

SCENARIO	
Title	Title Robot in a maze.
summary	Students are to write a program for the robot that is to go through the maze.
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General objectives:

the student knows the concepts: algorithm, instruction, turning activities into instructions, reminder and consolidation of the LEGO MINDSTORMS EV3 Home Edition program, developing a solution project and its implementation using the program.

Specific objectives:

knows how to run the program and what the LEGO MINDSTORMS EV3 Home Edition window looks like, knows the basic blocks for building algorithms in the program, knows how to create simple algorithms in the program, can write instructions to individual blocks, knows how to run an algorithm built in the program, the student can move the robot around the maze, student is able to build simple scripts, the student understands and knows how to apply loop instructions to repetitive activities.

Physics Mathematics Computer science Robotics Programming

Educational level: 10-12 years old 12-14 years old

Problem Statement

Arrange a program with which the robot can overcome the maze?

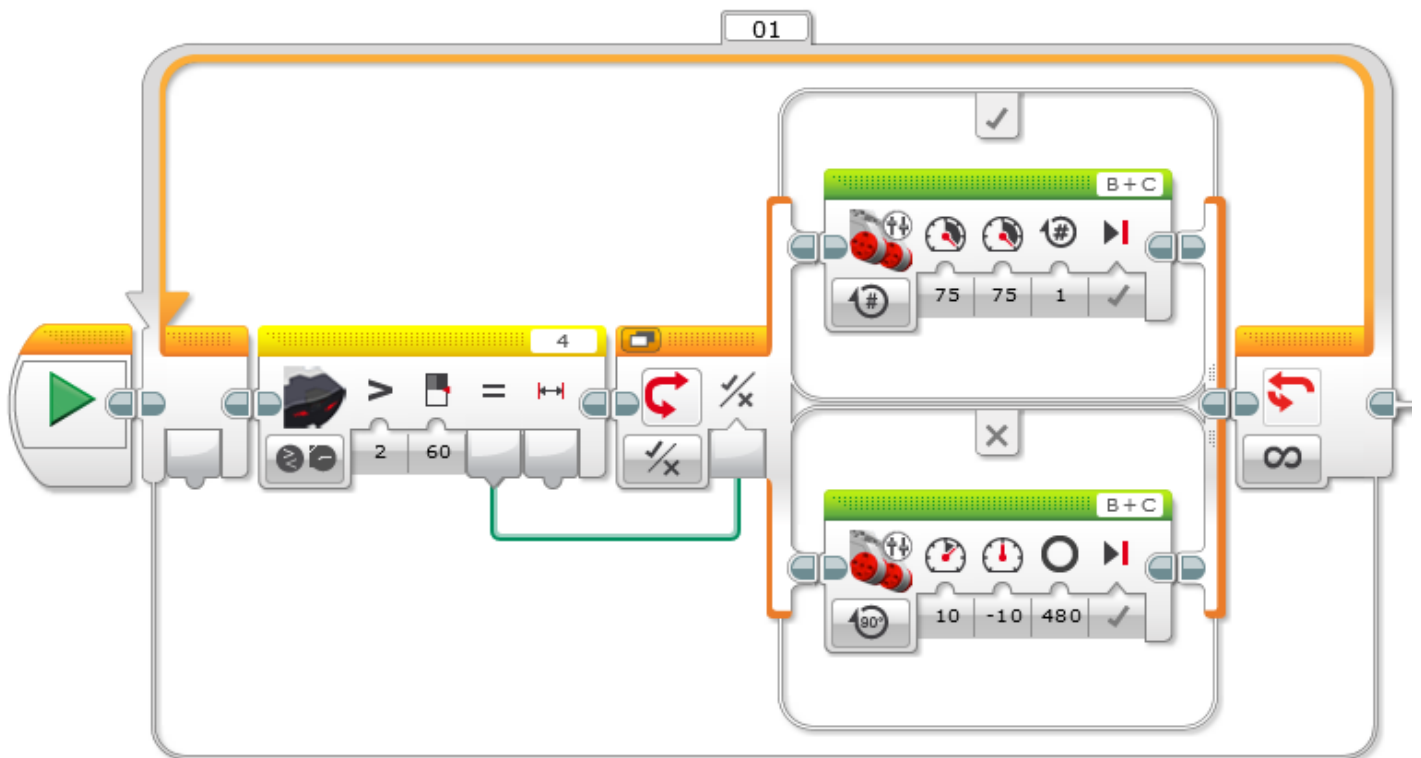
BOM (Bill Of Materials needed)

- computer station
- LEGO MINDSTORMS EV3 robot

Activity description

1. Organizational and organizational activities
2. Group work (groups of 4) - voluntary selection of the group composition
3. Choosing the team's captain who will present the group
4. Introduction to the topic - discussion of ways to overcome the maze
5. Reminder of conditional instructions
6. Robot control using conditional expressions.
7. Task specification: writing a program for the robot that will pass the maze
8. Detailed discussion of the selected problem and division into smaller sub-problems
9. Exchange of experiences and ideas
10. Practical exercises - writing the program and working with the LEGO MINDSTORMS EV3 robot.
11. Presentation of programs
12. Summary and end of the lesson.

Resources



„InnoExperiment – Innovative Approach to Teaching through Experiment”
Project Leader: Zespół Szkolno – Przedszkolny w Goniądzu (ZSP)

Students' Evaluation

The student will be assessed for commitment and proper performance of experiments.

Bibliography

I like this! - Computer science textbook for the seventh grade of primary school Authors: Grażyna Koba
<https://www.robocamp.pl/pl/lego-mindstorms-ev3-wersja-domowa-edukacyjna/>

Scalability

Script modification and improvement.

More information

Solving tasks using the program.

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