



Unit Essential Question

How does the size of the marble effect the speed of the marble through the paint and the thickness of the paint line when creating a painting?

PROJECT DESCRIPTION

In this project, students will use force and motion to create a visual art piece using marbles and paint. The students will investigate how the size of marbles will affect the speed of the marbles when rolled through paint. The students will then compare and contrast their artwork to the work of Jackson Pollock.

LEARNING TARGETS

“I Can...”

- Create an art piece using different media and force
- Can reflect on my art piece and how it relates to force and motion
- Compare and contrast my artwork to the work of

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.

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Cherokee County (GA) School District and ArtsNow, Inc.

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ESSENTIAL QUESTIONS

<ul style="list-style-type: none"> • How does the size of the marble effect the speed of the marble through the paint and the thickness of the paint line when creating a painting?
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STANDARDS

Curriculum Standards	Arts Standards
<p>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).</p> <p>a. Plan and carry out an investigation to demonstrate how pushing and pulling on an object affects the motion of the object.</p> <p>b. Design a device to change the speed or direction of an object.</p> <p>c. 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).</p> <ul style="list-style-type: none"> • ELAGSE2W2: Write informative/explanatory in which they introduce a topic, use facts and definitions to develop points and provide a concluding statement or section. 	<p>VA2MC.2 Formulates personal responses.</p> <p>a. Produces multiple interpretations for an object or image.</p> <p>VA2PR.1 Creates artworks based on personal experience and selected themes.</p> <p>b. Creates artworks emphasizing one or more elements of art (e.g., space, line, shape, form, color, value, texture) and principles of design (e.g., balance, repetition).</p> <p>c. Combines materials in new and inventive ways to make a finished work of art.</p> <p>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.</p> <p>c. Creates paintings with a variety of media (e.g., tempera, watercolor).</p> <p>VA2PR.4 Participates in appropriate exhibition(s) of artworks.</p> <p>a. Writes a title that describes his or her finished work of art.</p> <p>b. Writes an artist’s statement by reflecting on finished artwork.</p>

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

Content Vocabulary	Arts Vocabulary
<ul style="list-style-type: none"> • Force • Speed • Motion • Push • Pull • Investigation 	<ul style="list-style-type: none"> • Jackson Pollock: an American painter and a major figure in the abstract expressionist movement • Color: an element of art with three properties, hue, intensity, and value • Primary Colors: any of a group of colors from which all other colors can be obtained by mixing, including red, yellow and blue • Secondary Colors: a color resulting from mixing two primary colors together • Media: tools and materials an artist uses • Proportion: gives a sense of size seen as a relationship of objects, such as smallness or largeness • Line: an element of art which refers to the continuous mark made on some surface by a moving point • Shape: an enclosed space defined by other elements of art

TECHNOLOGY INTEGRATION

<ul style="list-style-type: none"> • Museum of Modern Art: Jackson Pollock https://www.moma.org/multimedia/video/123/687 • Ramps 1: Let it Roll! AAAS- Science Netlinks http://sciencenetlinks.com/lessons/ramps-1-let-it-roll/

ASSESSMENTS

Formative	Summative
<ul style="list-style-type: none"> • Teacher will observe the students for the understanding of forces and motion. • Teacher will observe the students 	<ul style="list-style-type: none"> • Teacher will use the rubric provided to assess student on science content, art process, and final product.

Project 3 of 3

Approx. Duration of Project: 30 -45 minutes

<p>as they use forces and motion to create a visual art piece in the style of Jackson Pollock.</p> <ul style="list-style-type: none"> • Teacher will observe the students during the reflection process. • Teacher will observe the students as they create their written reflection. 	
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MATERIALS

<ul style="list-style-type: none"> • Book: "Action Jackson" by Jan Greenberg and Sandra Jordan (1 per classroom) https://www.amazon.com/Action-Jackson-Jan-Greenberg/dp/0312367511/ref=sr_1_1?ie=UTF8&qid=1496409725&sr=8-1&keywords=jackson+pollock+kids+book • Tempera Paints (1 set of 5 per class) https://store.schoolspecialty.com/OA_HTML/ibeCCtpltmDspRte.jsp?minisite=10206&item=2993874 • Copy Paper Box Lids • Plain White Construction/ Art Paper (Size 9 X 12) • Different Size Marbles https://www.amazon.com/Marbles-Players-Shooters-Assorted-Colors/dp/B0186TVG4U/ref=sr_1_10?s=toys-and-games&ie=UTF8&qid=1496412706&sr=1-10&keywords=marbles
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Activating Strategy (5- 10 min)

<ul style="list-style-type: none"> • Show the Museum of Modern Art's video about Jackson Pollock: https://www.moma.org/multimedia/video/123/687 • Brainstorm on chart paper with a shoulder partner around the following questions: <ul style="list-style-type: none"> • <i>What sort of lines and shapes did you see in the video demonstration?</i> • <i>What do you notice about his technique and how it affects the paint?</i> • <i>What was the cause and effect of the amount of force he exerted and the amount of paint that splattered on the canvas?</i>

Main Activity

PROCESS:

- Refer back to the book "Action Jackson" as needed from the Unit Overview (Project 1).
- Announce to students that they will use their knowledge of force and motion to create a visual art piece using marbles, paper, and various colors of paint.

PART I

Project 3 of 3

Approx. Duration of Project: 30 -45 minutes

- Place students in small groups of 3-4 students.
- Give each student a piece of white art paper for the artmaking activity.
- Set up the needed materials for the activity (1 copy paper box lid per 2 students, different size marbles, and one piece white construction paper).
- Direct students to write their name on the back of their paper.
- Model for the students the correct way to roll the marbles back and forth and side to side.
- Direct the students to put the paper in the copy paper box lid.
- The teacher will squirt 3 to 4 colors, chosen by the student, onto the paper.
- The student will drop the marbles of different sizes into the paint and will begin to carefully roll the marbles back and forth and side to side.
- Repeat these steps with the other partner.
- This activity can also be facilitated by students rotating around the room in stations. Each station can explore a different size marble and have a different color assigned to it.
- Ask students to use the **Lab Recording Sheet (SEE DOWNLOADS)** as they rotate to stations making their art.

PART II

- After the artwork has dried, the students will give their artwork a title. Next, the students will notice lines and shapes in their painting. On chart paper, students can reflect what they saw in relation to the different size marbles and the different amount of force used.
- Students will complete a Venn Diagram comparing/contrasting their work with the work of Jackson Pollock.
- Reflect with students around the following questions:
 - My painting is similar to Jackson Pollock because they both have _____."
 - My painting is different than Jackson Pollock because _____.

Classroom Tips: Each student will create their own painting using different size marbles and tempera paint. Depending on the length of time they each have to roll the marbles around, you might think about how many colors will be used and what those colors are. Consider using 2 **primary colors**, which will make a **secondary color** as lines cross back and forth (red, yellow=orange). OR choosing only **warm colors** (red, yellow, orange) or only **cool colors** (blue, green, purple). This teaches/reinforces color theory and may save some students from getting a muddy mix (3 primary colors mixed together make brown).

REFLECTION**Reflection Questions**

- *How does the size of the object effect the change in the speed and direction of the marble?*
- *How do the markings differ from the small marble to the large marble?*
- *How is your painting similar to those by Jackson Pollock?*

DIFFERENTIATION

Approx. Duration of Project: 30 -45 minutes

BELOW GRADE LEVEL: The teacher will provide a writing template and word bank or flashcards for students that are below grade level or EL students. Project requirements such as number of marbles/colors used will be modified according to student abilities.

EL STUDENTS: Provide a word bank and support a small group with this activity.

ABOVE GRADE LEVEL: Write a story about what they see in their artwork.

ADDITIONAL RESOURCES

- Ramps 1: Let it Roll! AAAS- Science Netlinks <http://sciencenetlinks.com/lessons/ramps-1-let-it-roll/>

APPENDIX

- Rubric for this project
- Lab Recording Sheet

CREDITS

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**Rolling into Art
Lab Recording Sheet**

STATION 1:

Color of paint: _____

Type of ball: _____

Make a prediction about what will happen in the 2 minutes of rolling the ball in the box:

Was my prediction correct?

STATION 2:

Color of paint: _____

Type of ball: _____

Make a prediction about what will happen in the 2 minutes of rolling the ball in the box:

Was my prediction correct? _____

STATION 3:

Color of paint: _____

Type of ball: _____

Make a prediction about what will happen in the 2 minutes of rolling the ball in the box:

Was my prediction correct?

STATION 4:

Color of paint: _____

Type of ball: _____

Make a prediction about what will happen in the 2 minutes of rolling the ball in the box:

Was my prediction correct? _____

**Rolling into Art Rubric
Project 3**

Checklist			
Appropriate use of art materials.	I used my art materials appropriately.	I sometimes used my art materials appropriately.	I rarely used my art materials appropriately.
Students can discuss which motion created the most force.	I always accurately described the motion that would create the most force.	I mostly accurately described the motion that created the most force.	I rarely accurately described the motion that created the most force.
Students created a title for their artwork.	My artwork has a title.	NA	I did not title my artwork.
Students participated in a written critique of their artwork in comparison to Jackson Pollock.	I thoroughly compared my artwork to Jackson Pollock using a Venn Diagram.	I compared my artwork to Jackson Pollock using a Venn Diagram but my comparison lacked detail.	My comparison of my artwork to Jackson Pollock was incomplete.