Residency Sample Lesson Plan

Directions: Complete this lesson plan for a sample student residency. Fill out all the areas that apply to your lesson.

Teaching Artist Name	**Ciara McCormack Greenwalt/ Moving Minds Dance**
Course Title	**Energy, Force, and Movement**
Course Type	Integrated arts residency Partnering Course: **Science**
What grade(s) is the residency for?	**K-2**
Schedule Information	Number of sessions **6** Length of each individual session **40 min.** Total hours **3 hrs. 40 min.**

Course Description:

In this residency, students will use dance to connect to their physical science lessons. Because our bodies are impacted by the same laws that govern all matter, students will be able to feel the relationships between concepts like speed and momentum, and directly experience the impact of changing variables on their movements.

Materials & Space:

- *At least 300sq ft of open space. A cafeteria or gym is preferable, but a classroom with desks cleared to the side is functional.*
- *Music playlist on phone or CD and compatible speaker*
- *Whiteboard or posters and markers*
- *Scarves, poly dots, balls, pencils, other classroom items.*

Big Idea:

Dancers can show science ideas through movement.
Science Day 1: Force makes things move. Some things move with light force and some with strong force.
Dance Day 1: Dancers use strong and light force in their movements.

Lesson Objectives and Student Learning Assessment

Learning Objectives *What I want my students to know and be able to do.*	**Assessment Criteria** *What I will observe in my students – traits that can be seen and/or heard.*
1. *Dance Understanding:* Students can move lightly and strongly.	**1.** Students move with clear differences between light, soft, or gentle movement and strong, heavy, or powerful movement.
2. *Science Understanding:* Some objects take a lot of effort to move, and some move easily.	**2.** Students can identify an object that would move with light applied force and one that would require strong force.
3. *Critical Thinking:* Students evaluate how different forces can affect and change movements.	**2.** Students identify the impact of strong and light force on different dance movements. (For example, "When I use strong energy to jump, I go higher." Or "Tiptoes don't need strong energy because I can go faster when I use light energy.")

Vocabulary (optional):
Critical Thinking, Force, Direction, Speed, Relationship, Self Space, General Space

Standards Addressed:
Next Generation Science Standards **PS2.A: Forces and Motion** • Pushes and pulls can have different strengths and directions. • Pushing or pulling on an object can change the speed or direction of its motion and can start or stop it. **PS2.B: Types of Interactions** • When objects touch or collide, they push on one another and can change motion. **PS3.C: Relationship Between Energy and Forces** • A bigger push or pull makes things speed up or slow down more quickly. *(secondary)*
Washington Arts Standards in Dance **DA:Cr1.1.1: Generate and conceptualize artistic ideas and work.** **DA:Cr2.1.1: Organize and develop artistic ideas and work.** b. Choose movements that express an idea or emotion, or follow a musical phrase. **DA:Pr5.1.1: Develop and refine artistic techniques and work for presentation.** a. Demonstrate a range of … movements, body patterning, body shapes, and directionality. b. Move safely in general space through a range of activities…while maintaining personal space. **DA:Re8.1.1: Interpret intent and meaning in artistic work.** a. Select movements from a dance that suggest ideas and, using simple dance terminology, explain how the movement captures the idea.

Instructions:

Sample DAY 1:

- Welcome (7)
    - ⇒ Gather in a circle
    - ⇒ Introductions: I am Ciara from Moving Minds Dance. Over the next few weeks we're going to be dancing together about science.
    - ⇒ Overall Big idea: **Dancers can show science ideas through movement.** *Especially when those ideas are about how things move!*
    - ⇒ Expectations:
        - Use your watching eyes and listening ears,
        - Dance is done with bodies not voices
        - Be brave to try something new, share your ideas, and be creative
    - ⇒ Name circle for students
    - ⇒ Share big ideas
        - ***Science Day 1:*** Force makes things move. Some things move with light force and some things take strong force to move.
        - ***Dance Day 1:*** Dancers use strong and light force in their movements.

- Warm-up (5)
    - ⇒ Braindance- Students perform a series of movement patterns that warm up the whole body and help wake up the brain- Breath, Tactile, Core/ Distal, Head/ Tail, Upper/ Lower, Body Side, Cross Lateral, and Vestibular

- Freeze Dance (8)
    - ⇒ Rules of Freeze Dance: Move when there is music, stop when the music stops. Be safe.
    - ⇒ Cue students to explore specific movements with either light or strong energy.
        - i.e. Jump strongly, tiptoe lightly, poke lightly, gallop strongly

- Dance Experiments (15)

As a class, students participate in the scientific process by deciding what they think will happen, testing their ideas, and drawing conclusions. Use a three column chart to track hypothesis and conclusions.

- ⇒ 1. "We are going to test the force we need to move different real and imaginary objects." With the class, write a list of 6-7 things and have them guess how much force would be needed to move them. They can choose both things in the room and things that are made up.
- ⇒ 2. "Now let's test what kind of force we need to move the objects we have in the room." Call on students to try moving objects with both light and strong force. Some objects may be available for the whole class to try.
- ⇒ 3. "Did they all take the same amount of force that we thought they would?"
- ⇒ 4. "Now let's try it with some things we have to imagine because we don't have them in the classroom." *How much force would you need to move a tree? A dinosaur? An eyelash? A dragon egg? A star? A flower petal? What movement would you use to make that force?* Have students choose movements they would use to move those objects, and decide how much force it would take.
- ⇒ 5. Return to the list and record the results of the imaginary experiment.
- ⇒ 6. Perform the movements associated with each item on the list in order.

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- Reflection and Reverence (5)

⇒ Students pair and share about the big idea
⇒ Three students share out ideas
⇒ Bow

Remaining Sample Sessions:

Day	Daily Goal	Supporting Activities
1	Force can be strong or light. Dance: Strong/ Light Force	See full lesson plan above
2	Force can make things start or stop. Dance: Self/ General Space	Dancers explore staying in one spot and traveling through the room. Concepts from the first day will be layered to answer the question: What force is required to make different objects switch between self and general space?
3	Force can make things move faster or slower. Dance: Speed	Dancers explore how to perform the same movement at different speeds. Students will layer in the idea of how force causes objects decelerate when they come to a stop and accelerate as they begin to move.
4	Force can make things change direction. Dance: Forward/ Backward/ Sideways Direction	Dancers practice moving safely in different directions, thinking about where force would come from to make them move in that direction.
5	Force can affect the relationship between objects. Dance: Relationship- Near/ Far, Over/ Under/ In Front / Behind	Dancers will learn the dance concept of relationships and use them to imagine how force can move objects together and apart, as well as what happens when one object moves and another does not.
6	Reviewing and sharing knowledge	Dancers review what they've learned throughout the residency and synthesize their information into a final creative project and choreography task.