

The function to collect something from all the boxes

prerequisites: in the last lesson we went through algorithms and know how to write them

review of theory: what are algorithms?

part 1 (goal: to learn linear algorithms, start learning cycles)

theory: types of algorithms: linear, cyclic, branching

Setting up the task: there are 2 (for example) open boxes (anywhere you can put candy) on the table. All of them have candy inside.

Task: What is the algorithm that will collect candy from 2 boxes?

Implementation: Children are divided into teams and each team writes its function on the computer/on a piece of paper. Then we all test the written functions on real boxes. We correct any mistakes.

task: do the same if there are 5/10/100 boxes (need to introduce a "for one box" construction)

Theory: How to prevent code repetition, what is a loop, when is it needed, a for loop

task: implementing a loop in an algorithm

theory: types of loops

task: now in every box we have different number of candies, collect all (for+while)

Part 2 (practical part)

task: Write a function for karel to collect all the beepers in a row (in each cell there is a beeper)

Task: Write a function for the karel to collect all the beepers on the field (in each cell) (add turns and jump to another line)