Coding @ Park Grade 1 KIBOs Lesson #2

Lesson Objectives
Include skills practice

Materials: 5 KIBO kits, measuring tools, poster sticky, marker, Book slideshow

Students will…
- cooperatively code and operate a Kibo robot kit in groups of 3
- revisit specific coding blocks: start, end, forward, back, left, right, shake, beep.
- measure and gather data about the distance Kibo travels with one forward command
- Experiment and discover multiple avenues to move KIBO the distance of 3 forward commands
- learn and experiment with the REPEAT block
- identify the most "*efficient*" way to code KIBO to travel the distance that is 3X forward

Essential Questions

What makes a robot a robot?
How do you give instructions to a robot?
How can I make a robot repeat an instruction?

Hook/Activator
Activate prior knowledge/Get students set for class
Does this activity grab students' attention and capture their interest?
Does this activity make a connection with prior knowledge?

What is a robot?
Gather in circle and ask about what makes a robot a robot (concepts from lesson one). Collect and confirm. Review list from Session 1:
- •Robots are machines
- •Robots have moving (mechanical) parts
- •Not all robots look alike
- •People tell robots what to do with PROGRAMS
- •Some robots have SENSORS
- •Robots are not alive

Point out this is how robots are the same, but how might robots be different from one another? Take ideas, then Read the book, Robots, Robots Everywhere! By Sue Fleiss. Ask the students to notice if all the robots move, and how.

Not all robots move, but KIBO does.
1. Review how to program KIBO by using the program blocks and the scanner.
2. Review how we found out how far KIBO travels in one step (one forward) and why there might have been differing data.
3. Introduce REPEAT and demonstrate the repeat block.
4. Students will then work with partners to find 3 ways to demonstrate 3 "steps" one of which should be using the repeat block.
5. Gather and debrief. What were their solutions? What was a challenge? What was successful?
6. Have students clean up and fill out assessment.

1. *Students will enjoy a storybook about the large variety of robots and things they can do.*
2. *Students will use a yardstick to determine how far KIBO travels in one "step" (a forward command.)*
3. Students will use the repeat command to make KIBO travel forward three times.

Wrap-Up: Reflection/Summary/Synthesis
How will students capture the gist of the lesson?
What was important?
What have they learned?
How does today's learning fit in with what they have done
in previous classes or will be doing next?

Students will complete a handout asking students to show/draw/write how they programmed KIBO to move forward three "steps".