

# UNIT: CAN YOU BALANCE? PUSH AND PULL-FORCES IN MOTION THROUGH PARTNER POSES

(Lesson 1 of 4) Grade Band: 3, 4

**Content Focus: Dance & Science** 



#### LEARNING DESCRIPTION

Students will explore balanced and unbalanced forces through movement and collaboration. They will practice push and pull poses with a partner learning to maintain balance and adjust forces. Pairs will create a sequence with pushes, pulls, and level changes, rehearsing and presenting their work while receiving peer feedback. The lesson concludes with self-reflections on balanced and unbalanced forces and the creative process.

# **LEARNING TARGETS**

<b>Essential Questions</b>	"I Can" Statements
How can you identify balanced and unbalanced forces?	I can work with a partner to create a movement sequence demonstrating counter-balance.



unbalanced forces into balanced ones during a	I can recognize balanced and unbalanced forces in my movements and make necessary adjustments to achieve balance.
	I can reflect on my work and explain how different content areas are connected.

# **GEORGIA STANDARDS**

Curriculum Standards	Arts Standards
Grade 4: S4P3. Obtain, evaluate, and communicate information about the relationship between balanced and unbalanced forces.	Grade 4: ESD4.CR.1 Demonstrate an understanding of the choreographic process.
a. Plan and carry out an investigation on the effects of balanced and unbalanced forces on an object and communicate the results.	ESD4.CR.2.a Use movement to express an idea or feeling.
	ESD4.RE.1 Demonstrate critical and creative thinking in dance.
	ESD4.CN.3 Integrate dance into other areas of knowledge.

# **SOUTH CAROLINA STANDARDS**

Curriculum Standards	Arts Standards
Grade 3: 3-PS2-1. Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object.	Anchor Standard 1: I can use movement exploration to discover and create artistic ideas and works.  Anchor Standard 2: I can choreograph a dance.
	Anchor Standard 7: I can relate dance to other arts disciplines, content areas, and careers.

# **KEY VOCABULARY**

Content Vocabulary	Arts Vocabulary	
Force - Any interaction that, when applied to an object, can cause it to change its motion or shape	Counter-balance - Two or more dancers work together and use their weight to help each other stay balanced	
Balanced forces - Two or more forces acting on an object in such a way that	<ul> <li><u>Force/energy</u> - The amount of power you use to make your movements or show</li> </ul>	



they cancel each other out, resulting in no change in the object's motion

- <u>Unbalanced forces</u> Two or more forces acting on an object are not equal in size or are not opposite in direction, causing the object to accelerate (change its speed or direction)
- Gravitational force The force of attraction that pulls objects toward each other due to their mass
- Motion The change in the position of an object over time
- <u>Mass</u> A measure of the amount of matter in an object or substance
- <u>Direction</u> The way something is moving or pointing.
- Motion Something moves from one place to another
- Speed How fast something is moving
- <u>Strength</u> The amount of force something can handle or use

# feelings

- Movement sequence A series of movements: a short dance
- <u>Levels</u> One of the aspects of movement (there are three basic levels in dance: high, middle, and low)
- Body shape Refers to an interesting and interrelated arrangement of body parts of one dancer; the visual makeup or molding of the body parts of a singular dancer; the overall visible appearance of a group of dancers (they may be curved/angular, symmetrical/asymmetrical, positive/negative)
- <u>Locomotor movement</u> A movement that travels through space (e.g. walk, jump, hop, roll, gallop, skip, crawl & more)
- <u>Non-locomotor movement</u> A movement that does not travel through space (e.g. shaking, bending, stretching, twisting, turning & more)

# **MATERIALS**

 <u>Ideas of Partner Poses</u> (look through to identify those that clear show push and pull (counterbalance)

#### **INSTRUCTIONAL DESIGN**

# Opening/Activating Strategy

- Have students demonstrate, through movement, different body shapes and movements based on the following prompts:
  - A shape that expresses pushing something (frozen-not moving)
  - A movement that expresses pushing something (adding a locomotor movement)
  - A shape that expresses pulling something (frozen-not moving)
  - A movement that expresses pulling something (adding a locomotor movement)
  - Various locomotor movements (walk, gallop, jump, hop, skip, crawl, etc.)



Various non-locomotor movements (shake, twist, turn, rise, fall, etc.)

#### **Work Session**

- Review forces (push, pull, unbalanced, and balanced).
- Divide students into pairs.
- Guide the pairs through the following partner poses (movements).
  - Rooftops (Push):
    - Students will face each other with arms straight out in front of them. Their palms should be touching.
    - Instruct the pair to lean into each other so that arms raise to form a triangular "rooftop".
  - Elevator (Pull):
    - Students will face each other standing toe to toe with a little space between their feet.
    - Students will hold each other's forearms or interlock fingers.
    - Students will lean away from each finding balance.
    - Students will continue to pull away from each other, bending their knees to descend and ascend as a pair.
- Engage in a class discussion about the following:
  - What do you have to do to maintain equal balance?
  - What happens when one partner pulls or pushes more than the other?
  - What happens when one partner doesn't pull or push enough?
- Have pairs create a sequence that meets the following requirements:
  - The sequence must include:
    - A beginning, middle, and end
    - One partner movement that clearly expresses a Push
    - One partner movement that clearly expresses a Pull
    - One partner movement that clearly expresses a force of their choice (push or pull)
    - A level change (high, middle, or low)
- After a designated period of work time, pairs will present their complete sequence.
  - Have a dress rehearsal, in which all pairs present their sequence simultaneously.
  - o Invite pairs to present their sequence individually for the class (as time allows).
    - Engage the class in giving feedback of where they saw pushes and pulls in the sequences.

# Closing/Reflection

- Students will reflect on one or more of the following questions via an exit ticket:
  - What do you have to do to maintain equal balance? (Balanced force)
  - What happens when one partner pulls or pushes more than the other? What happens when one partner doesn't pull or push enough? (Unbalanced force)
  - How did this activity help you understand balance and unbalanced forces?
  - If you were to go through this artistic process again, what would you do differently?
     Why?



#### **ASSESSMENTS**

#### **Formative**

Check-in/observation of students during group creation of their sequence

#### **Summative**

- Performance of Sequence—did the sequence meet the requirements?
  - o A beginning, middle, and end
  - One partner movement that clearly expresses a Push
  - o One partner movement that clearly expresses a Pull
  - One partner movement that clearly expresses a force of their choice (push or pull)
  - A level change (high, middle, or low)
- Exit ticket

# **DIFFERENTIATION**

#### Acceleration:

- Increase group size to include more students.
- Have students write out the directions to their sequence for another pair to perform

#### Remediation:

- Give examples of <u>partner poses</u> to try. Determine which ones show a Push and which ones show a Pull before students choreograph their movement sequences.
- Have students' sequences include only two movements—one example of a Push and one example of a Pull.

ADDITIONAL RESOURCES		

# CREDITS

U.S. Department of Education- STEM + the Art of Integrated Learning Ideas contributed by: Christopher Crabb

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<sup>\*</sup>This integrated lesson provides differentiated ideas and activities for educators that are aligned to a sampling of standards. Standards referenced at the time of publishing may differ based on each state's adoption of new standards.