

Leo Villareal

FOR YOUR CLASSROOM

CLASSROOM CONNECTION

For a classroom arts-integration activity, design a site-specific work of art for your classroom inspired by Leo Villareal's sculptures.

- » Using graph paper, create a scale outline of your classroom's dimensions.
- » Decide where a sculpture would look best in your classroom. Draw a design for a 3D sculpture within the outline on your graph paper. Use straight lines and geometric shapes such as triangles or hexagons to design your sculpture.
- » Calculate the volume of the sculpture using the units of the graph paper as a guide.

FURTHER EXTENSION

Create a scale model of your sculpture using materials such as toothpicks and erasers to form segments and joints.

LEARN MORE!

You can read Crystal Bridges' interview with artist Leo Villareal on our blog!

CrystalBridges.org/blog/welcome-home-buckyball/

Leo Villareal was born in Albuquerque, New Mexico, in 1967. He received a BA in sculpture from Yale University and a graduate degree from the Interactive Telecommunications Program at New York University's Tisch School of the Arts. Villareal is known for site-specific works that are designed to complement and energize the environment in which they are placed.

The artist is interested primarily in "stripping systems down to their essence to better understand the underlying structures and rules that govern how they work." To do this, Villareal begins his projects with the simplest possible components, such as single pixels and the ones and zeroes of the binary notation system. He arranges them in a preset framework that allows the forms to "move, change, interact, and ultimately grow into complex organisms."ⁱⁱ Using these modest elements, Villareal aims to "create a rich environment in which emergent behavior can occur without a preconceived outcome."ⁱⁱⁱ

Villareal uses light as an integral component of his sculptural works, often designing elaborate software programs to generate intricate patterns and displays. The artist believes that light has a powerful effect on people who view his works. Describing many of his pieces as "digital campfires," Villareal states that his sculptures can make viewers feel "that same thing that happens with a fire—the way it's pleasant to be near that light."ⁱⁱⁱⁱ

One such work is *Buckyball* (2012), an outdoor light sculpture. The 30-foot sculpture is composed of 180 separate LED tubes organized in a sequence of pentagonal and hexagonal shapes. These geometric shapes form a version of the Carbon60 molecule buckminsterfullerene, named for theorist R. Buckminster Fuller. The LED tubes used to construct *Buckyball* are capable of producing more than 16 million unique colors of light, and flash in patterns based on a software program unique to *Buckyball*. Originally designed for Madison Square Park in New York City, the sculpture became part of the permanent collection at Crystal Bridges in 2013, where it delights visitors with a nightly performance of Villareal's programmed light show.



Photography by Stephen Ironside



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Leo Villareal, *Buckyball*, 2012, aluminum tubing
clad with LED lights atop aluminum plinth.

ⁱ<http://villareal.net/about>, ⁱⁱ *Ibid*, ⁱⁱⁱ *Ibid*, ⁱⁱⁱⁱ crystalbridges.org/press-releases/leo-villareals-buckyball