

Bee-Bot Bop



Virtual Workshop Pre-Visit Resources

STUDENTS WILL UNDERSTAND THE FUNDAMENTALS OF CODING AND HOW ROBOTS WORK BY PROGRAMMING A VIRTUAL BEE ROBOT AND THEN GETTING IT TO COMPLETE A SERIES OF CHALLENGES. FOLLOWING THE WORKSHOP, STUDENTS WILL 'BEE' CONFIDENT TO COMPLETE FURTHER CODING CHALLENGES INDEPENDENTLY.

Intended for and geared towards overall early learners and newcomers to computer programming, students will be introduced to coding and robotics. In small groups, students will learn how to program a robot bee to execute a series of commands.

Students are introduced to computational thinking through offline coding. Students will discuss coding as a language and learn how to write and to follow a code using symbols. With these coding skills, students will be presented with a series of challenges and program a virtual bee robot to solve them. By the end of the workshop, students will understand how robots read code to perform a task. They will also be able to independently explore with the virtual robot platform after the workshop ends.

TEACHERS ARE RESPONSIBLE FOR:

At least 1 week prior:

- If your district uses Teams or Zoom: Science World will email you a meeting link.
- If your district uses Google Meet/Classroom: create a meeting and email techup@scienceworld.ca with a link.
- ensuring classroom is properly configured and equipment will be available for students (see class configuration, below). Science World staff are available to test set up, contact schools@scienceworld.ca to schedule this.

Class configuration:

- In-class learners: only one computer (preferably the teacher's computer) will connect to the online learning platform. This computer should be connected to the classroom projector and to an audio system in the room, so students can hear and see the facilitator (the camera should also be facing the students, so the facilitator can also see the students).
- Distance learners (students at another location) will need to be connected to the learning platform. They will also need to be knowledgeable of how the learning platform works, and how to switch between separate program windows (i.e. Teams and Safari/Chrome), regardless of what device they are using.
- All learners will need an iPad or a laptop with internet access, and the link to the site where the workshop activities will occur: <https://www.terrapiologo.com/emu/beebot.html> (alternate short link: <https://tinyurl.com/beebotbop>)
To save time, we suggest getting the webpage ready on the devices before handing them out to the students and ensuring the students only open to the webpage when instructed.
- Learners will need a writing utensil and scrap paper to write out their work (some of the activities will have a higher rate of success if students write out their code before entering it into the online program).

During the workshop:

- logging in to online learning platform *10 minutes prior* to workshop start time
- providing class demographics* and updated participant count to the Science World facilitator
- providing moderation between students and Science World facilitator (making sure students are on task and communicating with Science World facilitator as needed throughout workshop).
 - We will not be able to view student's code as they're working and so we ask that teachers present in the workshop help us in communicating with students about their code and any technological debugging that may occur on the students' end.

*This program is funded through CanCode, a program of the Government of. Science World is required to collect demographic data as part of this funding, as it helps the government administrators understand the breadth of access and the impact of these kinds of programs. Please be prepared to complete a quick demographic survey prior to the workshop's end so that we may fulfill our reporting duties and continue to offer these programs.