Bee-Bot Sequence

Lesson 1 – Introduction to Bee-Bot

Prep: Write numbers 1 – 6 on post-it notes and place them in random squares on the grid.

Students sit around perimeter of carpet with grid in the middle. Pass the Bee-Bot around the circle so students have a chance to hold and see it up close.

Introduce Bee-Bot related vocabulary:

1. Code - a set of directions
2. Command Cards - represent directions for Bee-Bot
3. Commands or Code - forward, back, left, right, go
4. Debugging - correcting problems with code

Discuss how to recognize a left turn from a right turn (L hands, write-with hand, flag salute hand).

Put Bee-Bot on START square.

Go around the circle and each student will:

1. Name the command, i.e. forward
2. Code the Bee-Bot
3. Press Go
4. Debug if needed, if not, cancel code

Teacher will line up each command card representing the code so it appears as a line of code (usually about 4 – 7 cards). When completed, use this line of code to program the Bee-Bot to travel from START to first number on grid, then push GO. Continue this game until Bee-Bot has traveled all the way to number 6.

Lesson 2 – Introduction Follow-up

Prep: Trade numbers in game one for colors or shapes. Put the colors or shapes on grid and on a large, soft dice that can be rolled to determine were Bee-Bot is traveling.

Review process and vocabulary. Place Bee-Bot on START. Go around the circle and students participate as in previous game.

Lesson 3 – Story Sequencing

Prep: Print out 6 - 8 pictures that represent the sequence in a story. Place them randomly on the grid.

Class Prep: Read a story together such as *Rosie's Walk*, *Going on a Bear Hunt* or *The Little Red Hen*. Ask students to recall the sequence of events and record on easel as they do.

Review process and vocabulary. Place Bee-Bot on START. Go around the circle and students participate as in previous games. Code Bee-Bot to visit each site in correct order.

Lesson 4 – Introduce Bee-Bot ruler

New vocabulary: Ruler

Discuss function of a ruler and how far the Bee-Bot travels. Use Maze mat. Go around the circle and ask each student to add a command for the Bee-Bot and select the correct command card. Keep track of all the code it takes to program through the maze (19 commands). Code Bee-Bot

to travel the whole length of the maze. (This is a maze Ellen created on a large cardboard.)

Lesson 5 – Class Maze Creation

Tools needed: Building materials such as Legos, wooden blocks (not too large), toy bricks, cardboard blocks.

Review use of ruler. The goal is to create a maze together as a class. Go around the circle and have students add Legos or blocks to maze. Lay out command cards and program Bee-Bot to run the maze. If time permits, enter all code for maze and then press GO!

Lesson 6 – Build a Maze

Students work in table groups to build their own mazes for Bee-Bot. Students can have jobs: planner, builder, writer of code. Students can use paper Bee-Bot and rulers to help with size and length of walls. Take turns and have each group show the class how they have coded Bee-Bot to navigate their maze. Any building material may be used (suggestions: Legos, wooden blocks – not too large, toy bricks, cardboard blocks).