Unit Essential Question
How could the force of applying paint to paper change when painting to different musical dynamics and tempos?

PROJECT DESCRIPTION
Who doesn’t love creating an abstract painting using water balloons and all while simultaneously learning about the science topic: forces and motion? In this project, students will immerse in a visual arts activity that explores force and motion. This will be done by using dynamics and tempo to create some messy wild art. This project may be messy, but it will create a clear connection between visual art, music and the science topic: forces and motion!

LEARNING TARGETS
“I Can…”
- Use the visual arts to express different forces and motion
- Use the visual arts to express dynamics and tempos of music
- Synthesize my understanding of forces and motion using a digital reflection

www.artsnowlearning.org
Units provide differentiated ideas and activities aligned to a sampling of standards. The units do not necessarily imply mastery of standards, but are intended to inspire and equip educators.
Produced through the U.S. Department of Education: Arts in Education—Model Development and Dissemination Grants Program Cherokee County (GA) School District and ArtsNow, Inc.
**Feeling the Motion through Force**

**Project 1 of 3**

Approx. Duration of Project: 30 -45 minutes each day for 3 days

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### Learning Targets

“I Can…”:
- Use the visual arts to express different forces and motion
- Use the visual arts to express dynamics and tempos of music
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### Essential Question

- How could the force of applying paint to paper change when painting to different musical dynamics and tempos?

### Standards

**Curriculum Standards**

S2P2. Obtain, evaluate, and communicate information to explain the effect of a force (a push or a pull) in the movement of an object (changes in speed and direction).
- Plan and carry out an investigation to demonstrate how pushing and pulling on an object affects the motion of the object.
- Design a device to change the speed or direction of an object.
- Record and analyze data to decide if a design solution works as intended to change the speed or direction of an object with a force (a push or a pull).

**ELAGSE2W2:** Write informative/explanatory in which they introduce a topic, use facts and definitions to develop points and provide a concluding statement or section.

**Arts Standards**

VA2PR.2 Understands and applies media, techniques, and processes of two-dimensional art processes (drawing, painting, printmaking, mixed-media) using tools and materials in a safe and appropriate manner to develop skills.
- Creates paintings with a variety of media (e.g., tempera, watercolor).

VA2PR.4 Participates in appropriate exhibition(s) of artworks.
- Writes a title that describes his or her finished work of art.
- Writes an artist's statement by reflecting on finished artwork.

VA2AR.1 Discusses his or her artwork and the artwork of others.

MGGM.6 Listening to, analyzing, and describing music

### Key Vocabulary

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Feeling the Motion through Force  
Painting to the Beat  
2nd Grade

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<table>
<thead>
<tr>
<th>Content Vocabulary</th>
<th>Arts Vocabulary</th>
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<tbody>
<tr>
<td>● Force</td>
<td>● Beat: pulse underlying music</td>
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<tr>
<td>● Motion</td>
<td>● Tempo: speed of the beat</td>
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<td>● Push</td>
<td>● Dynamics: loud/soft volume</td>
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<tr>
<td>● Pull</td>
<td>● Color: an element of art with three</td>
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<tr>
<td></td>
<td>properties, hue, intensity, and value</td>
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<td></td>
<td>● Visual Rhythm: indicates a type of</td>
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<td>movement by repeated shapes, lines, or</td>
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<td></td>
<td>colors</td>
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<td></td>
<td>● Musical Rhythm: pattern of long and short</td>
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<tr>
<td></td>
<td>sounds</td>
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<tr>
<td></td>
<td>● Media: tools and materials an artist uses</td>
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</tbody>
</table>

TECHNOLOGY INTEGRATION

- [https://www.youtube.com/watch?v=H62BRsqEruE](https://www.youtube.com/watch?v=H62BRsqEruE) - Kandinsky Music Video
- [https://musiclab.chromeexperiments.com/Spectrogram](https://musiclab.chromeexperiments.com/Spectrogram) - Use this link to show how sound waves are represented visually
- [https://www.youtube.com/watch?reload=9&v=Jl4FPk_-hk8](https://www.youtube.com/watch?reload=9&v=Jl4FPk_-hk8) (Video Explanation of water balloon painting)

ASSESSMENTS

<table>
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<tr>
<th>Formative</th>
<th>Summative</th>
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</table>
| ● Teacher will observe the students as they use force and motion to create a visual art piece  
● Teacher will observe the students during the reflection process  
● Teacher will observe the students as they create their video reflection | ● Project 1 Rubric (See Download) |

MATERIALS

(No materials listed)
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**Tempera Paints (1 set of 5 per class):**
[https://store.schoolspecialty.com/OA_HTML/ibeCCtpItmDspRte.jsp?minisite=10206&item=2993874](https://store.schoolspecialty.com/OA_HTML/ibeCCtpItmDspRte.jsp?minisite=10206&item=2993874)

**White Sheets (5 per classroom):**
[https://www.amazon.com/Utopia-Bedding-Brushed-Microfiber-Sheet/dp/B00XK9CQ6E/ref=sr_1_9?s=home-garden&ie=UTF8&qid=1496412127&sr=1-9&keywords=white+sheets](https://www.amazon.com/Utopia-Bedding-Brushed-Microfiber-Sheet/dp/B00XK9CQ6E/ref=sr_1_9?s=home-garden&ie=UTF8&qid=1496412127&sr=1-9&keywords=white+sheets)

**Water Balloons (Red, Yellow, Blue, Green, Orange, Purple) 1 pack of 500 per grade level:**
[https://www.amazon.com/Water-Balloons-Assorted-Colors-include/dp/B01HBY7I2C/ref=sr_1_19?s=toys-and-games&ie=UTF8&qid=1496412524&sr=119&keywords=water+baloons](https://www.amazon.com/Water-Balloons-Assorted-Colors-include/dp/B01HBY7I2C/ref=sr_1_19?s=toys-and-games&ie=UTF8&qid=1496412524&sr=119&keywords=water+baloons)

**Bean Bags (2 sets per class):**
[https://store.schoolspecialty.com/OA_HTML/ibeCCtpItmDspRte.jsp?minisite=10206&item=87644](https://store.schoolspecialty.com/OA_HTML/ibeCCtpItmDspRte.jsp?minisite=10206&item=87644)

**Plain White Construction Paper:**
[https://store.schoolspecialty.com/OA_HTML/ibeCCtpItmDspRte.jsp?minisite=10206&item=3467060](https://store.schoolspecialty.com/OA_HTML/ibeCCtpItmDspRte.jsp?minisite=10206&item=3467060)

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**Activating Strategy (5-10 min)**

- The teacher will read *Action Jackson* by Jan Greenberg and Sandra Jordan to introduce Jackson Pollock and his art techniques.
- The teacher will show the Kandinsky music video ([https://www.youtube.com/watch?v=H62BRsqEruE](https://www.youtube.com/watch?v=H62BRsqEruE)).
- Then as a class, experiment with the Spectogram website: ([https://musiclab.chromeexperiments.com/Spectrogram](https://musiclab.chromeexperiments.com/Spectrogram)) to show how different dynamics and tempos can be represented visually.

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**Main Activity**

**PROCESS:**

- After reading *Action Jackson*, announce to the students that they will create a visual art piece representing different dynamics and tempos in music using balloons filled with slightly watered down paint.
- **Communication Assessment:** Students will reflect/ explain how the force of their throw determined the speed and direction of the splattered paint. The teacher may choose the appropriate technology for the video reflection according to school availability (Chatter-pix, Office-Mix, Sway, etc).

**PART 1**

- In groups of 4-5, the students will assign a value to each color (red, yellow, green, blue, orange,
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and purple) based on the dynamics (soft, loud) and tempo (fast, medium, slow) of the music piece they are creating. Each group will include at least three of the choices (soft, loud, fast, medium, and/or slow).

- The students will make inferences about force and motion. They will do this by predicting how the transfer the music creation onto the construction paper would look using crayons corresponding to the colors of the beat they chose.
- Then using the colored beanbags and throwing them against a white sheet based on the dynamics and beats assigned, the students will rehearse. Their throwing of the beanbags should be rehearsed with the music piece selected. The force and motion of how they throw the beanbags should correspond with the musical dynamic or tempo assigned.

PART 2

- Then the students will create their own masterpiece on a white fabric sheet using the paint filled water balloons following the music piece on construction paper. Remind students to throw the water balloons as they rehearsed them with the bean bags the previous day. Refer to the video: https://www.youtube.com/watch?reload=9&v=Jl4FPk_-_hk8 . This video will help explain how this painting activity can be set up.

PART 3

- Students will reflect/ explain how the force of their throw determined the speed and direction of the splattered paint. The teacher may choose the appropriate technology according to school availability (Chatter-pix, Office-Mix, Sway, etc). Students will capture a digital reflection of students’ explanation of how the music and paint water balloons correlate with the concept of force and motion.

Classroom Tips:

The teacher will put the students in heterogeneous groups of 4 to 5 before Part 1. Students will perform paint balloon activity outdoors. Instruct students to wear clothing they can get messy. (Have Smocks or old t-shirts available). Students can take their shoes off if needed for this activity.

REFLECTION

Reflection Questions

- How did you choose colors to represent differing music dynamics (loud and soft)?
- How does the speed of your throw relate to music tempo (fast, slow, medium)?
- How does force of the throw change the look of the splattered paint?

DIFFERENTIATION

BELOW GRADE LEVEL: The teacher will provide a graphic organizer for color coordination regarding beat and tempo. The teacher will provide a sentence frame for students that are below grade level or ELL students.

ABOVE GRADE LEVEL: Create a musical composition using Quaver or other musical website.
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Students may also research Jackson Pollock and Kandinsky using materials from the library and various websites.

EL STUDENTS: Provide a word bank for written reflection
Small Group for the written reflection

ADDITIONAL RESOURCES

- IPads
- Computers
- Quaver
- Chatterpix
- Office 365

APPENDIX

- Project 1 Rubric

CREDITS

U.S. Department of Education
Arts in Education--Model Development and Dissemination Grants Program
Cherokee County (GA) School District and ArtsNow, Inc.
Ideas contributed and edited by:
Lisa Keasler, Tammy Owen, Edited by Jessica Espinoza, Edited by Dr. Carla Cohen
# Painting to the Beat
## Project 1

<table>
<thead>
<tr>
<th>Checklist</th>
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<th>😞</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Appropriate use of art materials</strong></td>
<td>I used my art materials appropriately.</td>
<td>I sometimes used my art materials appropriately.</td>
<td>I did not use my art materials appropriately.</td>
</tr>
<tr>
<td><strong>Science Connection: Force &amp; Motion</strong></td>
<td>Student can accurately verbalize (or write) why certain tempo-assigned colors created the most force.</td>
<td>Student can somewhat verbalize (or write) why certain tempo-assigned colors created the most force.</td>
<td>Students can not verbalize (or write) why certain tempo-assigned colors created the most force.</td>
</tr>
<tr>
<td><strong>Student Critique of Artwork</strong></td>
<td>Student participated in a fully developed oral/ written critique of their artwork.</td>
<td>Student participated in a somewhat developed oral/ written critique of their artwork.</td>
<td>Student did not participate in an oral/ written critique of their artwork.</td>
</tr>
<tr>
<td>Students participated in a video reflection of their artwork explaining the meanings of the force of the splatters.</td>
<td>Student created a video reflection loudly and clearly explaining how the force and motion was impacted by the music. Student then expressed the cause and effect of the paint splatters.</td>
<td>Student created a video reflection using a somewhat loud voice and explaining some of how the force and motion was impacted by the music.</td>
<td>Student created a video reflection with minimal explanation of how the force and motion was impacted by the music. Student struggled to explain the cause and effect of the paint splatters.</td>
</tr>
</tbody>
</table>