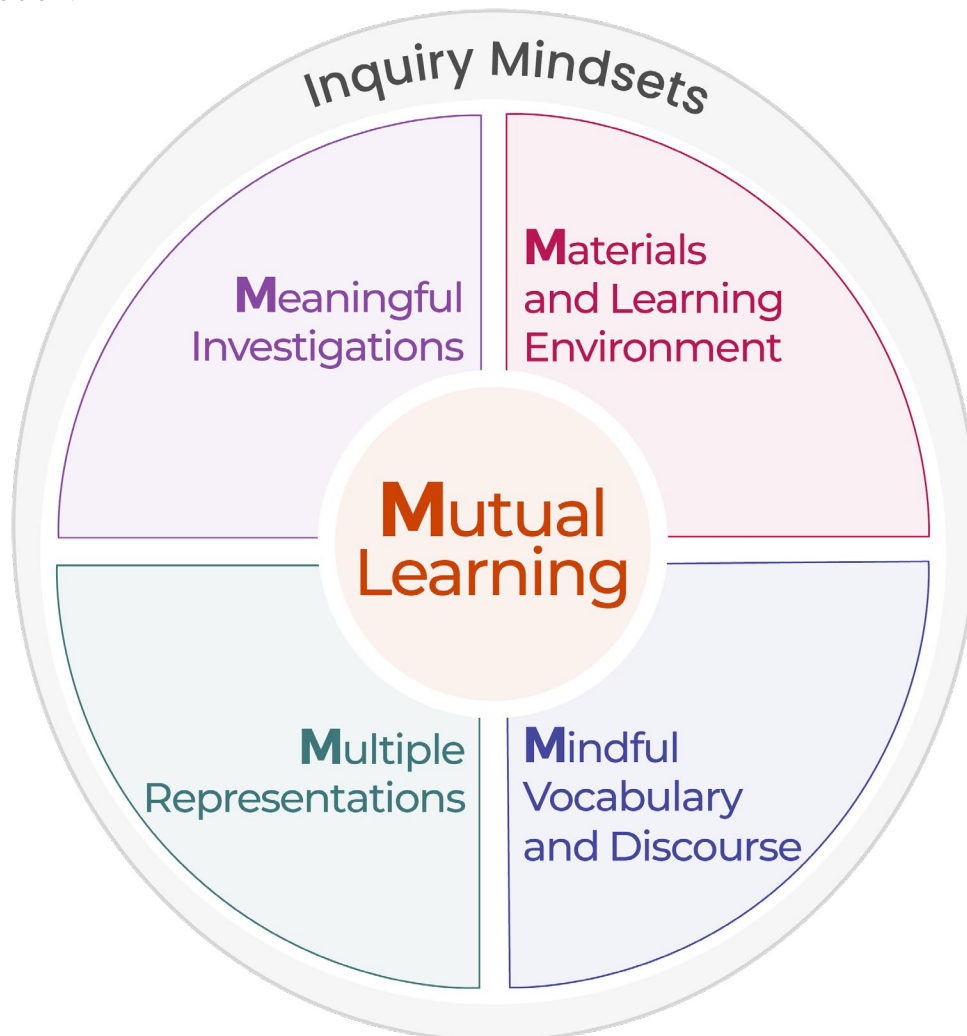




Planning Investigations About Force and Motion

This handout guides the user to plan force and motion investigations using the M⁵ Early STEAM Approach.



Brief Description

Provide a brief description of an experience you can provide for children in your setting to support them in investigating force and motion.



Concepts and Skills

Review the foundations and standards relevant to the age or grade of the children in your setting. What concepts and skills might you focus on?

Mutual Learning

- How do children in your setting experience concepts related to how things move (for example, motion, pushing, and pulling)? How might you build on these experiences and provide more intentional opportunities for children to investigate and learn about these concepts?
- In what ways can you connect the learning experience to the different interests of children in your setting (for example, how can you connect the experience to the unique interests of the girls in your setting)?
- What are some questions you might ask children to help you understand their ideas and support them in thinking more deeply?
- Consider ways to connect with families. Are there materials you might ask families to share from home? Is there an opportunity for a family member to share their expertise or experiences with children as they relate to the topic?





Meaningful Investigations

- What questions might you investigate with children about how things move related to their interests and lived experiences?
- What concepts might children explore as they seek answers to their questions?
- In what ways might children use different inquiry skills (for example, asking questions, testing ideas, and documenting) as they investigate?
- How might you make these experiences playful?

Materials and Learning Environment

- What materials might you provide? How will these materials help children learn about force and motion?
- What environments might you create or visit that invite children to explore force and motion (for example, play equipment or natural spaces)?
- Consider materials and environments that are open-ended and invite children to explore in different ways.





Mindful Vocabulary and Discourse

- What vocabulary might you introduce to children related to force and motion? Consider ways to pair new words within direct and meaningful experiences or words that children might use in their everyday lives.
- In what ways might you support children to communicate about their ideas and experiences? Consider different ways children might communicate (for example, using home languages, gesturing, writing, drawing, or using augmentative and alternative communication devices).
- What are some open-ended questions you might ask children to encourage them to think and explain?

Multiple Representations

- How might you support children to explore this concept in different contexts and investigations, or with different materials?





Inquiry Mindsets

- All of the effective teaching practices that guided your planning above occur within an inquiry mindset.
- Inquiry mindsets include the way educators think and feel about inquiry and their children's abilities. Let's take a moment to consider your own mindset. Inquiry can be messy. It can be unpredictable. When we engage in inquiry and support children to wonder and explore, they might investigate in ways you were not expecting. Sometimes, this unpredictable nature of inquiry can feel uncomfortable. How might you best prepare your mindset and children's mindsets to be ready to embrace inquiry?

