

Getting a feel for the phenomenon: Activity 2 -- Liquid: Flow & Glide

Exploring Solid, Liquid, Gas, and State Change

Goals & Rationale

- Help students experience how atoms/molecules behave in solids, liquids, and gases -- rather than only see diagrams
- Use students' bodies and movement to eternalize and explore abstract scientific ideas. This can make invisible phenomena (e.g., molecular motion, spacing, energy) accessible
- Support multiple ways of knowing (embodied, social, verbal, conceptual) -- serving diverse learners and offering culturally sustaining, engaging science learning
- Use Move About It cards to guide embodied inquiry, and encourage flexibility, creativity, and student-driven exploration.

Tips and Considerations for Implementation

- Provide plenty of physical space and clear norms for movement to ensure safety
- Combine embodied activities with reflection -- discussion, drawing, linking to diagrams/simulations -- to help students connect body experiences to scientific concepts
- Use multiple modalities (movement, talk, drawing, simulation) to support diverse learners and deepen understanding
- Consider rhythm or music (for fluid transitions or warm-ups), but ensure that movement goals remain clear
- Invite students to invent their own gestures, motions, or interpretations -- this honors student creativity, identity, and agency
- Use the cards to help students expand the ways they explore movement ideas in the space

Activity 2 -- Liquid: Flow & Glide

Prompt: "You are a liquid -- particles are close, but can slide past one another."

Use this activity to introduce the structure and properties of liquids. Liquids are made up of particles that are close together but randomly arranged, with weaker bonds than solids. Particles slide past one another. Liquids have a definite volume but take the shape of their container.

Setup: Have students stand up in a space where they have room to move openly.

Movement Instructions:

- Have students spread out slightly from the "solid" cluster -- still near neighbors but with enough space to move.
- Describe the way that particles move in a liquid, and ask students to become liquid particles.
- Encourage them to slowly slide, glide, drift, or float around the room -- moving gently, swaying, sliding their feet, shifting weight, gently drifting past one another, remaining close to one another, but not touching. *(Facilitator can use Move About It Cards to encourage students to explore different qualities of movement, energy levels, shapes, and speeds)*
- Encourage smooth and continuous movement.

Facilitator Notes / Variations:

- After a minute or two, ask students to reflect on and describe the differences they felt between solid and liquid (e.g., spacing, flow, ease of movement).
- Variation: Ask a few participants to "lead" the flow (set the pace) and others to "follow" to simulate viscosity or flow resistance.
- Reflection prompts: "If you were water, what would you flow like? Fast? Slow? Calm or choppy?"