LACMA

CLASSROOM ACTIVITY

Exploring and Experimenting with Size, Scale and Proportion in Michael Heizer's *Levitated Mass*

ABOUT THE PROJECT

Artist Michael Heizer's *Levitated Mass* is a 456-foot-long slot cut into the earth, over which rests a 340-ton boulder. As visitors walk along the slot, the path gradually descends to fifteen feet deep before ascending back up again. Moving toward the boulder, the massive object appears to rise as the path descends. A 200-foot-long transporter almost three freeway lanes wide will carry the boulder 110 miles to LACMA's campus. It can safely travel at only 5 to 8 miles per hour.

Height of boulder: 21.5 feet
Weight of boulder: 340 tons
Length of slot: 456 feet
Depth of slot: 15 feet
Width of slot: 15 feet

ABOUT THE ARTIST

Michael Heizer was born in Berkeley, California, in 1944. He attended the San Francisco Art Institute and moved to New York City in 1966, where he produced small-scale paintings and sculptures. In the late 1960s, Heizer left New York for California and Nevada, where he began to produce large-scale works that could not fit in a museum setting. Heizer is a pioneer of Land Art, or Earth Art, a movement where artists moved out of studios and galleries and into the landscape, sometimes actually engaging the land as a sculptural medium.

The Big Idea

Size, scale, and proportion are relative terms. In order for these qualities to have meaning, they must be in relationship to some system of measurement. In math, these terms can be measured in meters.

For objects that are particularly large or small, sometimes these standard units of measurement are not enough to fully comprehend their size. For example, we know that the widest part of the Grand Canyon measures 18 miles. But in order to really grasp its enormity, it can be more effective to look at a photograph or painting of the site with people standing next to it for comparison.

Of course, nothing beats the experience of actually standing at the edge of the Canyon and peering across the expanse. It is on this experiential level that *Levitated Mass* operates best.

Art can be a fun and effective way to visualize and communicate the relative size of objects beyond standard units of measurement. Walking down the trench of Heizer's installation and underneath the boulder, participants will experience the installation's massive size in a unique and direct way—in relation to their own bodies. By interacting with such a large artwork, students will appreciate and be awed by the sheer scope of the project.

Utilize this activity guide to build excitement for this monumental project and help students think about the ways Heizer uses size, scale, and proportion for effect and to convey meaning. Students can then use their own art-making processes to capture and play with these qualities as well.

The Goal

Students will unite principles of art and math to demonstrate the relative concepts of size, utilizing standard units of measurement as well as artistic expression. Through discussion and hands-on activities, students will comprehend the dimensions of *Levitated Mass* in different ways and explore how to communicate size using alternate methods.

Stimulating Conversation

Break down the numbers. If one ton is equal to 2,000 pounds, how many pounds does this boulder weigh? If one foot equals 12 inches, how many inches long is the transporter? How many centimeters?

Think about the numbers in a different way. Ask students to brainstorm alternative ways to convey the size of *Levitated Mass* without using standard units of measurement. How many shoes would represent the length of the slot? How many books would fit across the width of the boulder? How many classmates could you stack to equal the height of the boulder? If the average car weighs 3,000 pounds, how many cars would equal the weight of this boulder?

Put it in historical context. Introduce students to the idea of a monolith (a geological feature consisting of a single massive stone or rock) and famous examples that have been moved, such as the Ramesseum and Colossi of Memnon statues in Ancient Egypt. How does the process of moving a monolith today differ from the techniques, methods and procedures required to move one over a thousand years ago?

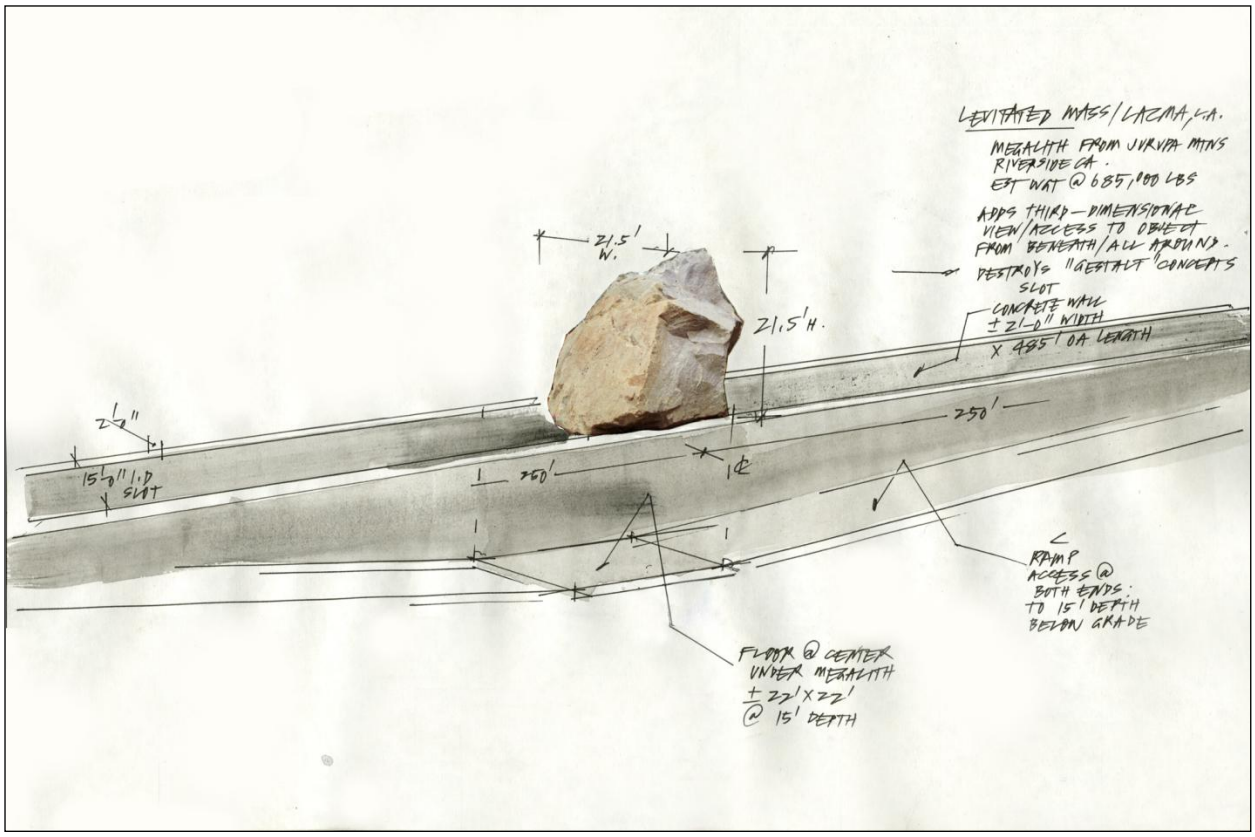
Bringing the Big Idea to Life

Activity 1: Relating Size

Create a stack of note cards with various sized objects written on them (car, eraser, radio, Eiffel Tower, Watts Towers, Ramesseum). Students select an object at random and, utilizing math skills, determine what the proportion of their object is to the boulder or entire installation. Create a large, collaborative scroll that compares the relative size of these objects through scale drawings on grid paper.

Activity 2: Changing Scale
Ask students to play with scale by brainstorming a list of small things (an ant, a jelly bean, a key) and a list of large items (a television, a bus, a skyscraper, the Colossi of Memnon). Students will then reverse the scale of these objects by making large sculptures of small items and hand-sized sculptures of items from the large list. Utilize math concepts to scale the sculptures up or down according to a specific ratio. Ask students to reflect on the effects of size on their perception of objects.

Activity 3: Playing with Proportion
Ask students to select an image and draw a grid over it. Students can then scale up or down their image by creating a proportionally larger or smaller model of the grid on a blank sheet of paper and then transferring the drawing square by square. Students can also alter their drawing by moving the X and Y axes of the grid so that a drawing of a house could transform into what looks more like a tower.



MICHAEL HEIZER
Preliminary Sketch for Levitated Mass, 2011, courtesy of the artist, © Michael Heizer

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