



After School STEM Program

After School STEM Program Guide

Are you eager to host an Ozobot-centered camp but unsure where to start? Look no further than the **Ozobot STEM Camp Guide!** Designed for educators, librarians, and camp organizers alike, this comprehensive resource is your roadmap to creating a dynamic and engaging camp experience centered around robotics, coding, and creativity. From facilitator training to curriculum plans, let us guide you through the process of bringing your vision to life. Get ready to inspire young minds, foster innovation, and make memories that last a lifetime with Ozobot!

Materials

- A computer or smart device ([see compatible devices](#))
- An Ozobot

Evo Entry Kit

Ideal for 1-2 campers at a time, the Evo Entry Kit includes:

- 1 Evo robot
- Get Started activities
- 1 Charging Cable
- 5 Dual-Tip Color Code Markers
- 1 Zip Case



Evo Classroom Kit

Our classroom kits set you up for success with large groups of campers and include:

- 12 or 18 Evo robots
- 12 or 18 Dual-tip
- Color Code marker packs
- Bot stickers
- Wireless charging cradle and accessories



Facilitator Training

As enthusiastic young coders approach summer break, we understand the importance of preparation. Whether you possess a strong background in robotics and coding or have never interacted with a robot before (let alone lead a camp where you teach students to use them!), our **Self-Service Professional Development** offers the training necessary to prep camp instructors. Our self-paced, virtual sessions will equip you not only to incorporate Ozobot color coding and Blockly into your camp activities but also to grasp the fundamental conceptual learning underlying algorithmic thinking so you will be ready to answer all the amazing questions your campers will bring with them.

Recommended Course 1

Creative Coding with Color Codes

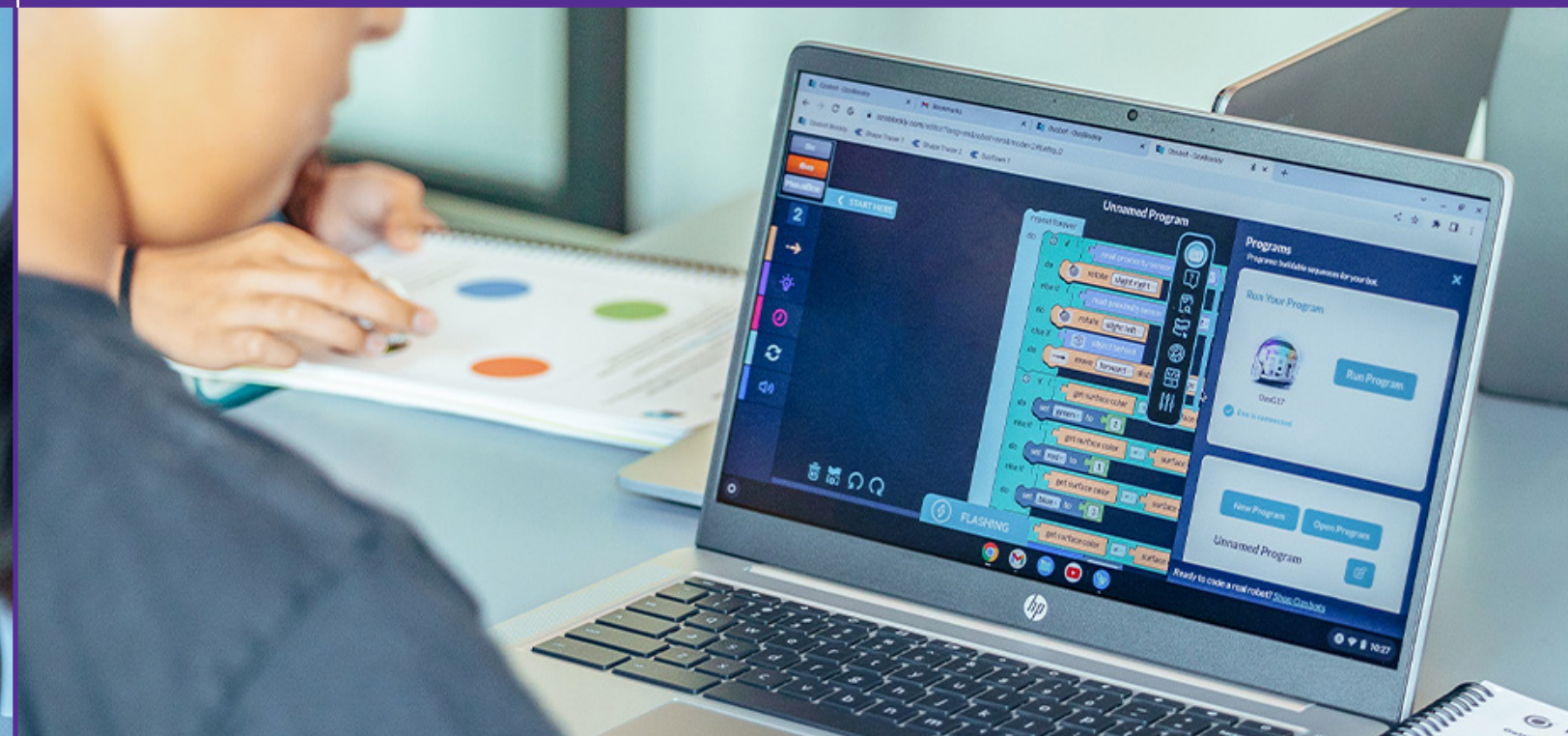


This online course offers a step-by-step guide to integrating Ozobot Color Codes and computational thinking into your curriculum, providing you with all the tools you need to engage your students in exciting educational activities.

[Learn More](#)

Recommended Course 2

Ozobot Blockly Essentials



Through hands-on exploration of the Ozobot Blockly programming environment, participants will master basic programming logic and skills, enabling them to create engaging educational activities.

[Learn More](#)

Recommended Course 3

Innovating with Ozobot Blockly



This course goes beyond mastering programming concepts; it's about learning to inspire and manage student-led projects that tackle real-world problems.

[Learn More](#)

Curriculum

We recommend starting with the **Ozobot Introductory Lessons** and that you learn alongside your students! From there, we have provided an offering of lessons from our library that represent our most beloved and highest-quality options on a variety of subjects. You can do these lessons in order or choose based on your interest or need.

Ozobot Introductory Lessons

- [Introduction to Color Codes](#)
- [Introduction to Ozobot Blockly](#)

Table of Contents

- 1 Color Code Lessons** - These lessons include an activity sheet that students will fill out using Color Code markers. It is helpful to refer to the Color Code chart in the guide you can find [HERE](#).
- 2 Ozobot Blockly Lessons** - Students will program Ozobot using a tablet or Chromebook for these lessons. Some lessons will also include an activity sheet or an attachment for Ozobot.
- 3 K-3 Learning Content with Ozobot** - This bundle includes both Color Codes and Blockly lessons that integrate grades K-3 ELA, math, and science content.
- 3 4-6 Learning Content with Ozobot** - This bundle includes both Color Codes and Blockly lessons that integrate grades 4-6 ELA, math, and science content.

Color Code Lessons

Lesson Link & Title	Duration	Description	Topic	Coding Method
Write Your Name With Color Codes	60 min	Young Ozobot students practice their line and code drawing skills by turning their first name into a course their bot must travel across with line jumps.	ELA	Color Codes
Ozobot Race Track	60 min	How fast can you go? Use your knowledge of speed Color Codes to program Ozobot to win the race!	Race Cars	Color Codes (Speed)
Zombie Apocalypse	45 min	Watch out for the Zombie Apocalypse! Collect survival supplies and guide your Ozobot to safety without running into zombies.	Zombies	Color Codes (Direction)
Late for School!	45 min	Ozobot is late for school and needs your help getting there as fast as possible without getting distracted! Use Color Code directions and speed to navigate Ozobot's path to school.	School	Color Codes (Direction)

Color Code Lessons

Lesson Link & Title	Duration	Description	Topic	Coding Method
Landform Adventure Race	45 min	Students identify different landforms to help Ozobot plan for an adventure race along with the order it will see them in. Then students add pictures to a map to sequence the race, and Color Codes to program Ozobot to complete the race in 30 seconds.	Maps	Color Codes (Speed and Timer)
Decode the MLK Quote	60 min	In honor of Martin Luther King Jr. Day, students will decode a quote from MLK about justice. Then students will order the line switching tracks and Color Code a program for Ozobot.	MLK Day	Color Codes (Line Switching)
Katherine Johnson the Human Robot	60 min	Take a look at the accomplishments of Katherine Johnson, one of the first black women to become a NASA mathematician. In honor of Black History Month, create a flight path for Ozobot's spaceship to land on the moon, just like Katherine did!	Space, STEM, Black History Month	Color Codes (Point Counter)

Ozobot Blockly Lessons

Lesson Link & Title	Duration	Description	Topic	Coding Method
Monster Mash Dance Off	60 min	Choreograph a dance for your Ozobot Monster and rival another student in a Monster Mash Dance Off!	Dance	Blockly (Sequences and Loops)
Navigate Tough Feelings	60 min	We all have times when we feel tough feelings, so it's important to have the tools to process them. Help Ozobot express those tough feelings and navigate through the steps to feel better.	Social Emotional Learning	Blockly (Sequences)
Healthy Habits	30 min	Which healthy habits are you going to bring into the new year? Which ones are you already doing? Show us using Blockly to move Ozobot around your healthy habit tracker.	Healthy Habits	Blockly (Movement)
Ozobot Goes Ice Skating (K-2) & (3-5)	60 min	Develop your skills using the Movement and Loops blocks! Create a Blockly program that enables Ozobot to skate within the boundaries of the ice skating rink.	Ice Skating	Blockly (Movement, Loops, Proximity Sensors)

Ozobot Blockly Lessons

Lesson Link & Title	Duration	Description	Topic	Coding Method
Code for the Gold Challenge	45 min	Students will construct an attachment for Evo to compete in a curling competition. Evo will push the curling stones into the goal area to score points.	Curling	Blockly (Movement)
Code to Touchdown	60 min	Code Ozobot to run a touchdown! Create a randomization code and see how many points your Ozobot can score in a modified game of football.	Football	Blockly (Randomization)
Girls Innovating Change	90 min	In honor of International Women’s Day, we are recognizing the young innovator Gitanjali Rao. Learn about this woman’s incredible achievements, then use Ozobot to come up with your own. You are never too young to make a difference in the world!	The Engineering Design Process	Blockly (Line Navigation)

K-3 Learning Content with Ozobot

Lesson Link & Title	Duration	Description	Topic	Coding Method
CVC Words	40 min	Students will decide which vowel belongs to the CVC word by programming the Ozobot to turn left or right at an intersection.	ELA, CVC Words	Color Codes
Ozobot Plays with Verbs and Adverbs	45 min	Students will complete sentences in a silly story to demonstrate the function of verbs and adverbs. Students will use Color Codes to program their bot to show the relationship between the verbs and the adverbs in their sentences.	ELA	Color Codes
Addition and Subtraction Mystery	30 min	Students will read addition and subtraction sentences in a story and practice adding and subtracting with numbers to 20. Then, program Ozobot to help tell the story.	Math, Addition, Subtraction	Color Codes
Dia de los Muertos Dance (K-2)	60 min	During Día de los Muertos, we can bring joy and celebration through dancing! Solve addition and subtraction problems to help Ozobot create a Día de los Muertos dance.	Math, Addition, Subtraction	Blockly

K-3 Learning Content with Ozobot

Lesson Link & Title	Duration	Description	Topic	Coding Method
Telling Time	45 min	Students use numbers their bot randomly chooses to write and tell time on digital and analog clocks. Students connect their daily schedules with the times they write.	Telling Time	Color Codes
Polar Animals	60 min	Do you know which animals live in the north pole and which ones live in the south pole? Take Ozobot through a snowy adventure to learn about the animals that live in the chilliest parts of the world!	Science, Animals	Color Codes
Stargazing with Ozobot: Recreate a Constellation	40 min	Students will learn about constellations and recreate a constellation for Ozobot to follow along using Color Codes.	Astronomy	Color Codes

4-6 Learning Content with Ozobot

Lesson Link & Title	Duration	Description	Topic	Coding Method
What's the Word Relay	45 min	Students will use Color Code to complete a homophone randomizer. Students will program their bot to randomly choose a homophone and write a sentence showing the correct meaning of the word.	ELA	Color Codes
Prepositions by Chance	45 min	Students will use an Ozobot to randomly choose words on the Prepositions by Chance Map and identify the word as a preposition, noun or adjective, then write a sentence using the word.	ELA	Color Codes
Mix It Up Multiplication	45 min	Students will program their Ozobot to randomly select numbers to make multiplication problems, find the products, and apply the commutative property.	Math, Multiplication	Color Codes
Division Race	45 min	Students will do long division problems with one-digit divisors, while racing Ozobot to the finish. Students can choose the speed they want the Ozobot to go.	Math, Division	Color Codes

4-6 Learning Content with Ozobot

Lesson Link & Title	Duration	Description	Topic	Coding Method
Area with Ozobot	45 min	Students program their bot to randomly select a number of units for the length and width of a rectangle. Next, draw the rectangle on grid paper and find the area by counting the units and multiplying the length by the width.	Math, Area	Color Codes
Exploring Solstices and Equinoxes	60 min	Create a Blockly program for Ozobot to travel through the year's solstices and equinoxes!	Astronomy	Blockly (Line Navigation and Loops)
Trait Match Up	40 min	Students explore how certain traits are inherited in animals by programming their Ozobot to randomly choose a trait from a pair of parents. Then students put the chosen inherited traits from the parents together to draw the offspring.	Life Science	Color Codes

Thank You

Visit ozobot.com to learn more

The Ozobot logo is rendered in a white, lowercase, sans-serif font. The letters 'o', 'z', and 'o' are connected to each other, and the 't' is also connected to the second 'o'. A small registered trademark symbol (®) is positioned at the top right of the 't'.