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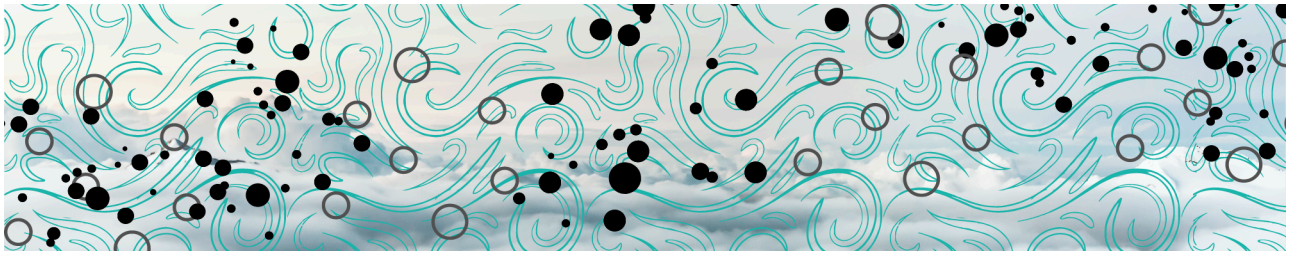
Integrated learning solutions

CREATING ATMOSPHERIC ART:
EXPLORING HIGH AND LOW PRESSURE SYSTEMS
Grade Band: 6-8
Content Focus: Visual Arts and Science



LEARNING DESCRIPTION

In this lesson, students will demonstrate the characteristics of high and low-pressure systems in weather patterns by creating artwork using color, repetition, placement, and movement.

LEARNING TARGETS

Essential Questions	"I Can" Statements
• How can I use color, repetition, placement, and movement in art to demonstrate the characteristics of high and low-pressure systems in weather patterns? • How does air particle density and air pressure impact weather patterns?	• I can use color, repetition, placement, and movement in art to demonstrate the characteristics of high and low-pressure systems in weather patterns. • I can explain how air particle density and air pressure impact weather patterns.

GEORGIA STANDARDS

Curriculum Standards	Arts Standards
Grade 6 S6E4. Obtain, evaluate, and communicate information about how the sun, land, and water affect climate and weather.	**Grade 6** VA6.CR.1 Visualize and generate ideas for creating works of art. VA6.CR.2 Choose from a range of materials and/or methods of traditional and contemporary artistic practices to plan and create works of art. VA6.CR.3 Engage in an array of processes, media, techniques, and/or technology through experimentation, practice, and persistence. VA6.CR.4 Incorporate formal and informal components to create works of art.

SOUTH CAROLINA STANDARDS

Curriculum Standards	Arts Standards
Grade 6 6-ESS2-5. Analyze and interpret data to provide evidence for how the motions and complex interactions of air masses result in changes in weather conditions.	**Anchor Standard 1:** I can use the elements and principles of art to create artwork. **Anchor Standard 2:** I can use different materials, techniques, and processes to make art. **Anchor Standard 7:** I can relate visual arts ideas to other arts disciplines, content areas, and careers.

KEY VOCABULARY

Content Vocabulary	Arts Vocabulary
• Low pressure system - An area where the air pressure is lower than the surrounding areas; usually associated with cloudy weather • High pressure system - An area where the air pressure is higher than the surrounding areas; usually associated	• Warm colors - Yellow, orange, red • Cool colors - Purple/violet, blue, green • Movement - One of the principles of design; it is the way artists create the illusion of motion; it is the way artists use the elements of art to move the viewer's

with sunny weather ● Air particle density - The number of particles in a specific volume of air; high density means more particles, low density means fewer	eye through the artwork ● Placement - Where artists choose to place the elements of art in an artwork ● Repetition - One of the principles of design; the repeated use of an element in an artwork

MATERIALS

- White paper
- Markers/colored pencils OR tempera paint and paintbrushes

INSTRUCTIONAL DESIGN

Opening/Activating Strategy

- Project *Sunlight* by Yayoi Kusama.
  - In small groups, students should make observations about the artwork. Students should identify as many characteristics of the artwork as they can. Examples could include that it has dots, repetition, shades of red, etc.
- Facilitate a discussion about what students observed.
- Next, have students make associations about the artwork in their small groups–what does it make them think of?
  - Facilitate a group discussion about the associations that students made.
- Tell students the name of the artword and the artist. Ask students why they think Kusama named the artwork *Sunlight*.
  - Display a color wheel. Ask students what the warm colors are and what connection that might have to the title *Sunlight*.
- Show students other examples of Kusama's artwork. Ask students to discuss what is similar and different about the artwork. Students should notice that Kusama uses dots throughout most of her artwork.
- Ask students where they see repetition in her artwork.
- Tell students that another principle of design is movement. Movement can mean real physical movement, but it can also represent how the artist wants the viewer's eyes to travel through the artwork.
  - Show students *Starry Night* by Vincent Van Gogh. Ask students how Van Gogh created the illusion of air moving in the artwork.
  - Show students *Sunlight* by Yayoi Kusama again. Ask them where they see movement in this artwork (radiating sunlight).

Work Session

- Explain to students that they will be creating two artworks–one that demonstrates a high pressure system and one that demonstrates a low pressure system.
- Review (or teach) students about both systems, warm and cold air density, and why high pressure systems result in sunny weather and why low pressure systems result in cloudy/rainy weather.
- Students' artwork should use dots, like Kusama, to represent air particles.
    - Students' artwork should visualize warm and cool air particles using warm and cool colors.
    - They should use placement of their dots to show that warm air is less dense than cool air.
    - They should also use placement to represent where warm and cool air particles are positioned depending on the type of weather (sunny or cloudy).
- To make their artwork more visually engaging and interesting, project *Starry Night* and *Sunlight* on the board again. Since air particles move, ask students to think about how they could show movement in their artwork.
- If students are using markers or colored pencils, they will draw dots to represent air particles. If they are using tempera paint and paint brushes, students will "spatter paint" their air particles.
    - Demonstrate low-mess splatter paint techniques: After dipping the paintbrush in paint, tap the handle of the paintbrush on the opposite hand with the bristles over the paper OR flick the bristles of the paintbrush with thumb.

Closing/Reflection

- Students should complete their work by writing a summary explaining how they showed both types of systems using placement and movement to show density and the type of system and how they used color to show air temperature.
- Conduct a gallery walk. Students should be able to determine which artwork shows a low pressure system and which shows a high pressure system.

ASSESSMENTS

Formative

Teachers will assess student understanding by observing whether students are able to identify how artists show movement, identify repetition in art, and explain high and low pressure systems.

Summative

CHECKLIST

- Students can use color to represent air particle temperature.
- Students can use placement and movement to represent where warm and cool air particles are positioned depending on the type of weather and to visually demonstrate air particle density.
- Students can explain how they showed both types of systems using placement, movement and color.
- Students can explain both high and low pressure systems.

DIFFERENTIATION

Acceleration: Students can create a similar artwork that shows how changes in air pressure create hurricanes, tornadoes, and thunderstorms.

Remediation:

- Students should select either a high or low pressure system for their artwork.
- Allow students to work with a partner.
- Allow students to orally explain how they used color, placement and movement in their artwork to visualize each system.

ADDITIONAL RESOURCES

- *Starry Night* by Vincent Van Gogh
- *Sunlight* by Yayoi Kusama
- Color wheel
- Examples of Kusama's artwork

**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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