



Ozobot Bit Classroom Application: Cartesian Coordinate Practice

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Topics

Math (coordinate system)

Ages

Grades 5-8

Duration

Approx. 15 min

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Are you a teacher who needs to introduce the Cartesian coordinate system to your students? Would you like to give your students an enjoyable way to practice identifying coordinates in your classroom? Then the ***Ozobot Bit Classroom Application: Cartesian Coordinate Practice*** is just what you are looking for!

All you need to do is load *CartesianCoordinatePractice.ozocode* into your classroom Ozobot Bits using the "Load Ozobot" feature of the OzoBlockly Web site and print copies of the maze on the next page for each group of students. Be sure to calibrate Ozobot Bit on paper before running the application.

Place Ozobot Bit on the region labeled "Start" in the direction shown by the arrow. Make sure that the leading edge of Ozobot does not extend beyond the gray curve. Then double press the power button to start the program. Ozobot should show a solid deep blue color LED. After about a two second delay, Ozobot will move randomly to one of the coordinates on the Cartesian coordinate plane and will stop. After stopping, Ozobot will show an aqua colored LED for five seconds. This five seconds is intended to give the student time to determine the (x, y) coordinates of the location where Ozobot stopped. Following this five second delay, Ozobot will inform the student of the correct coordinates as a check on what the student thought the coordinates were. Here are some examples:

- If Ozobot landed on (3, 2), Ozobot would blink as follows: 

GREEN flashes means the coordinate is positive. Note the time delay between specification of the x and y coordinates.

- If Ozobot landed on (4, -3), Ozobot would blink as follows: 

Note that RED flashing means the coordinate is negative.

- If Ozobot landed on (-4, 0), Ozobot would blink as follows: 

If a coordinate is 0 (zero), then Ozobot blinks WHITE once.

After Ozobot has blinked the answer, he will blink AQUA for eight seconds. During this time, the student should manually move Ozobot back to the "Start" position, where Ozobot will again randomly move to another coordinate pair on the Cartesian plane. This process can continue for as long as desired, or until Ozobot battery power is depleted.

