



# LOOPING FRUITS

## COMPUTATIONAL THINKING: REPETITION & LOOPING

*Every child is different. Do what works best for encouraging each child's exploration of this suggested activity.*

### OBJECTIVE OF THIS INVESTIGATION:

Children recognize simple loops in pictorial instructions.

### VOCABULARY:

- Instructions
- Repeat
- Loop

### MATERIALS:

- Two different snacks in self-serve bowls
- 5 pictures of each snack
- Numeral cards 1-5
- Plates for children

### PROGRESSION STEPS (COMPUTATIONAL THINKING: REPETITION & LOOPING):

Visit [STEMIE Learning Trajectories](#) for details

- Repetition Recognizer
- Simple Looper
- Complex Looper

### THIS INVESTIGATION:

- During snack time, show children the bowls of snacks, the pictures, and the numeral cards. Explain the activity:
  - “**Today, we’re going to use these cards to help us serve our snack. Let’s make instructions so that everyone at the table gets a snack.**”
  - “**How many people do we have?**” (Count up to 5)
  - “**And we want all [insert number of people] to get two snacks – crackers and blueberries.**” (or the snack you have prepared).
- Lay one cracker picture and one blueberry picture down in a line in front of you for each child. Have the children say together what each child gets.
  - “**Crackers and blueberries for [insert child name].**”  
Repeat for next child.
  - “**What’s next?**” (**Repetition Recognizer**)
  - “**Yes, Crackers and blueberries for [insert child name].**”
  - “**Now we have instructions! If we follow these instructions, will everyone get a snack? Let’s check.**”

### ADAPTATIONS:

See [A Guide to Adaptations](#) for general ideas and strategies

#### Materials:

- Create cards that have both food items, rather than a card for each item to help children identify the core unit of the loop.
- Add Velcro so that cards don't slide around/get out of order

#### Instruction:

- Model creation of the loop, then see if children can create the loop independently.





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### THIS INVESTIGATION (CONTINUED):

- Pass out the real snacks and have them say the directions with you again, adding a counting word after each set of snacks.  
**"Crackers and blueberries for [insert child name]. That's one."**  
(Repeat to the number of children at the table.)  
**"We handed out [number] sets of snacks for [number] people."**
- While children eat their snack, ask about the instructions.  
**"Are these long directions or short directions?"** Gesture across the long set when you say long and gesture short to contrast.  
**"Is there a way we could make these directions shorter?" (Simple Looper)**  
**"Could we use these numeral cards to make our directions shorter?"**  
**"How many sets of snacks did we need? [Number] sets of snacks for [number] people."**
- Use the questions to prompt children to represent the loop with one numeral card and one set of pictures.
- If children are not able to represent the loop, encourage them to identify the part of the long directions that repeats. **"Does anyone hear a pattern?" "What repeats?"**
- If children quickly represent the loop, challenge them to create directions with a set of 3 or 4 actions or objects in an efficient way – using one numeral one and one representation of the set. **(Complex Looper)**

### HOW TO CONTINUE THIS INVESTIGATION:

- Try this activity in other contexts, such as the cooking (break an egg, scramble it – end when all eggs are gone), music and movement (clap, clap, stomp – end after four times), or clean up (get a block, put it on the shelf – end when all blocks are put away).
- Use cards that represent the steps to challenge children to make efficient directions and follow them.

SUPPORT MATERIALS: Use the blank one to make your own!



**Graham cracker**



**Blueberries**

