Doin' the Newton Dance

Use the activity below to explore the connection between science and art.

Materials Needed: One small object per student

1. To begin, offer students the following context: "The famous scientist Sir Isaac Newton authored a set of laws centered on the relation between an object and motion. In fact, Newton's first law of motion says 'objects at rest stay at rest unless a force acts on them.'

2. Next, tell them they're going to explore a blend of science and art—specifically dance. To start the exploration, ask students to find a small object, such as a ball or toy, and then find a partner.

3. First, ask students to hold their object in their hand and do the following:

   → Toss it gently in the air, catching it when it comes down. Ask them: *What happens when you toss it gently upward? How does the object move?* and invite them to share their responses with their partners.

   → Give their object a spin on a solid surface. Do this a few times at different speeds. Ask them: *In what different ways did the object move at varying speeds? How did it act when coming to a stop? How would you describe its movement?* and invite them to have a discussion in pairs about the different ways their objects move.

4. Next, invite students to create a short sequence of four movements inspired by the motion of their objects. Then, invite them to share their moves with their partner.

5. Ask students to combine their moves and their partner's moves to create a dance. Ask them to consider this question: *How do your dance moves reflect Newton's law?*

6. Finally, invite volunteers to step into the spotlight by sharing their dance moves with the class and celebrate the fusion of science and dance!

Reflection Questions:

How did your object's movements reflect Newton's laws?

What surprised you during the dance exploration?

How can you apply the science of motion to improve your dance moves in the future?