

# Public Sculpture Lesson Series: “Interdisciplinary Inquiry Through Sculpture”

## Framework for Grades 8-12

Based on *Twist* by Howard Russo



*This project is supported by:*



ART+DESIGN

# Objectives:

- Analyze how **form**, **space**, and **structure** communicate ideas in more complex ecosystem of ideas
- Explore **abstraction** as means to represent tangible and abstract concepts rather than objects
- Develop and articulate personal interpretations
- Create a sculpture with intentional meaning and use diverse tools and simple materials to express ideas

The sculpture becomes a conduit into:

- applied science
- systems thinking
- creative writing
- design
- architecture
- environmental observation
- perception psychology
- philosophy of space

This provides multiple points of entry and allows flexibility while still maintaining a coherent center.

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## Key Vocabulary

- **Abstraction** — art that does not represent reality directly
- **Positive space** — the material (the lines/structure)
- **Negative space** — the empty space around and inside
- **Structure** — how something is built
- **Interpretation** — what something means to the viewer
- **Concept** — the main idea or message behind an artwork
- **Sci-fi** — imaginative ideas about the future, technology, or space
- **Speculative** — based on imagining possibilities or “what if” ideas
- **Philosophy** — thinking deeply about ideas, meaning, and existence
- **Integration** — combining different ideas, materials, or subjects into one work

# Expanded Vocabulary

- **Form** — the shape and structure of an artwork
  - **Dimension** — measurable space such as height, width, and depth
  - **Composition** — the arrangement of parts within an artwork
  - **Innovation** — creating new ideas or approaches
  - **Transformation** — changing form, meaning, or materials
  - **Narrative** — the story or message communicated through art
  - **Futuristic** — relating to imagined future designs or ideas
  - **Prototype** — an early model or experimental version of an idea
  - **Symbolism** — using images or objects to represent deeper meanings
  - **Experimentation** — trying new methods, materials, or ideas
  - **Interdisciplinary** — combining multiple subjects or fields together
  - **Immersive** — creating an experience that surrounds or deeply involves the viewer
  - **Perspective** — a particular way of seeing or understanding something
  - **Materiality** — the qualities and characteristics of materials used in art
  - **Interaction** — how viewers engage with or respond to an artwork
  - **Environment** — the surrounding space or conditions connected to the artwork
  - **Visionary** — imaginative and forward-thinking
  - **Hybrid** — made from a combination of different elements or styles
  - **Identity** — how a person, group, or idea is represented
  - **Sustainability** — creating with awareness of environmental impact
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# Central Questions

- How can structure create meaning, movement, and presence without relying on solid mass?
  - How humans perceive absence?
  - How abstract ideas translate into art and science
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## Option 1 — Applied Science / Engineering

### “Structures Without Solid Walls”

Applicable to: Physics, Engineering, Architecture, Environmental Design, Fabrication

#### Inquiry Focus

How can open structures remain stable?

#### Students investigate:

- compression
- tension
- load distribution
- efficiency of material usage

#### Outdoor Investigation

At the sculpture site:

#### Students analyze:

- weight distribution
- contact points
- implied motion vs. actual stability

#### Prompt:

- “Why does this not collapse?”
- “Where are the strongest structural points?”
- “What forces are being resisted?”

## Applied Activity

### Students design a structure that:

- uses minimal material
- maximizes strength
- creates volume without enclosure

### Possible materials:

- wire
- cardboard ribs
- modular connectors or Lego components

## Scientific Extensions

### Potential inquiry:

- geodesic structures
- skeletal systems
- bridge engineering
- biomimicry

You can introduce [Buckminster Fuller](#), an American architect, systems theorist, writer, designer, inventor, philosopher, and futurist.

You can also discuss concepts applied in mathematics and scientific community "[Evidence of Absence](#)"

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## Option 2 – Creative Writing / Language Arts

### “The Shape of Thought”

#### Inquiry Focus

Can abstract forms communicate emotion, memory, or identity?

Potential inquiry:

- symbolism of creation and erasure

You can introduce the artwork "[Erased de Kooning](#)" by Robert Rauschenberg.

You can also speak about a British artist [Rachel Whiteread](#).

Local: Clarksville’s [Madison Street Methodist Church](#) steeple replacements after 1999 F3 tornado disaster.

## Outdoor Observation Writing

Students walk around the sculpture silently.

### They record:

- sensory impressions
- emotional shifts
- associations

### Prompt:

- “What does this structure remember?”
- “What kind of object feels both open and contained?”

## Writing Possibilities

### Poetry

- fragmented syntax
- spatial poems
- repetition-based writing

### Speculative Writing

The sculpture becomes:

- a machine
- a relic
- a failed technology
- a map
- a portal
- an orbiting structure

### Perspective Exercise

Write from:

- inside the sphere
- the perspective of the structure itself
- someone discovering it centuries later

## Advanced Literary Concepts

### For older students:

- metaphor through structure
- negative space in language
- fragmentation
- non-linear narrative
- circular storytelling

### Inquiry Focus

- Modes in which absence or missing can be expressed

You can discuss poem by Mark Strand  
“[Keeping Thing Whole.](#)”

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# Option 3 — Environmental / Biological Thinking

## “Systems in Nature”

This framework applies because Russo references spheres in nature.

### Inquiry Focus

Why do spherical or networked forms appear repeatedly in nature?

Students compare *Twist* to:

- cells
- seed pods
- radiolaria
- planetary systems
- fungi networks
- skeletal forms
- [Fibonacci sequence](#) and patterns in nature

### Outdoor Activity

Students photograph or sketch:

- branching systems
- circular growth patterns
- structural repetition in trees/plants

Then compare those observations to the sculpture.

### Studio / Lab Hybrid

Students create hybrid structures inspired by:

- biological systems
  - natural growth logic
  - environmental adaptation
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# Option 4 — Philosophy / Perception / Psychology

## “What Makes an Object Feel Real?”

This is especially strong for advanced high school students.

### Inquiry Focus

Why does the brain perceive incomplete structures as whole forms?

Students investigate:

- perceptual completion
- Gestalt principles
- visual cognition
- implied structure

You can discuss ideas in a book titled “[Philosophy of Absence](#)” by Dr. Bimal Kumar Subedi.

### Discussion Questions

- Why do we read this as a sphere even though much is missing?
- Does the mind complete forms automatically?
- How much information is needed before we recognize something?

### Applied Activity

Students intentionally remove information from drawings or structures while preserving recognizability.

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### Recommendation

Do not make this: “Art plus science.”

Make it: “A sculpture examined through multiple disciplines.”

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# Closing Reflection

## Students Respond

- “I used to think sculpture was mainly about \_\_\_\_\_. Now I think sculpture can also explore \_\_\_\_\_.”
  - “One idea or material that challenged my thinking today was \_\_\_\_\_ because it changed how I understand \_\_\_\_\_.”
  - “A sculpture, artist, or concept that inspired me today was \_\_\_\_\_ because it showed me that art can communicate \_\_\_\_\_.”
  - “While creating, I experimented with \_\_\_\_\_ and discovered that \_\_\_\_\_.”
  - “One connection I noticed between sculpture and other subjects or real-world ideas was \_\_\_\_\_.”
  - “After today’s work, I feel more confident about \_\_\_\_\_ and more curious about \_\_\_\_\_.”
  - “My artwork reflects ideas about identity, society, the future, or imagination by \_\_\_\_\_.”
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# Inquiry Stations or Modular Investigations

Students rotate between subjects/lenses

Lens	Guiding Question
Art	How does line create movement?
Physics	Why does the structure remain stable?
Biology	What natural systems resemble this form?
Writing	What narrative exists inside this structure?
Philosophy	How does the mind complete missing information?