Coding as Another Language - KIBO (CAL-KIBO)

DEVTECH RESEARCH GROUP

Lesson 17: I Spy

Lesson 17 Overview: In Lesson 17, children will be introduced to and explore the Light Sensor and Distance Sensor and compare these programs to human senses.

Powerful Ideas from Computer Science: Algorithms, Control Structures, Hardware/Software
Powerful Ideas from Literacy: Literary Devices, Tools of Communication and Language

I. Warm Up: I Spy With My Little Eye

- Have children walk around the classroom or look out a window, and, using their Lesson 17 Design Journal, draw pictures of, and write down, objects they see (e.g., trees, flowers, books, etc.).

II. Opening Tech Circle: Sensing Our Surroundings

- Remind children that just as humans have different senses to take in information from our environment, robots have sensors to do the same, like the Sound Sensor. Each robot sensor can only do one thing.
- Tell children that today, they will learn how KIBO is able to "see" light and dark using a new KIBO part: the Light sensor! KIBO can also detect how far away things are from it, using the Distance Sensor.

III. KIBO Time: Light and Distance Sensors & Free Play

- Show children the Light Sensor module. Then Show the Repeat and End Repeat blocks, and the new Until Light/Until Dark parameter cards. Create two example programs together.
- Next, introduce the Distance sensor. Create two example programs together, one which uses the Until Near parameter and the other which uses the Until Far parameter. Similarly, using the Until Dark and Until Light parameters, create two example programs together.
- In groups, children will create programs using the Light Sensor and the Distance Sensor.

IV. Closing Tech Circle: Roses and Buds

- Each child shares one "rose" (thing that they learned today) and one "bud" (thing they want to know more about and are excited about learning).

KIBO Modules:

Light Sensor

Distance Sensor

Until parameters