

Robot: Ozobot

Activity : The Great Ozobot Perimeter Race - Advanced

Grade Level	3	Difficulty	Advanced
Subject	Math		
Description	Students will be using the Ozobot, grid paper, markers, and Ozocodes to create a Ozobot race that will consist of multiple laps for a total of 240 cm (you can change this length if you like).		
Outcome(s)	SS3.3 Demonstrate understanding of linear measurement (cm and m) including: - selecting and justifying referents - generalizing the relationship between cm and m - estimating length and perimeter using referents - measuring and recording length, width, height, and perimeter.		
Required Prior Learning	Introduction to Ozobot lessons 1 and 2. The Metric System Perimeter		
Time Frame	1 hour		
Materials	Ozobots Copies of Ozobot reference codes 11X17 0.5 cm Ozo-grids (1 per person or group) Have extras available.		
Additional Resources			
Assessment	Observation, evaluate and examine the students path and their use of codes		

Activity

Procedure

Students must design a race track that will be 240 cm using multiple laps. (for example, their race may be 2 laps of 120cm, 4 laps of 60 cm, etc....) **NOTE, you can change this measurement to suit your class.)** This can be done independently or in groups of 2. They must use the 11X17 - 0.5cm grid paper. They will use rulers to measure the path, label how long each segment is, use ozobot codes. They can race against other classmates to see who created the fastest race track. There is an instruction sheet that can be displayed using a projector to guide the activity. The instruction sheet can be printed out if needed.

Student Handouts

- [Blank 11X17 - 0.5 cm grid paper](#)
- Student Instruction sheet (optional)

Assessment Guide

Ensure the track created is divisible by 240 cm. (you can change this length if you like). Students will need to illustrate and describe their pattern to their peers. Look for creativity and accuracy in their illustration and description.

ACTIVITY: The Great Ozobot Perimeter Race.

Using your Ozo-graph paper and a ruler, you will need to create a race track. Your Ozobot will need to travel a total of **240 cm**. The course should needs to be made using straight lines and turns. There are no curved lines allowed. Your ozobot will need to do at least TWO laps to complete the race but you can choose to have Ozobot to do more laps. Your ozobot race must end where your ozobot started. Your path will need the following before you can race your ozobot:

- 3 speed ozocodes placed anywhere on your track
- Your ozobot must do a cool move at the end of each lap and at the end of the race.
- Your ozobot must do a zig zag at the 10 cm mark of your track.
- |You must label your start and end.
- You can only use a code ONCE. You can not re-use any codes.

You must label how long each line segment is on your path.

Reflection Questions:

1. Describe your ozobot race track.
 - a. How long was your track?
 - b. How many laps did your ozobot need to do?
 - c. Would you do anything different with your path to improve your result?
 - d. Would you choose any different codes to improve your result?
 - e. How many laps would your ozobot need to do to go one metre?
2. When measuring your path, explain if you discovered a relationship between the size of the grid paper to the length of your lines?