



OZOBOT'S FAIRYTALE

LESSON II

PREPARED FOR OZOBOT
BY LINDA MCCLURE

Essential question

How can we use programming in literature?

Overview

This lesson connects writing and programming. Students outline a fairytale about their Ozobot. Part of the story will require programming the Ozobot to complete a task or engage in a behavior related to the story.

Suggested prerequisites

- Knowledge of how to program Ozobot using blocks from the Movement category. To practice, please complete the Shape Tracer games on games.ozoblockly.com.
- Completed Ozobot's Fairytale Lesson I

Materials

- Ozobot, one or more per group
- Completed Fairytale Elements Template and Sketch from Ozobot's Fairytale Lesson I
- ozoblockly.com on a computer or tablet
- Handout: Fairytale Elements Lesson II Template
- Handout: Ozobot's Fairytale Sketch Lesson II

Grouping

Independent or groups of two or three

Age/Grade Level

Grade 2 and up

OzoBlockly programming topics

Movement, Logic and Loops

OzoBlockly mode

Use any mode

Duration

Part I: 30-55 minutes

Part II: 55-90 minutes (can be broken into two or more lesson periods)

Vocabulary

- *Ozobot* - Little robot that can follow drawn lines and can be programmed using visual codes or through the OzoBlockly programming language
- *OzoBlockly* - A visual editor which allows to create programs by plugging blocks together. The blocks can be used to control Ozobot's behavior like movement, LED lights, etc.
- *Rotate Right or Left* - 90° turn
- *Rotate Slightly Right or Left* - Aprox. 45° turn
- *Steps* - a unit of movement forward or backward
- *Line Following* - Ozobot's capability of sensing and following lines on paper or tablets

ACTIVITY

1. Introduction

1. Review the story from Ozobot's Fairytale Lesson I.
2. Have students refer to completed template from Ozobot's Fairytale Lesson I.
3. Have 1 or 2 students talk about their struggles or successes in programming the Ozobot to complete the task from Fairytale Lesson I

2. Procedure

Discuss and Identify

1. Pass out the "Fairytale Elements Lesson II Template."
"Today you are going to write your own tale starring your Ozobot. This template will help you plan your story. Independently or with a partner, brainstorm possible ideas for your fairytale. Fill in the first three sections in the planning template (Beginning, Setting and Characters). Be sure to be specific so when you write your story so you will have a good plan."
2. Allow students time to work on the template to the "Problem/conflict" section.

Differentiation: Have the student complete the template in parts. Discuss and brainstorm as a class different ideas they can use in their template. List these on the overhead or white board so struggling students can choose these elements to put in their story.

Connect Ozobot to the Story

1. "Your Ozobot is the main character of the story. What behavior is Ozobot going to act out?"
2. Two or more Ozobots can be assigned different roles in the story. Have the class come up with different behaviors for each Ozobot character.
3. Brainstorm and list with the class possible ideas for Ozobot's behavior. For example, does your character go to a Ball? Then the Ozobot can dance. Does your character go on a journey? Plan to have your Ozobot to travel around obstacles.
4. Make sure Ozobot's behavior is complex enough to demonstrate that programming Ozobot would be interesting and challenging.
5. After brainstorming possibilities, have students finish their template with Ozobot's behavior, solution, and conclusion.

Editing

1. Have two groups get together and take turns sharing their plan with each other
2. Suggestion Box Activity: handout slips of paper. After group 1 shares, group 2 writes "suggestions for improvement" on the slips of paper.
3. Both groups share and write suggestions. They then exchange slips of paper
4. The groups can choose to edit their story based on the suggestions

Programming

1. Pass out the "Ozobot's Fairytale Sketch Lesson II" handout.
2. Students draw out the movements of Ozobot's behavior on the sketch paper.
3. Go to ozoblockly.com on a computer or tablet. Students program the Ozobot to complete the behavior. Challenge students to make the program complex. Ozobot can move slow and fast. Ozobot can demonstrate fear, happiness, and curiosity using color and movement.

Differentiation: younger students can use the Novice or Beginner mode. Older students or students with experience can use the Intermediate or Advanced mode of OzoBlockly and achieve more effects.

4. Extension

Choose from one or more of these possible extensions:

1. Customize Ozobot to reflect the character (using DIY skins) and/or create a setting for the fairytale with cardboard, colored paper etc.
2. Have the students write and publish the fairytale
3. Students could produce an illustrated children's story using photos of a decorated Ozobot
4. Student use PowerPoint to create a presentation about their fairytale. Include the programming steps and demonstrate to others how the Ozobot moves
5. Create a script and act out the story with Ozobots
6. Create an iMovie starring Ozobot

5. Share

We would love to see your student's creations! Please share your documents, photos and videos with us for a chance to win cool prizes and be featured on our website. Contact us at ozoedu@ozobot.com.

FAIRYTALE ELEMENTS LESSON II TEMPLATE

By _____

Fairytales Elements	Ideas	Your notes about and decisions
Beginning/ Opening	Once upon a time, Long, long ago, In a far off land, There once lived a... (do some research and find another fairytale opening or think of your own)	
Setting	Your town, A forest, A castle, Your school, Your house, A far off place	
Characters	Hero/heroine (Ozobot), Villain, Family Give your characters names and background. Be sure your story includes dialog	
Problem/ Conflict	All good fairytales have some sort of problem that needs to be solved. The problem either surrounds the main character, is caused by them, or they discover it	
Ozobot Movement /Behavior	You will program your Ozobot to complete a task during and related to your story. What are some behaviors your character can do that would enhance your story? Dance? Follow a map? Search for something? Write this behavior into your story	
Solution to Problem	The main character solves the problem in an interesting, creative way	
Conclusion	Tie it all up so everybody lives happily ever after	

OZOBOT'S FAIRYTALE SKETCH

LESSON II

By _____

Title of Fairytale _____

Plot statement _____

Ozobot Character Description _____

Describe the behavior of Ozobot during your story _____

In the box below (or on a blank sheet of paper if needed), **sketch out the movements and behaviors** you want your Ozobot to complete. Be sure to include arrows to indicate the direction your Ozobot is moving so you will be able to program your robot correctly.

