Alabama Course of Study: Science
DCI: Motion and Stability: Forces and Interactions
Topic: Changes in Motion
CCC: Cause and Effect

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1. Plan and carry out investigations to determine the effects of forces of different strengths and directions on the motion of an object, including speed, direction, and distance traveled.

Examples: pushing, pulling, or crashing objects

2. Analyze data from investigations to determine whether a design solution provides sufficient force to change the speed or direction of an object.

Example: constructing a ramp to increase or decrease the speed of a moving object

Interactive Sorting Game

Have children engage in a sorting game to classify actions as 'Push' or 'Pull,' helping them explore key concepts of force and motion.

Materials Needed:

- Picture cards depicting various actions (e.g., opening a door, pulling a wagon, pushing a swing).
- Two labeled bins or areas: "Push" and "Pull".

Instructions:

- Show each picture card to the class.
- Ask students to decide whether the action is a push or a pull.
- Have students place the card in the corresponding bin or area.
- Discuss each choice, reinforcing the vocabulary and concepts.

Extension Activity:

Introduce a simple experiment where students use toy cars and ramps to observe how different forces (strong push vs. gentle push) affect the motion of the car. Discuss observations using the vocabulary words.