ozobot

OZOBOT'S FAIRYTALE

LESSON I

PREPARED FOR OZOBOT
BY LINDA MCCLURE

Essential question

How can we use programming in literature?

Overview

This lesson connects writing and programming. Students "act out" a fairytale using Ozobot as the main character. 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 Bit using blocks from the Movement category. To practice, please complete the Shape Tracer games on games.ozoblockly.com.

Materials

- Ozobot Bit, one or more per group
- Copy(s) of a fairytale
- ozoblockly.com on a computer or tablet
- Handout: Fairytale Elements Template
- Handout: Ozobot's Fairytale Sketch

Grouping

Whole class

Differentiation for older students: Independent, in 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

Guided Activity: 55 Minutes

Independent Activity: 55 Minutes

Can be extended to multiple class sessions

Vocabulary

Ozobot Bit - Little robot that can follow drawn lines and can be programmed using visual codes or through the OzoBlocky programming language

OzoBlocky - 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

Read one or more of these rare, not widely known fairytales with your students or pass out copies and have them read them independently or in groups.

The White Snake
http://www.surlalunefairytales.com/authors/grimms/17whitesnake.html
The Devil with the Three Golden Hairs
http://www.surlalunefairytales.com/authors/grimms/29devilgoldhairs.html
List of Fairytales
http://www.surlalunefairytales.com/authors/grimms.html#CONTENTS

2. Guided Activity

Discuss and Identify

Pass out the "Fairytale Elements Template." Discuss with the students what elements are found in all fairytales and identify those elements in the story you read (Opening, setting, character, problem/conflict, solution, conclusion). As you discuss the fairytale the class read, show the students how to fill out the template notating important parts of the story in the designated sections.

Differentiation: With older students, pass out the template and have them work in groups to complete the task. Come back as a whole group and share and discuss.

Connect Ozobot to the Story

To spark the students' creativity and prepare them to create an "Ozobot Fairytale", have them imagine their Ozobot as the main character. If the main character had been an Ozobot Bit, what type of behavior could it do if it was acting out the story? Two or more Ozobot Bits can be assigned different roles in the story. Have the class come up with different behaviors for each Ozobot character. Write these in the "Ozobot Behavior" box on the template.

Make sure the Ozobot Bit behavior is complex enough to demonstrate that programming Ozobot would be interesting and challenging. For example, Ozobot can dance, navigate

around obstacles, or try to evade a villain. In The Devil with Three Golden Hairs, Ozobot could take the "trip" to the Queen or even the journey of the box. In the White Snake, Ozobot can take the servant's journey.

Programming Preparation
Pass out the "Ozobot's Fairytale Sketch" handout. Guide the class to draw the Ozobot character's movements. Incorporate turns, color changes, and other elements.

Differentiation: Each group decides on Ozobot's character and behavior. One student in the group records and draws instructions while the group discusses.

3. Independent Activity

In pairs or groups, go to ozoblockly.com. Students program 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

Customize Ozobot Bit to reflect the character (using DIY skins) and/or create a setting for the fairytale with cardboard, colored paper, etc.

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.

Next activity:
Ozobot's Fairytale Lesson II – Students write and program their own Ozobot Bit tale!

FAIRYTALE ELEMENTS LESSON I TEMPLATE

Title of Fairytale _____

Fairytale Elements	Ideas	Your Notes
Beginning/ Opening	Describe the opening. How did it grab your attention? What are the 'traditional' elements?	
Setting	Where did the story take place? Be sure to add details!	
Characters	Hero/heroin, Villain, Family	
Problem/Con-flict	All good fairytales have some sort of problem that needs to be solved. What was the conflict in this story?	
Ozobot Bit Movement/ Behavior	If your Ozobot Bit was the main character in this story, what activity or behavior could it do?	
Solution to Problem	How was the conflict solved?	
Conclusion	At the very end, what was the outcome? What traditional lan-guage was used?	

OZOBOT'S FAIRYTALE SKETCH

LESSON I

By _____

Title of Fairytale _____

Ozobot Bit 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 Bit to complete. Be sure to include arrows to indicate the direction your Ozobot Bit is moving so you will be able to program your Ozobot Bit correctly.