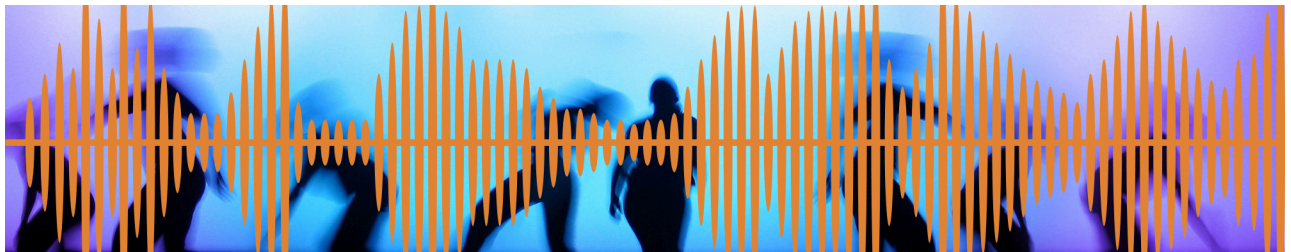




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Integrated learning solutions

MOVING SOUND Grade Band: 4-5 Content Focus: Dance & Science



LEARNING DESCRIPTION

Guide your students in using movement and dance composition to aid their comprehension of sound waves and how they transmit energy.

LEARNING TARGETS

Essential Questions	"I Can" Statements
How can dance/movement be a tool to communicate how sound waves transmit energy?	<p>I can explain and define vocabulary related to sound and sound waves.</p> <p>I can communicate the meaning of vocabulary related to sound and sound waves through movement.</p> <p>I can use the elements of dance intentionally and meaningfully to communicate how sound waves transmit energy.</p>



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GEORGIA STANDARDS

Curriculum Standards	Arts Standards
<p>S4P2. Obtain, evaluate, and communicate information about how sound is produced and changed and how sound and/or light can be used to communicate.</p> <p>a. Plan and carry out an investigation utilizing everyday objects to produce sound and predict the effects of changing the strength or speed of vibrations. b. Design and construct a device to communicate across a distance using light and/or sound.</p>	<p>ESD4.CR.1 Demonstrate an understanding of the choreographic process.</p> <p>ESD4.CR.2 Demonstrate an understanding of dance as a form of communication.</p> <p>ESD4.PR.1 Identify and demonstrate movement elements, skills, and terminology in dance</p> <p>ESD4.RE.1 Demonstrate critical and creative thinking in dance.</p>

SOUTH CAROLINA STANDARDS

Curriculum Standards	Arts Standards
<p>4-PS4-3. Generate and compare multiple solutions that use patterns to transmit information.</p>	<p>Anchor Standard 1: I can use movement exploration to discover and create artistic ideas and works.</p> <p>Anchor Standard 2: I can choreograph a dance.</p> <p>Anchor Standard 3: I can perform movements using the dance elements.</p>

KEY VOCABULARY

Content Vocabulary	Arts Vocabulary
<ul style="list-style-type: none"> ● <u>Absorb</u> - To receive without echo ● <u>Amplitude</u> - The measure of a sound wave ● <u>Echo</u> - A reflection of sound ● <u>Pitch</u> - How high or low a sound is; determined by the frequency of the vibration ● <u>Reflection</u> - The return of light or sound waves from a surface 	<ul style="list-style-type: none"> ● <u>Choreography</u> - The art of composing dances and planning and arranging the movements, steps, and patterns of dancers ● <u>Level</u> - One of the aspects of the movement element space; in dance there are three basic levels: High, middle and low ● <u>Body</u> - the physical aspect of the dancer's form and movement ● <u>Action</u> - The movements that the dancer performs; these movements can be



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- Reverberation - A sound that echoes
- Transmit - To send or convey from one place to another
- Vibrations - A rapid back and forth movement
- Sound wave - Sound travels in a wave, which is a moving pattern of high and low pressure or vibrations
- Volume - How much sound energy reaches the ear

divided into two main categories:
non-locomotor (axial) and locomotor

- Non-locomotor (axial) movements – Movements that occur around the axis of the body without traveling from one place to another
- Locomotor movements - Movements that involve traveling from one place to another
- Space - The area in which the dance takes place and how the dancer interacts with this area
- Time - Use and manipulation of temporal aspects to create rhythm, pacing, and duration in movement
- Energy - The quality and dynamics of movement, including the force, flow, and intensity
- Dynamics - The quality of movement in terms of energy, intensity, and speed; movements can be sharp or smooth, fast or slow, strong or gentle

MATERIALS

- Sound source and music
- Cards with sound terminology written on them

INSTRUCTIONAL DESIGN

Opening/Activating Strategy

Classroom Tips: Set up chairs and tables in a circular format to maximize students' engagement and ability to see their peers during the activity and performance. Also establish parameters for acceptable movement choices and discuss audience behavior/etiquette with students.

- Begin the lesson by engaging students in movement that introduces students to the Elements of Dance: Body, action, space, time and energy.
 - Have students arrange themselves in a circle with enough personal space to move freely without touching a neighbor.
 - Turn on instrumental music with a steady beat.



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- First, have students bring awareness to their bodies by leading them through gentle stretches starting from the head and moving to the toes (e.g., head circles, shoulder shrugs, toe touches, etc.).
- Next, bring students' awareness to the space in the room by having them march in place to the beat of the music with high knees and swing their arms side to side. Select a "leader" who will guide students in a movement as students walk in a circle around the room. This will allow students to explore traveling movements and pathways (straight, zigzag, circular).
- Now, direct students to go back to their place; they will explore energy variations with different movement qualities such as sharp movements—quick, precise actions like punches or snaps, and smooth movements—slow, flowing actions like waves or circles with arms.
- Finally, bring students' attention to levels (high, middle, low) and directions (forward, backward, sideways) with movements such as stretching up high and moving on tiptoes, moving low to the ground and crawling forwards and backwards, and bouncing in place at a medium level.

Work Session

- As a class, discuss or review concepts of sound and how sound waves transmit energy.
- Arrange students in small groups.
- Pass out vocabulary cards to each group with vocabulary such as volume, absorb, amplitude, echo, pitch, reflect, reverberate, transmit, vibrate and sound wave.
- Ask each group to consider the meaning of their card and how they could use movement to represent it. Remind students of the movements they used in the activator.
 - Allow groups to share their word and movement with the class.
 - Have each group write one to two sentences explaining how sound waves transmit energy.
- Now, tell groups that they will be creating a short movement phrase that demonstrates how sound waves transmit energy. Students should use the dance concepts that they have learned and practiced in their movement phrase.
- Students should be prepared to perform their dances.

Closing/Reflection

- Before students perform their dances, discuss audience participation and etiquette. The groups will then perform their movement phrases.
- Ask the audience to identify and discuss how the group showed how sound waves transmit energy using dance. Students should reference characteristics of energy, levels, pathways, etc.

ASSESSMENTS

Formative

Teachers will assess students' understanding of the content throughout the lesson by observing students' participation in the activator, responses in class discussion, ability to create a movement to communicate the meaning of a vocabulary term, and ability to collaborate with their groups to create a movement phrase demonstrating how sound waves transmit energy.



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Summative

CHECKLIST

- Students can explain and define content vocabulary.
- Students can communicate the meaning of content vocabulary through movement.
- Students can use the elements of dance intentionally and meaningfully to communicate how sound waves transmit energy.

DIFFERENTIATION

Acceleration:

- Have students incorporate additional characteristics to their final dances such as variations in volume.
- Require students to use certain elements of dance in their choreography.
- Allow students to select their own music or sound to accompany their dance. Their dance should reflect the sound qualities in the music (volume, echo, etc.).

Remediation: Instead of creating a dance in small groups to demonstrate how sound waves transmit energy, work as a whole class to create one dance that students can perform together.

ADDITIONAL RESOURCES

NA

**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.*

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ATLANTA BALLET

Centre for Dance Education

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