OBJECTIVE OF THIS INVESTIGATION:

Children will notice the effects of pushes and pulls during their buggy walk.

VOCABULARY:

- Push
- Pull
- Move
- Force

MATERIALS:

· Buggy or wagon for outdoor walk

PROGRESSION STEPS (SCIENCE: FORCE & MOTION):

Visit **STEMIE Learning Trajectories** for details

· Force Noticer

THIS INVESTIGATION:

- Before you head out on your buggy/wagon walk, present the problem to the children:
 - "I need your help! I forgot how to move our buggy/wagon. Can someone help me remember how to get everyone moving?"

If children need support, try these prompts to support their thinking:

- "If I walk this way (walk in parallel to the buggy), will the stroller move? Hmmm, no? What do you think I need to do to move the buggy/wagon?"
- 2. If children don't tell you (verbally or non-verbally) to push the buggy/wagon, try these prompts to help children figure out what you need to do. Try to support children to come up with the answer on their own...
 - o "I wonder what would happen if...."
 - "Do you think I need to use a body part to help me?"
 - "What happens when I use my hands? It's still not moving. What should I do with my hands?"

Model any actions or ideas the children have.

ADAPTATIONS:

See <u>A Guide to</u>
<u>Adaptations</u> for general ideas and strategies

Instruction:

- Provide visual cues of push and pull to provide opportunities for children to communicate during the experience
- Note: Consult with your El providers if your child needs an adapted stroller or wagon to meet their sensory or physical needs.



THIS INVESTIGATION (CONTINUED):

- 3. Encourage children to think of novel ways to move the stroller. Remember to give children wait time after asking a question.
 - o "Is there another way I could move the stroller?"
- 4. Model the difference between pushing and pulling the buggy/wagon and label as push and pull.

HOW TO CONTINUE THIS INVESTIGATION:

- If children understand that you can use force from pushing the buggy/wagon to move it, challenge them to think about how to exert more or less force (Force Recognizer):
 - "Hmmm, I wonder how I can push the buggy/wagon very far? What do you think I should do? Can you help me?"
 - "Wow! That was a big push. The buggy/wagon went really far when we gave it a big push. How could we move it and not go very far? What do you think I should do?
 - "That was a small push. The buggy/wagon did not go as far as when we gave it a big push!"

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

