

Design a flowerbed!

UL

Scenario title/name of the game: Design a flowerbed

Children’s age (primary school students):9-10 years old

Time needed:15 minutes

Content/Subject: Geometry (shapes: square, rectangle, and triangle)

Aim of the activity:Describe, classify, and relate two dimensional shapes and identify their properties: sides and vertices

# Introduction

This game aims to develop logical thinking using geometrical shapes as a pretext to play. The story of the game, appropriated for the student’s age, will take them in a scenario where they can help design flowerbed by using their knowledge!

## Resources:

Programmable robot

Shapes: square, rectangle, triangle

Marker to make the table on the whiteboard

# A detailed description of the scenario

|  |  |
| --- | --- |
|  | Peter Rabbit decided to decorate his garden. He really wanted to have lots of flowers blooming around the house. So he decided to create a beautiful flower bed with lots of flowers. Help Peter Rabbit create a flowerbed! |

# Steps

1. Decide together what shapes do you need to design a flowerbed (square, triangle, and rectangle).
2. Decide how many sides and vertices you need for designing a shape.
3. Make a mental map of the road to design a shape.
4. Programme the Robot (or put the arrows in the right order). Press start!
5. Design a flowerbed!

# Tips and tricks for the teacher

Give instructions at the beginning of the game!

Let children make mistakes. Trying again and discovering the error is part of the game!

Distances and Speeds: One of the easiest ways to use the robot is to teach student about distances and speeds. Student can program the robot to drive a certain distance and then change its speed. In this way, student can learn how distance is related to time and speed.

Shapes and Geometry: the robot can also help teach geometry. Student can program the robot to draw different shapes such as squares, rectangles, triangles or circles. This can help student understand the properties of these shapes and how they can be created by using lines, vertices, and angles.

Problem Solving: Student can use the robot to solve problems and learn about logic and sequence. For example, student can program the robot to perform a series of actions in sequential order to learn about algorithms and sequences.

Measurement: the robot can also teach student about measurement and how it is used in practice.

# Variants of the scenario/the game

Students can work out task form textbook (see Figure 1, Figure 2, Figure 3).

|  |  |
| --- | --- |
|  | The farmer decided to grow flower plants. How many flower plants did he decide to grow?  Petunia 55 plants  Widows 30 more than  Begonias 20 less than  Velvets 10 more than  Pelargoniums 20 more than |
| ***Figure 1. Task*** (Helmane, Dāvida, 2014, 110) | |
|  | Read it! Write an Operation! Solve!  If you add 4 to 23, you get  To plant 34, add 30 to  6 of the 58 seedlings are removed. Left  To get 40, 4 must be taken away |
| ***Figure 2. Task*** (Helmane, Dāvida, 2014, 110) | |
|  | Take a look! Solve!  How many meters of timber do I need to add one more row of timber around all area*?* |
| ***Figure 3. Task*** (Helmane, Dāvida, 2014, 167) | |

**Literature:**

Helmane, I., Dāvida, A., (2014). *Matemātika 1.klasei. Otrā daļa*, Lielvārds (in Latvian**)**

Potter, B. (1992). *The Tale of Peter Rabbit*. Penguin Young Readers Group.