

Maze: Sequence

Lesson time: 30 Minutes

LESSON OVERVIEW

In this series of puzzles, students will build on the understanding of algorithms learned in the Happy Maps and Move It Unplugged activities. Featuring characters from the game Angry Birds, students will develop sequential algorithms to move a bird from one side of the maze to the pig at the other side.

TEACHING SUMMARY

Getting Started

[Introduction](#)

Activity: Maze Sequence

[Maze: Sequence](#)

Extended Learning

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LESSON OBJECTIVES

Students will:

- Order movement commands as sequential steps in a program
- Represent an algorithm as a computer program
- Count the number of times an action should be executed and represent it as instructions in a program

GETTING STARTED

Introduction

Ask your students if they are familiar with the game Angry Birds. Explain that they will be writing programs to help an Angry Bird locate a Pig.

- Review cardinal directions.
- Use the NEWS mnemonic and let students know that they will see those letters in their programs next to the direction arrows.
- Getting the bird to the pig will require putting your directions in a very specific order or sequence.
- Can you solve the puzzles using the fewest blocks possible?

LESSON TIP

Encourage students to continue using the pair programming method that they learned in the last lesson. Ask them to restate the roles of the driver and navigator.

ACTIVITY

Maze: Sequence

As your students work through the puzzles, observe how they plan the path for the bird. Identify different strategies used and ask students to share with the whole class. This helps students to recognize that there are many ways to approach these problems. You may want to go through a few puzzles on the projector. While doing this you can ask a one student to trace the path on the screen while another writes the directions on a whiteboard.

EXTENDED LEARNING

Use these activities to enhance student learning. They can be used as outside of class activities or other enrichment.

Create Your Own

In small groups, let students design their own mazes and challenge each other to write programs to solve them. For added fun, make life-size mazes with students as the pig and bird.



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