

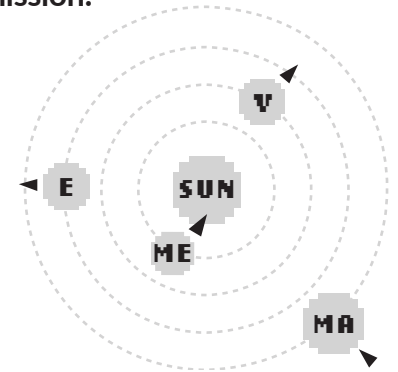
PROGRAMMER SPACECRAFT CHALLENGE

TEACHER GUIDE

In this activity, you will create your own program to help your bot mimic a spacecraft and complete a mission.

STEPS

1. Place each planet model on its pathway next to the orange triangle on the board like in the picture to the right.
2. Choose and read a mission.
3. Think about the route your spacecraft will need to take and write out a pseudocode or plan for your program using simple words.
4. Now, use your pseudocode to build a program in Ozobot Blockly.
5. Connect your bot to Ozobot Blockly. Then, put your bot in the dotted circle on Earth's path.
6. Run the program. Then, make changes to the program until you successfully complete the mission.
7. Share your program with a friend who chose the same Mission. How are the programs alike? How are they different?



MISSION 1

Face right to leave Earth. Move around the planet that rotates backward to get to the smallest planet in the solar system. Display the colors of the planets as you move by.

My Pseudocode: *light up blue and green, move forward, turn left, light up yellow and white, move forward and turn right three times, move forward, light up gray.*

My Program: <https://ozo.bot/b/gii4p3>

My spacecraft traveled to *Venus* and *Mercury*.

MISSION 2

Face down to leave Earth. Move beside the fastest planet in the solar system to get to the planet with the largest volcano. Display the colors of the planets as you move by.

My Pseudocode: *light up blue and green, move forward, turn left, move forward, light up gray, turn right, move forward, light up red.*

My Program: <https://ozo.bot/b/nhwe6s>

My spacecraft traveled to *Mercury* and *Mars*.