Erasmus+

Project co-funded by European Union under Erasmus+ Programme

Teaching programming in primary school:
curriculum, didactic methods, textbooks, online support
CodeInnova

TITLE: Logical games

LEARNING SCENARIO		
School:	**Duration (minutes):**	**90**
Teacher:	**Students' age:**	**9**

Essential Idea:	**We can come to a solution in several different ways.**

Topics:

- Pupils solve problems, organize information and learn about concepts of algorithms.
- Pupils learn how to visualize problems with different charts and generalizations.

Aims:

- Pupils arrange the data in a useful way.
- Pupils order the data according to the criteria that allows their effective use.

Outcomes:

- Pupils determine common characteristics of the data group.
- Pupils sort data into groups.
- Pupils organise data according to criteria that allow their efficient use.

Work forms:

- individual work
- work in pairs

Methods:

- presentation
- discussion
- graphic work

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ARTICULATION
Course of action (duration, minutes)

INTRODUCTION

The teacher starts a discussion:

When you encounter a problem in life, can it be solved in just one way or more?

Give examples of problems that can be solved in only one way and in many ways.

We achieve the goal by taking a sequence of steps.

How to recognize the appropriate steps?

We design a sequence of steps every day to successfully accomplish a task.

We often think about possible actions and make decisions about the best solution.

For example, a cat wants to get an A on the next math test.

The cat practices arithmetic and thinks about what types of exercises he has mastered

and what types of exercises he must still practice, in order to achieve his goal.

A sequence of steps or procedures leads us to the goal.

There are often several different ways to successfully accomplish a task and reach a goal.

Decision making is a process of thinking and choosing different actions that guide us to a

desired goal.

Announcement of the goal of the lesson:

Today we will solve puzzles in computer science class. We will find different solutions to

achieve one goal.

MAIN PART

1. The cat wants to become a successful programmer. A cat needs a computer to learn

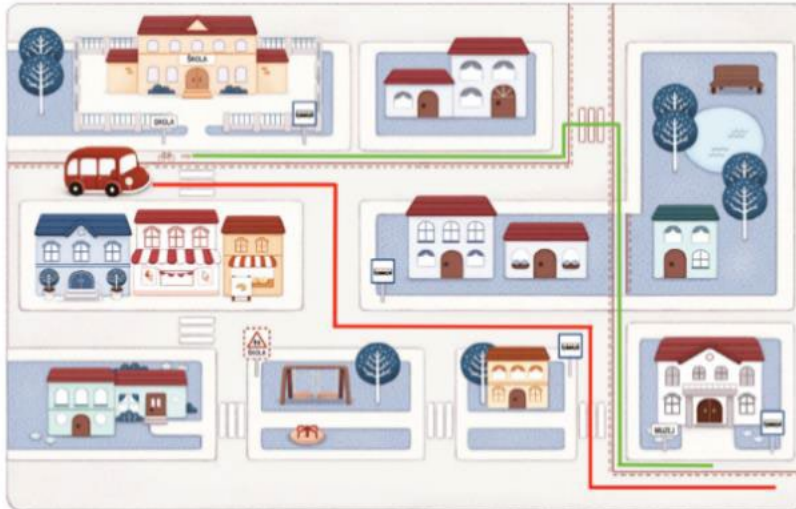programming. Help the cat to get through the maze and get to the computer.

a) There are 3 different solutions. The best solution is the shortest route - the green line.

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b) There are 2 solutions due to the log on the way. The best solution is the shortest path - the blue line.

2. The cat and his two friends are going to visit the museum. They all start from school, but everyone chooses a different path. The cat goes on foot, the boy rides a bike on the bike path, and the girl takes the bus. What distance will each of them travel? Keep in mind that the bus stops at every station.

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3. Create your own maze on paper or draw on a computer.

Design several different paths from entrance to exit.

Present and your maze and share it with the students in class.

Have them solve it.

The teacher prepares an online exhibition of pupils' work.

Pupils solve tasks and present their solutions and work.

Pupils and the teacher discuss and evaluate the presented solutions.

CONCLUSION

We can come to a solution in several different ways.

The teacher controls the students' solutions to the tasks.

Methods		Work forms
presentation	interview	individual work
discuss	demonstration	work in pairs
work on the text	role playing	group work
graphic work		frontal work
interactive exercise /simulation on the computer		

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Material:

- textbook
- paper
- computer, drawing application

Literature

- https://www.e-sfera.hr/prelistaj-udzbenik/e6e81764-edaf-45bb-aa9f-72fe641b4565

PERSONAL OBSERVATIONS, COMMENTS AND NOTES