

Bee-Bots

What is coding you ask? And how in the world would you introduce it so that it is about problem solving and a learning loop?

Simply put, coding is used for communicating with computers. People use coding to give computers and other machines instructions on what actions to perform. We use coding to program websites, apps, and other technologies (like our phones, stoves, or lights) we interact with every day.

Bee-Bots are programmable robots.

They have 5 major commands in moving forward (150 mm), backward (150 mm), left (90 degrees); right (90 degrees); pause (1 second) and make a sound. Plus 2 device control commands: clear (all commands) and go (execute commands). When programming is complete, bee-bot makes a sound and lights up.



Start with the Basics:

- Grab a friend and code Bee-bot to their location. Send bee-bot through its paces – count out the steps. What numeracy patterns can be found? If your first code set was not exactly correct, how would you change the code to gain results? (*Hint: make sure you clear your code after each attempt*)
- **Alphabet mat** – have student start off at their beginning letter name and code the steps to make bee-bot land on all the letters of a student’s name.
- **Community map** – add boxes or landmarks on the community map. Create a path to get to a specific place. What story might be found on the journey?
- **Use command cards (this can be used as unplugged or plugged)** – set up a series of action steps. Have another student follow the steps once the coder has called out the series of steps. (This is called ‘unplugged’ as it does not use a computer.)
Using Bee-bot, code in the steps and analyze whether the steps bee-bot made matched the command cards set.