Coding as Another Language - KIBO
(CAL-KIBO)

DEVTECH RESEARCH GROUP

Lesson 17: Over and Over

Lesson 17 Overview: In Lesson 17, children will learn how to identify complex repeating patterns and create nested loops and statements using the KIBO programming blocks.

Powerful Ideas from Computer Science: Algorithms, Control Structures, Modularity
Powerful Ideas from Literacy: Literary Devices

I. Warm Up: I Know a Song…

- Sing *The Song that Gets on Everybody's Nerves*.

II. Opening Tech Circle: Different Repetition

- Lead a child-centered discussion about the different kinds of repetition in the song. Explain to children how some of the lines repeated within the verse, but the verses repeat forever.
- KIBO can also use repetition in different ways. KIBO can have repeats within other repeats, ifs within other ifs - these are called nested loops and nested statements.

III. KIBO Time: Nested Loops and Statements & Free Play

- Explain to children that nested loops are a way to make even more efficient programs, where parts of instructions are repeated a different number of times. Just like there can be a repeat inside of another repeat, nested statements are created using any kind of statement (if or repeat) inside of another statement (if or repeat).
- In their groups, children can work on their Silly Rules Race projects, encourage children to explore Nested Loops and Statements, and incorporate these into their programs.

IV. Closing Tech Circle: Small-group Share

- Children share their programs in small groups. Review sharing procedures (e.g., listening while others are presenting, asking questions about others' projects, or providing compliments to peers).

Vocabulary:

Nested Loop

Nested Statement