



# artsNOW

Integrated learning solutions

## MAGNETIC MOVING Grade Band: 3, 5 Content Focus: Dance & Science



### LEARNING DESCRIPTION

In this lesson, students will use movement to illustrate their understanding of magnetic poles.

### LEARNING TARGETS

Essential Questions	"I Can" Statements
How can dance/movement help us demonstrate the relationship between magnetic poles?	<p>I can create choreography that appropriately demonstrates my assigned magnetic poles.</p> <p>I can accurately match choreography and magnetic poles.</p>

### GEORGIA STANDARDS

Curriculum Standards	Arts Standards
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<p><b>Grade 5:</b> S5P3. Obtain, evaluate, and communicate information about magnetism and its relationship to electricity.</p>	<p><b>Grade 5:</b> ESD5.CR.1 Demonstrate an understanding of the choreographic process.</p> <p>ESD5.CR.2 Demonstrate an understanding of dance as a form of communication.</p> <p>ESD5.PR.1 Identify and demonstrate movement elements, skills, and terminology in dance</p> <p>ESD5.RE.1 Demonstrate critical and creative thinking in dance.</p>
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## SOUTH CAROLINA STANDARDS

Curriculum Standards	Arts Standards
<p><b>Grade 3:</b> 3-PS2-3. Ask questions to determine cause-and-effect relationships of electric interactions and magnetic interactions between two objects not in contact with each other.</p> <p>3-PS2-4. Develop possible solutions to a simple design problem by applying scientific ideas about magnets.</p>	<p><b>Anchor Standard 1:</b> I can use movement exploration to discover and create artistic ideas and works.</p> <p><b>Anchor Standard 2:</b> I can choreograph a dance.</p> <p><b>Anchor Standard 3:</b> I can perform movements using the dance elements.</p> <p><b>Anchor Standard 7:</b> I can relate dance to other arts disciplines, content areas, and careers.</p>

## KEY VOCABULARY

Content Vocabulary	Arts Vocabulary
<ul style="list-style-type: none"> <li>● <u>Magnet</u> - An object or material that generates a magnetic field. This magnetic field exerts a force that attracts ferromagnetic materials like iron, nickel, and cobalt, and can attract or repel other magnets.</li> <li>● <u>Magnetic Poles</u> - Every magnet has two poles: a north pole and a south pole. Opposite poles attract each other, while like poles repel.</li> <li>● <u>Magnetic Field</u> - The region around a magnet where magnetic forces are exerted. This field is invisible but can</li> </ul>	<ul style="list-style-type: none"> <li>● <u>Energy/Force</u> - Force propels or initiates movement, or causes changes in movement of body position</li> <li>● <u>Mirror</u> - To copy the movements of another while facing that individual</li> <li>● <u>Pathway</u> - The designs traced on the floor as a dancer travels across space; the designs traced in the air as a dancer moves various body parts</li> <li>● <u>Space</u> - An element of movement involving direction, level, size, focus, and</li> </ul>



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be visualized with iron filings or by its effects on other magnets and ferromagnetic materials.

pathway

- Formation - The placement of dancers in a performance space

## MATERIALS

- Magnets
- Paper and pencils
- Sound source and music

## 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 with teacher-led mirror exercises to get students focused and warm-up for dance activities.
  - Have students arrange themselves in the classroom with enough personal space to move freely without touching a neighbor.
  - Turn on instrumental music with a steady beat.
  - 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 rhythm of the music by having them march in place to the beat with high knees, swinging their arms side to side.
  - Now, direct students to follow your movements with energy variations using 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

- Challenge students to work with a partner and practice mirroring. Students will begin seated, then explore mirror activities that travel through space.
  - **Pair Up:** Divide the class into pairs, with each pair facing each other.
  - **Leader and Follower:** Designate one person as the leader and the other as the follower.
  - **Slow Movements:** The leader starts with slow and simple movements, such as raising an arm, tilting the head, or taking a step to the side.



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- **Mirroring:** The follower mirrors the leader's movements as precisely as possible, as if they are the leader's reflection in a mirror.
- **Switch Roles:** After a few minutes, have the pairs switch roles so that the follower becomes the leader and vice versa.
- **Increase Complexity:** Gradually increase the complexity and speed of the movements as students become more comfortable with the exercise.
- **Explore Creativity:** Encourage the leader to incorporate different levels, directions, and dynamics into their movements, challenging the follower to stay in sync.
- Tell students that they will be using dance to communicate the properties of magnets.
- First, discuss or review properties of magnets, including the response of same and opposite poles.
  - Pass out magnets to students and allow them to experiment with how the magnetics move depending on whether two like poles are facing each other or whether opposite poles are facing each other.
  - Students should record findings.
- Return to the mirror activity. Ask students to now engage in the mirror activity responding to your prompts.
  - Prompt the leader to move in a way that shows magnets facing opposite poles.
  - Prompt the leader to move in a way that shows magnets facing like poles.
  - Debrief the activity with students. Discussing how these concepts would influence choreographic decisions in a dance.
- Divide into groups (having an equal number of students per group, if possible). Assign each group opposite or like poles.
- Within groups, have students create short choreographic phrases (eight count phrases with four movements of two counts each) to demonstrate their assigned concept.
- Provide time for students to choreograph and practice; circulate the room to work with students and check for understanding.
- When student compositions are complete, students will present their choreography to their classmates.

### Closing/Reflection

- The students will perform their choreography for their classmates. Discuss appropriate audience participation and etiquette prior to performances.
- Turn up the volume of the music and help students find the steady beat by tapping their toe on the floor.
- Invite the first group up to perform their dance.
- After each performance, the audience should analyze the different choreographic creations, comparing and contrasting them. Students should identify whether the group demonstrated like or opposite poles.
- Have students write about the choreographic decisions their group made and why those decisions best supported their concept.

## ASSESSMENTS

### Formative



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Teachers will assess students' understanding of the content throughout the lesson by observing students' participation in the activator, participation in partner mirroring, discussion of magnetism, notes about observations of magnetic behavior, and contributions to choreography.

### Summative

#### CHECKLIST

- Students can create choreography appropriately demonstrating assigned magnetic poles.
- Students can accurately match choreography and magnetic poles.

### DIFFERENTIATION

#### Acceleration:

- Have students write a paragraph comparing and contrasting two student choreographic compositions. Identify the magnetic poles about which the piece was created. Discuss the similarities and differences evident between pieces. Did one composition convey ideas better than others? If so, why?
- Have students portray what they learned about poles through a visual art piece that focuses on the use of color and space to convey the relationship between types of poles.

#### Remediation:

- Scaffold the lesson by creating a whole-class choreography together to demonstrate either like poles or opposite poles. Debrief the process and choreography as a class. Then, assign groups the task of choreographing a dance to demonstrate whichever types of poles was not choreographed as a class.
- Reduce the number of movements required in choreography.

### 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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