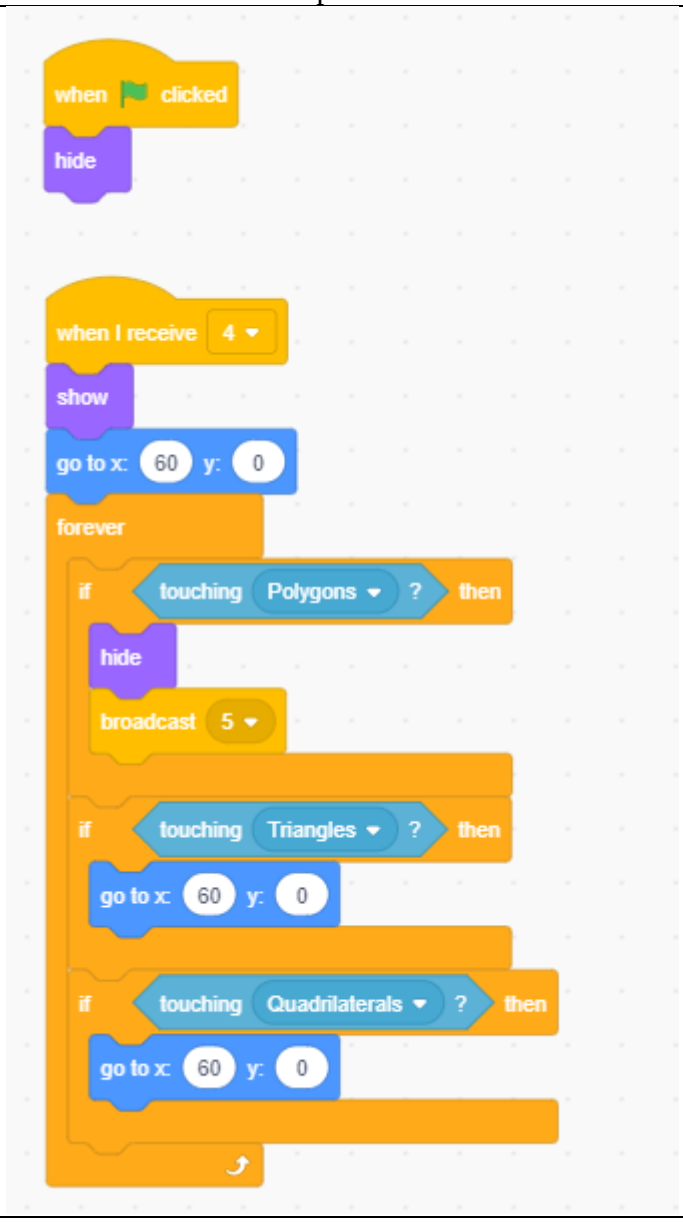
Didactic objectives
General objectives: - remind the division of geometric figures - learning function *if* **Detailed objectives:** - creating new sprites - creating an algorithm using function *if* - moving sprites around the stage
Physics☐ Mathematics☒ Information Technology☐ Robotics☐ Programming☒
Education Level: 10-12 years☒ 12-14 years☐
Problem Statement
What are polygons? How many angles have some geometric figures? How can the figures be divided?
BOM (Bill Of Materials needed)
- computer for each student - Scratch environment installed - multimedia board with a projector for presentation - sheets of paper, rulers, pencils - Internet access
Activity description
The scenario is planned for 4 lessons. **Course of classes:** 1. Organization in the classroom, assigning computer workstations to students, creating a folder on the computer disk for saving projects named student's name_class, for example Adam_IIA. 2. Exercise 1. Assigning figures to sets. a. creating three sprites on the stage, which will be sets of geometric figures - *triangles, quadrilaterals, polygons*.

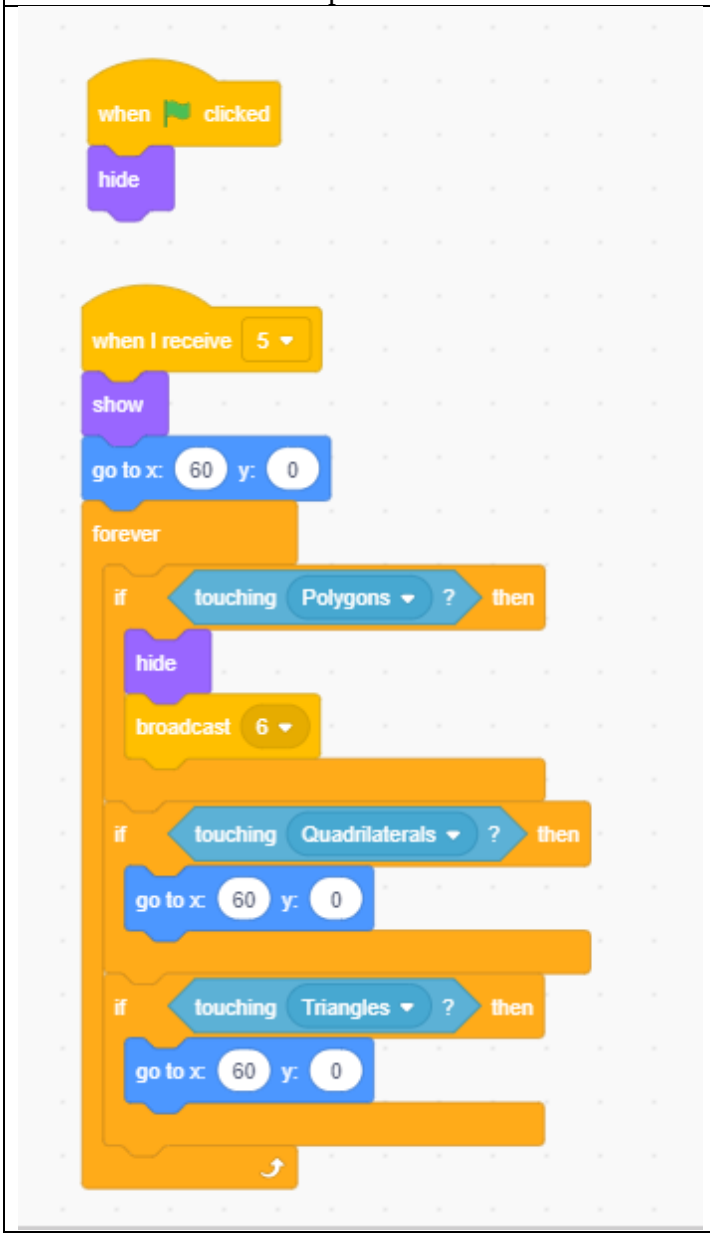
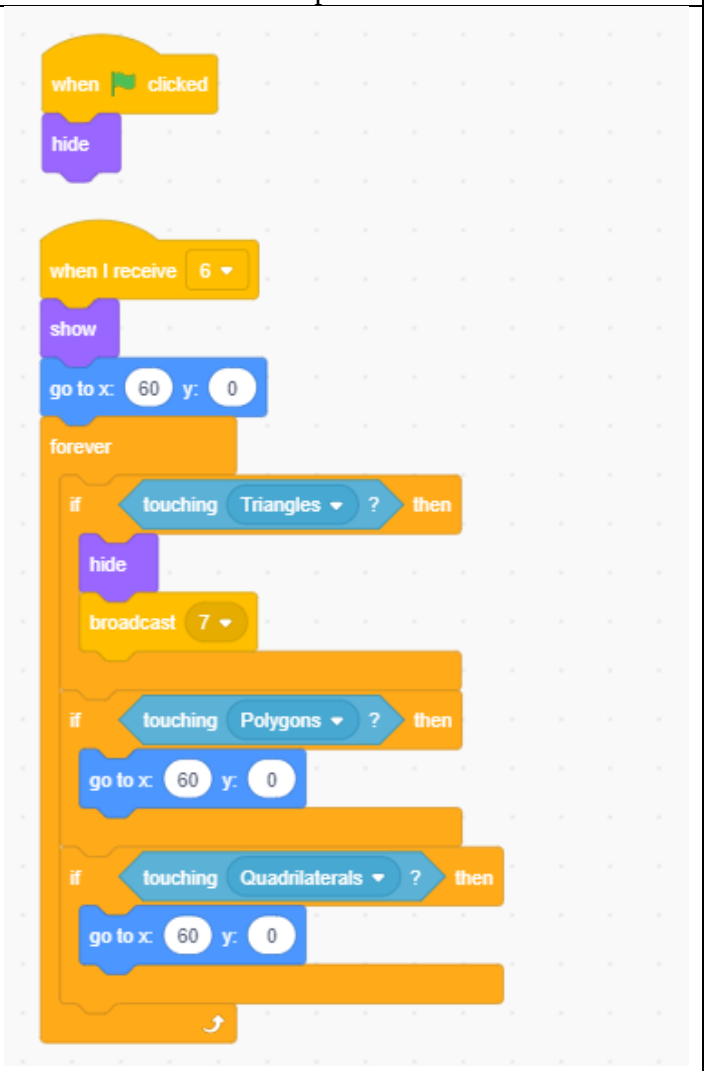
b. after the students have created the sets the teacher copies the set of 7 geometric figures to students' computers,
c. students add the figures as new sprites to the program,
d. every sprite that is a geometric figure should have its own algorithm, which will contain functions *forever, if, hide, show, say, touching* - according to the implementation and screen in the sources. Students should gradually find the appropriate functions on their own to make the algorithm work properly,
e. in addition, at the beginning of the program, a message about the task should be added - assign the figures to the appropriate sets and at the end the player should be informed about the end of the task,
f. project should be saved as project1.

3. Summary of the classes. Self-evaluation of students.

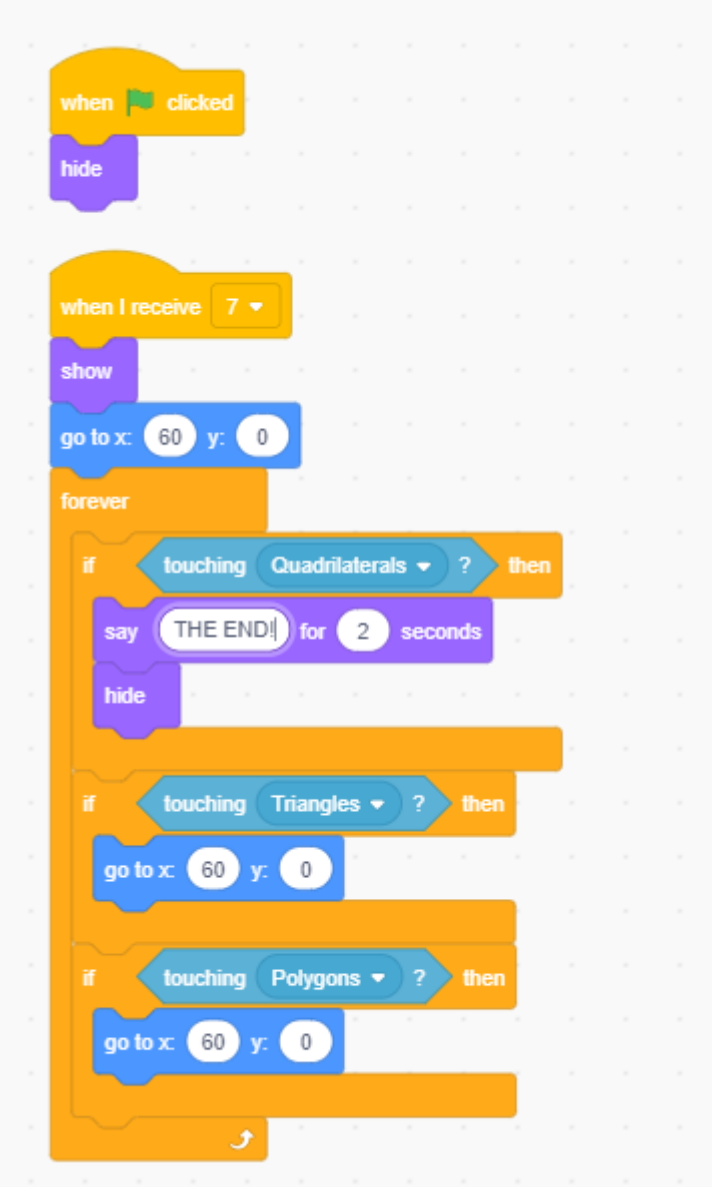
Resources

Sprite 1	Sprite nr 2
	

Sprite 3	Sprite 4
	

Sprite 5	Sprite 6
	

Sprite 7



Students' Evaluation

Evaluation tools:

- observation of students' work and their activities,
- students' self-assessment - what I have learned, what I can, what I would like to know, what algorithm I can create,
- program feasibility.

Bibliography

https://scratch.mit.edu/ R. Kulesza, S. Langa, D. Leśniakiewicz, P. Pełka „Młodzi giganci programowania. Scratch” wyd. Helion
Scalability
The exercise can be extended with additional messages if the figure is incorrectly assigned, or a sound in the form of applause if the sprite is correctly assigned.
More information
Scenario was created as part of the project "InnoExperiment - Innovative Approach to Teaching through Experiment" carried out under Key Action 2. Erasmus +. The scenario will be made available on the project platform.