

Fruit juice

ULBS

Scenario title/name of the game: Fruit juice

Children’s age (primary school students):6-7 years old

Time needed:15 minutes

Content/Subject: Problem solving

Aim of the activity:Express mathematical ideas and processes, orally and in writing, using their own language and vocabulary.

# Introduction

This game contains a simple one-operation problem. The steps of the game help the child to understand what are the known data in the problem, what data needs to be known, what operation needs to be applied, and what are the steps to solve the problem. The main goal is to see how many fruits are needed to prepare the juice and to collect the fruits in the basket. Through the game, students are encouraged to verbalize what they are thinking and what they have to do in order to solve a problem.

## Resources:

Programmable robot or a toy: the robot is a small and programmable robot that moves in different directions and distances.

Cards: with fruits or real fruits

A basket

Accessories: colorized scotch to make the table on the floor or a map divided in 15 cm squares or a map made of carton

# A detailed description of the scenario

Mom wants to make apple and pear juice. She asks the children to collect the fruit from the garden and put it in a basket. We have to decide how many fruits we need to pick. This is mentioned in the recipe for the juice: 7 apples and 9 pears. Let's help the children pick fruit and make delicious juice!

# Steps

1. Students and the teacher decide together the rules of the game.
2. Students make a mental map of the road to get to the fruits, alter the recipe is read.
3. Then they program the robot (or put the arrows in the right order). Press start!
4. The students read the juice recipe. In this game, making the algorithm for solving the problem is essential. So, the teacher should insist in creating the algorithm. Only after the entire rout is mentally designed, children can pass to action.
5. The recipe is 7 apples and 9 pears. Students need to program the robot to collect in one road all 7 apples. Then place them into the basket. Then they program the robot to collect in one road all 9 pears. Then they place the pears into the basket.
6. If there are mistakes, reset the robot and always start from the beginning.
7. Repeat the game by changing the places of fruits in the squares so that the algorithm changes. When making changes, ask children to close their eyes, so that the new road map is a surprise.

# Tips and tricks for the teacher

Give instructions at the beginning of the game!

Encourage children to speak out loud when they think!

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

Add the more fruits or increase the number of fruits in one lot.

You can carry real baskets and real fruit and put them on the map.

Ask each time what action he is doing and what operation needed.

Play the game in teams to add competition, if you aim to increase the speed of solving the tasks!

# scenario implementation and other resources

* Maps, arrows, and other materials are specially created for this scenario.
* Didactic materials: cards with fruits, a card with a basket or real fruits and a real basket.

# Variants of the scenario/the game

The same game can be played in teams to add in competition if another aim is to speed up solving the tasks.

Change the starting point or repeat the game by changing the places of fruits in the squares so that the algorithm changes.

When making changes, ask children to close their eyes, so that the new road map is a surprise.