



# MS. MIX UP: PLAYDOUGH PIZZA

## COMPUTATIONAL THINKING: DEBUGGING

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

### OBJECTIVE OF THIS INVESTIGATION:

Children recognize and fix errors by checking the work of a mixed-up puppet.

### VOCABULARY:

- error
- mistake
- correct
- incorrect
- check
- order
- steps

### MATERIALS:

- Puppet
- Playdough (pre-cut into circles for dough, red sauce, cheese, and pepperonis for a more complex design)

### PROGRESSION STEPS (COMPUTATIONAL THINKING: DEBUGGING):

Visit [STEMIE Learning Trajectories](#) for details

- Guided Error Recognizer
- Simple Error Recognizer
- Simple Error Fixer

### THIS INVESTIGATION:

- Explain what Ms. Mix-Up is trying to do.  
**"This is Ms. Mix-Up. Today she wants to make pizza with the playdough that look just like this."**
- Show the playdough pizza picture.  
**"She sometimes makes mistakes. Can you tell her if she makes a mistake with the pizza?"**
- Prompt
  - Place the red sauce on the table, with dough on top.
  - If the child notices the mistake, allow them to fix it (**Simple Error Fixer**).
  - Continue by placing the cheese beside the dough and the pepperoni in random places.
  - If the child doesn't notice the mistake, use Ms. Mix-Up to ask, **"Did I do it right?"**
- Response
  - If children are not able to identify the error(s), ask **"Are these the same color on top? Are the pepperonis in the same place?"**

### ADAPTATIONS:

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

#### Materials:

- Use cardboard pieces rather than playdough to support easier grasping.
- Plastic gloves for children reluctant to touch playdough.

#### Instruction:

- Alternate the activity with time to play in open-ended ways to increase engagement.  
**"First, Ms. Mix Up is going to do it and then you can have a turn!"**





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## THIS INVESTIGATION (CONTINUED):

- If they describe an error but aren't able to fix it (**Error Identifier**), ask **"What could Ms. Mix-Up do to make it right? Show me!"** If needed, break down the errors so they can re-order the steps into a correct order.
- Summarize the steps: **"First we put the dough down, then the sauce, then the cheese. Finally, we put the pepperoni on top."**

## ADAPTATIONS (CONTINUED):

- Support steps with a first/then visual board.
- Encourage children to use verbal language, sign, gesture, or AAC to let you know they see a mistake. Sign "Stop" while saying **"Tell Ms. Mix-Up 'Stop!' if you see a mistake."**

## HOW TO CONTINUE THIS INVESTIGATION:

- Repeat the steps of the investigation with other playdough designs or other mistakes using the same design, such as putting the cheese under the sauce.
- For more of a challenge:  
Don't show the picture ahead of time to encourage them to focus on problems in the process rather than in the outcome.
- For more support:  
Compare the visual as you go, referring to it after each piece is placed. **"Okay, I'm getting my red sauce. Now I'm going to add the dough on top. Hmm, do you think that's right? Does it match the picture?"**

## SUPPORT MATERIALS:



**Outcome:**  
**Cheese Pizza**



**Outcome:**  
**Pepperoni Pizza**



**Error: Pepperoni Pizza**