

# Sculpture: A 3-D Experience

Teacher Resource: A Guide for School Groups



Explore constructed, cast, and carved creations in Storm King's striking setting. Discover how sculptors invite us to engage with form, space, balance, scale, and materials.

**Recommended for grades K-12.**

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## How to Use This Resource

This Teacher Resource is designed to help you explore the theme of *Sculpture: A 3-D Experience* with your students. It is designed for classes planning a visit to Storm King and is accompanied by a [slide deck](#). The resource can also be used in classrooms that are **not** planning a visit to the Art Center. For those classes, the *Storm King Visit* section is included in the slide deck.

By approaching artworks through a thematic lens, we hope to engage learners in focused close looking, activities, and conversations, providing a solid foundation as students construct connections throughout their experience.

### Content

This resource and accompanying [slide deck](#) is organized in four parts.

1. **Pre-Visit in your classroom**, pages 3-4.
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### About Your Storm King Visit

Storm King Art Center is pleased to welcome K-12 school groups. Availability is limited and requests must be submitted at least three weeks in advance. [Plan your visit now.](#)

School groups may select a guided tour or facilitate their own visit to Storm King. If you choose an educator-led walking tour, students and chaperones will spend 45-60 minutes with a museum educator exploring three to four artworks through close looking and inquiry-based discussions. While you will not see all the artworks in this packet during a guided tour, we invite you to visit additional works after the tour, if time allows. If you are planning a self-guided visit, use the *Visit to Storm King* section of this resource when you are onsite.

Most artworks featured in this resource packet are located within one mile of the School Group arrival area. Routes between artworks may include paved paths, unpaved paths, and grass.

### Contact Us

For more information about accessibility, to request alternative suggestions for this theme, or if you have any additional questions about your upcoming visit, please contact us at [groups@stormkingartcenter.org](mailto:groups@stormkingartcenter.org).

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## Introduction

### Learning Objectives

Students will:

- Apply art vocabulary when discussing an artwork. Vocabulary might include form, negative space, balance, texture, geometric, organic, site, and scale.
- Make observations and use evidence to hypothesize how a sculpture may have been made.
- Understand that scale is relational; consider sculptures in relationship to their bodies and the landscape.
- Explore sculptures from multiple perspectives through movement and sketching.
- Relate each sculpture to structures, forms, or spaces they have previously experienced, and to ideas the artist may have shared.
- Compare and contrast sculptures, applying knowledge about form, negative space, site, and scale.

### Connections to Educational Standards

Here are a few ways in which this lesson plan connects to the New York State Department of Education learning standards. This list is not exhaustive.

#### Visual Arts:

- **Enduring Understanding 2.1:** Artists and designers experiment with forms, structures, materials, concepts, media, and artmaking approaches.
- **Enduring Understanding 8.1:** People gain insight into meanings of artwork by engaging in a process of art criticism.

#### Science:

- **K-2-ETS1-2:** Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.

#### Mathematics:

- **NY-K.G:** Identify and describe shapes / Analyze, compare, sort, and compose shapes
- **NY-5.MD:** Geometric measurement: understand concepts of volume and relate volume to multiplications and to addition.
- **NY-7.G:** Draw, construct, and describe geometrical figures and describe the relationships between them.
- **GEO-G.MG:** Apply geometric concepts in modeling situations.

#### Language Arts:

- **Reading Anchor Standard 7:** Integrate and evaluate content presented in diverse media and formats.

## Pre-Visit

### Introduction to Storm King Art Center



Storm King Art Center is a 500-acre outdoor museum where visitors experience large-scale sculpture under open sky. **We strongly recommend using our free digital guide on Bloomberg Connects**, via the QR code here. You'll find photos, videos, audio recordings, maps, suggested routes, activities for children and families, and more. Use the guide to plan your visit, then easily access helpful insights when you're onsite. Afterward, use it in the classroom to dive deeper into your favorite works. You and your students can also learn more about Storm King's environmental stewardship, collection, and community connections in this brief [video](#).

### Introduction to Sculpture: A 3-D Experience Theme

Ask students what they think a sculpture is, and how it is different from a painting or drawing. A sculpture is a three-dimensional artwork, and some elements of sculpture that students will explore at Storm King include form, negative space, and balance.

**Form:** A sculptural form is a three-dimensional shape with length, width, and height. Invite students to create three dimensional forms with their bodies, paper, or clay. Can they create a form that is geometric (cone, sphere, cube)? An organic, or free-flowing, form? A form that represents something familiar (chair, dog, rock) ? An abstract or non-representational, form?

**Negative space:** Negative space is the “empty” space within and around the form of the sculpture. Find and observe an object in the classroom with clearly defined negative spaces, like a chair with slats or a plant. Ask students to fully cover a sheet of paper with a pencil. Then, ask them to use an eraser to reveal only the negative spaces they see within and around the object (a demo might be helpful). Younger students might use a finger in the air to trace the negative spaces the object makes. Or, use their bodies to create negative space (a circle with fingers and thumb, a triangle by placing an arm on a hip, etc.)

**Balance:** Sculptors create artworks that are structurally and visually balanced. They need to think about the amount of weight in different areas and how that might affect a sculpture's center of gravity. [Explore center of gravity](#) by stacking books or blocks, slowly sliding the top object as far over the edge of the stack as it will balance (to its center of gravity). Continue all the way down the stack. Students can also see how their own center of gravity shifts when they stand on one leg and then bend that leg.

### Observe and Discuss

Project or print an image of Alexander Liberman's sculpture, *Adonai*. Ask students what they notice about form, negative space, and balance in the sculpture. Share [installation images](#) of the work from Storm King's archive. In small groups or partners, ask students to discuss what they notice about the artist's choices and process. What do they wonder? What are they excited to experience when they see the sculpture in person?

## Visit to Storm King

If you are on a self-guided visit, or have time before or after your tour, walk the grounds. View the same artwork from multiple perspectives and notice how it changes.

What do students notice about form, space, and balance in each sculpture you encounter?

## Artwork Engagement

Click each artwork title to view artwork information.



**Artwork:** Alexander Calder, *The Arch* (1975)

**Location:** Meadows | [#301 on our Map](#)

**Engagement:** Invite students to view, sketch, or photograph the work from multiple angles. What do they notice about form, negative space, and balance? What does the sculpture make them think of from each angle? How might it relate to architectural structures? To the natural world?



**Artwork:** Tal Streeter, *Endless Column* (1968)

**Location:** Meadows | [#306 on our Map](#)

**Engagement:** Invite younger students to trace or recreate part of the sculpture with their bodies. The artist described this as “a kind of drawing in space which will take your eyes in a staccato movement to the top and on into the sky.” What sounds might students imagine as they follow the line of the sculpture up into the sky? Tal Streeter was also interested in kites. Ask students to imagine or draw a kite design inspired by this sculpture.



**Artwork:** Alexander Liberman, *Adonai* (1970-71, refabricated 2000)

**Location:** Meadows | [#303 on our Map](#)

**Engagement:** Walk around and through this sculpture. What are some different paths you can take? Students might create sketches of what they see through the negative spaces. The artist was inspired by the structure of cathedrals. How is the sculpture similar and different from a grand building? Ask students to recall viewing images of the work in class before their visit. How would they describe interacting with this large-scale sculpture in person?



**Artwork:** George Cutts, *Sea Change* (1996)

**Location:** North Woods | [#106 on our Map](#)

**Engagement:** How many words can students use to describe this work? Challenge students to work in groups to choreograph a brief dance or series of movements inspired by this sculpture. Compare and contrast *Sea Change* with other works you've explored at Storm King. Consider the role that movement, form, and negative space play in your experience of each one.

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## Post-Visit

### Reflect

Ask students to individually journal or talk with a partner about their visit to Storm King. What are some sculptures and ideas they explored?

### Multiple Dimensions

Look back at images of the four sculptures your students learned about during the pre-visit. All four artists used steel as a material. However, each artist had a different approach to making three-dimensional forms with that material.

Invite students to consider similarities and differences between the sculptures. What choices did each artist make about form, negative space, and balance? Which sculptures do students find most engaging? Why?

### Art Exploration

Prompt for Students: Using **one material**, how will you create a sculpture that features **form, negative space, and balance**?

Offer students one material, such as clay, aluminum foil, or paper. If using paper, you might want to also provide tape or glue.

First, lead students in an inquiry with the material. What are different ways that they can transform the material (ex: roll, bend, fold, etc.)? How can they make the material balance and stand on its own?

After students experiment with the material, share the prompt to create a sculpture that features form, negative space, and balance.

Once students have created their sculptures, invite them to create a drawing that shows a space where they imagine their sculpture being displayed. How will they show the scale of the sculpture? The scale is a sculpture's size compared to people, spaces, and objects around it. They might also give their artwork a title.

Invite students to share some of their choices with the class or do a "gallery walk" around the room to explore one another's sculptures and sketches.

## Resources

Storm King Art Center Collection

<https://collections.stormking.org/index.php/About/collection>

John P. Stern Oral History

<https://collections.stormking.org/Detail/oralhistory/4867>

Exploratorium Teacher Institute. "Take It from the Top: How does this stack up?"

<https://www.exploratorium.edu/snacks/take-it-from-top>

Tal Streeter Archival Images

<https://collections.stormking.org/Detail/entities/126>

Alexander Liberman's Adonai installation photos available on our website

[https://collections.stormking.org/Browse/archival/facet/rel\\_entity\\_facet/id/115](https://collections.stormking.org/Browse/archival/facet/rel_entity_facet/id/115)

Information about the refabrication of Alexander Liberman's Adonai in David Collen's Oral History (begin at 0:55, through 2:08)

<https://collections.stormking.org/Detail/oralhistory/4866>

George Cutts' Sea Change video on Storm King's Facebook page

<https://www.facebook.com/StormKingArtCenter/videos/4956901761043819/>

Storm King Art Center Groups

<https://stormking.org/groups/>

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## Vocabulary

**Form:** A sculptural form is a three-dimensional shape with length, width, and height. Form can also describe the shapes of a sculpture's components.

**Positive and negative space:** Positive space is the material form of a sculpture, while negative space is the "empty" space within and around the form of the sculpture.

**Balance:** Sculptors create pieces that are structurally and visually balanced. They need to think about the amount of weight in different areas and how that might affect a sculpture's center of gravity.

**Perspective:** Typically the representation of 3-D objects or spaces in two-dimensional artworks. In sculpture, perspective relates to the angle or view one has on an artwork and the space around it.

**Site-specific artwork:** A work of art created and designed specifically for a particular location, and whose meaning often is related to the location.

**Scale:** The size of one part or object in relation to another part or object. Artists at Storm King use scale, or perception of size, in relation to landscape features.

**Texture:** The surface quality of an artwork, describing how something feels or looks like it would feel (i.e. rough, smooth, soft, hard, etc.)

**Geometric shapes:** Precise and regular shapes, like circles, squares, triangles, and polygons. 3-D examples of geometric shapes include cubes, spheres, and cones.

**Organic shapes:** Organic shapes differ from geometric shapes in that they are free-form, irregular, natural shapes.

## Credits

**Developed by:** Kristin Roeder, School Partnership Educator, in collaboration with Storm King Learning and Engagement Team

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**Cover Image:** Alexander Liberman, *Adonai*, 1970-71 (refabricated 2000). Photo by Jerry L. Thompson.