

Lesson 17:
Can You Repeat That?

Lesson 17 Overview: Lesson 17 explores Repeat loops and how they can be used to make code more efficient.

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

I. Warm Up: Wheels on the Bus

- Sing and dance the *Wheels on the Bus* as a class.

II. Opening Tech Circle: Patterns and Repeat Loops

- After singing two verses of the song, discuss with the class the repetitions they observed in the song. Ask the children what line we say over and over several times? Talk about how we made a pattern and then repeated that same pattern over and over again, as needed in the lyrics! Ask the children to imagine they're teaching their friend the words to the song. Is there an easier way to tell them all the words without saying the same words so many times? Tell the children that there is! You can tell your friend to "Repeat" the line a certain number of times. Such as, "Repeat 'Round and round' 3 times!"

III. KIBO Time: Repeating Patterns & Repeating Free Play

- Using the large Programmer Says cards or KIBO blocks, create a simple repeating pattern. Have children engage actively by asking the repeating pattern. As a class, come up with several other examples of KIBO programs that have repeating patterns.
- Explain to children that we can use a repeat loop to make it easier to scan a KIBO program with a repeating pattern. Introduce the Repeat and End Repeat blocks, with the number parameters: 2, 3, 4, and forever.
- Allow children to free play with the Repeat Block and number parameters.

IV. Closing Tech Circle: Sharing Circle

- In a circle, have children share one interesting or surprising thing they learned during free play. Children are also welcome to share a challenge they encountered. Other children are encouraged to offer possible solutions.

Vocabulary:

Loop

Repeat

KIBO Blocks:

Repeat Block

End Repeat Block