GROCERY STORE
COMPUTATIONAL THINKING: REPETITION & LOOPING, SEQUENCING

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

OBJECTIVE OF THIS INVESTIGATION:

Children will determine the best order in which to complete a set of tasks to buy food at a grocery store. Children will then take on roles in dramatic play to follow the sequence they created.

VOCABULARY:

- first, then, next, last
- repeat
- steps
- order
- sequence

MATERIALS:

- Pretend food or recycled packaging (e.g., empty berry containers, egg container, cereal boxes, etc.) for children to purchase
- Shelves or an area to put the food
- Shopping bags
- Pretend money or credit card
- A pretend cash register or cardboard box
- Visuals of steps in the sequence (attached)

PROGRESSION STEPS (COMPUTATIONAL THINKING: REPETITION & LOOPING, SEQUENCING):

Visit **STEMIE Learning Trajectories** for details
- Complex Looper
- Complex Sequencer
- Sequence Planner

THIS INVESTIGATION:

- Set up the dramatic play grocery store ahead of time.
- Show children the materials and introduce the activity.
  - **"I set up this grocery store for dramatic play, but I'm not sure how to play. Can you help me use these pictures to make ourselves directions to follow? What we need to do first? What comes next?"** **(Simple Sequencer)**
- Encourage children to work through a plan either verbally or by putting the picture cue cards in order. **(Sequence Planner)**
- Ask guiding questions as children work to figure out a plan.
  - **"Can we put the food in the bags before we pay for it? No....hmm so maybe bagging our food should come at the end."**

ADAPTATIONS:

See **A Guide to Adaptations** for general ideas and strategies

Environment:
- Ensure the grocery store is set up in a way that everyone can access it and complete both the shopper and customer role. This might mean setting up on the floor, providing a chair to sit, etc.

STEMIE Learning Trajectories

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THIS INVESTIGATION (CONTINUED):

- After you scaffold ordering the visuals, allow children to choose roles as either the grocery store worker or the customer and follow the visual you made together to complete the play scenario. Refer back to the visual as you go.
- Note the simple loop in the directions as you play.
    "We said we need to scan the food before we pay. Do we scan just one piece of food and then pay? Or do we scan all the food before we pay? You're right! We need to do this step over and over until all the food is scanned. Then we can move on to the next step!"
- When you finish the play scenario, review the sequence and encourage children to switch roles.

ADAPTATIONS (CONTINUED)

Materials:
- Provide a variety of different textures and sizes of materials for children to work with.

Instruction:
- Focus on children completing the loop. Create the visual ahead of time and encourage children to follow the sequence.
- Reduce the number of steps (e.g., have food ready to check out and have children scan and bag only).

HOW TO CONTINUE THIS INVESTIGATION:

- Do children see any steps that could be switched in the sequence and still allow the shopper to buy their groceries (e.g., pay then bag vs bag then pay**)."Hmm, I wonder if we can do any of these steps in a different order. What do you think?"** (Early Decomposer)
- Add additional "loops" within activity. For example, pretend to forget an item. "**Oh, I forgot to buy milk! What should I do?**"
- Add a math and counting component when children pay, encouraging children to count out dollar amounts for their purchase.
- Add a writing/reading component and have children make grocery lists by writing out lists, drawing pictures, or using premade visuals.
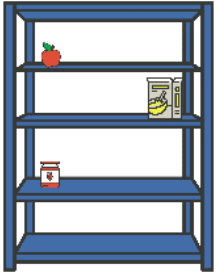
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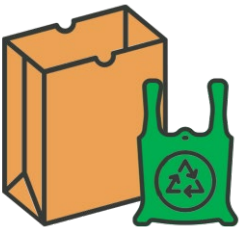
SUPPORT MATERIALS:

Put items on shelves

Shop

Scan food items

Put groceries in bag

Pay