

Password Finders vs. Pirate Blackbeard

COMU

Scenario title/name of the game: Password Finders vs. Pirate Blackbeard

Children’s age (primary school students):8 – 9 years old

Time needed:15 minutes

Content/Subject: Numbers (number patterns)

Aim of the activity:Describe, build and compare number patterns.

# Introduction

This activity aims to:

* understand determination of inter-numeral relations by helping to find the continuation of a given number pattern, the development of estimation and control strategy and mathematical-logical skill,
* develop social-emotional aspects through their collaborative work as a team
* develop algorithmic thinking skills by giving commands to robots.

The age-appropriate story of the event will lead students to a scenario using their ability to identify number patterns, create new number patterns!

## Resources:

1. Colorized scotch to make the table on the floor

2. Two robots or arrows

3. Number cards.

# A detailed description of the scenario

Have you ever seen a pirate? What do you know about pirates? Do you know the world's most famous pirate? If we ask who is the world's most famous and scariest pirate, many would answer the famous Edward Teach. Edward Teach, the world's most popular pirate, is known as Blackbeard with his long and braided black beard. Edward Teach or Edward Thatch (c. 1680 – November 22, 1718) was notorious as an English pirate operating around the American colonies during the early 18th century. Legend has it that Edward Teach hid a lot of valuables he stole in a secret compartment of his ship. Nobody knew that. But little Joseph, whom he was working with, saw him entering this secret compartment, the treasure room. He spent days thinking about how to get there. Because it was his biggest dream to take all of these precious items from there and give them to their real owners. Again one night, he followed Blackbeard and heard Blackbeard softly whisper a password to the door, "2, 5, 11, ..". Joseph could only hear the first three numbers, but there were 6 numbers in the code. So, would you like to complete this code with Joseph and enter Blackbeard's secret room and return his treasure to its rightful owners?

# Steps

1. 2 different teams of 2-3 people are formed by the teacher, taking into account the number of children who will carry out the activity.

2. The scenario is shared with the students by the teacher.

3. Students share their thoughts about the scenario and the information they already know. They ask the questions they want to ask.

4. The teacher places the figures "2, 5, 11, ..", the continuation of the pattern "23, 47, 95" together with other numbers that are not answers. The pattern rule is "one more than twice".

5. Ask the teams to work together on how the pattern continues and decide on the numbers that the teams will add to continue the pattern

6. The teams are asked to draw up a roadmap to collect the numbers in the rest of the pattern.

7. Each team programs their Password Finder Robot (or put the arrows in the correct order) and hits start!

8. Teams collect numbers with your friends in order and are entitled to enter the Treasure Room.

# Tips and tricks for the teacher

1. Let's pay attention to the heterogeneity of teams to be formed of 2-3 people.

2. Ask each team to name their Password Finder robot by consensus within the framework of collaborative learning.

3. Give the rules and information of the event at the beginning.

4. Have children express their feelings and thoughts about the scenario aloud, and encourage them in this regard.

5. By changing the starting points of the two robots, you can avoid them overlapping at the same point.

6. Avoid children's fear of making mistakes in coding robots, and do not allow their friends' negative criticism. Encourage them when they make mistakes and make them feel that it is part of the game.

7. Do not allow other students to interfere with the student who will fulfill the task, be determined on this issue.

**Scenario implementation and other resources:**

Maps, arrows, other materials especially created for this scenario.

**Variants of the scenario/the game**:

* If there is too much competition between the teams in the activity, the activity can also be carried out as a single group, with the children determining and adding the numbers respectively.
* Teams can compete on different maps with different number patterns. However, consider that an assistant teacher is also needed in this case.
* The game can be repeated by asking students to create their own patterns.