SPARKed
SPARK in Education

EDUCATOR GUIDE

Story Theme: A Few Good Stories
Subject: Jaime Guerrero
Discipline: Visual Art (glass blowing)

Still image from SPARK story, 2006.

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SECTION I - OVERVIEW

EPISODE THEME

A Few Good Stories

SUBJECT

Jaime Guerrero

GRADE RANGES

K-12 & Post-secondary

CURRICULUM CONNECTIONS

Visual Arts & Language Arts

OBJECTIVE

Understand the development of personal works of art and their relationship to broader social themes and ideas, abstract concepts, and the history of art.
Develop basic observational drawing and/or painting skills.
Develop visual, written, listening and speaking skills through looking at, creating and talking about visual artworks.
Develop an expressive visual vocabulary with which to address personal and/or social themes and ideas.
Develop observational and representational skills by looking at and reproducing images of people, places and things accurately and thoughtfully.

STORY SYNOPSIS

Since the late 1990s Jamie Guerrero has been making striking one of a kind glass pieces that have gained him recognition around the Bay Area and nationally. Spark drops in on Guerrero and his team hard at work on a new piece at San Jose's Bay Area Glass Institute.

INSTRUCTIONAL STRATEGIES

Group oral discussion, review and analysis, including peer review and aesthetic valuing as a group.
Teacher-guided instruction, including demonstration and guidance.
Hands-on individual projects in which students work independently.
Hands-on group projects in which students assist and support one another.
Critical reflection on personal expressions and how they are seen and received by others.

INSTRUCTIONAL OBJECTIVES

- To introduce students to the work of Jaime Guerrero and the process of glassblowing
- To provide context for the understanding of the history of glass blowing in art and architecture
- To inspire students to explore glass work and the use of iconography in contemporary art

EQUIPMENT NEEDED

- TV & VCR with SPARK story about Jaime Guerrero
- Computer with Internet access, navigation software, speakers and a sounds card, printer

MATERIALS NEEDED

- Access to libraries with up-to-date collections of periodicals, books, and research papers
- Pencils, pens, and paper

INTELLIGENCES ADDRESSED

Bodily-Kinesthetic - control of one's own body, control in handling objects
Interpersonal - awareness of others' feelings, emotions, goals, motivations
Intrapersonal - awareness of one's own feelings, emotions, goals, motivations
Spatial - ability to manipulate and create mental images in order to solve problems
Logical-Mathematical - ability to detect patterns, reason deductively, think logically

See more information on Multiple Intelligences at www.kqed.org/spark/education.

SECTION II – CONTENT/CONTEXT

CONTENT OVERVIEW

Since the late 1990s, Jamie Guerrero has been creating striking one-of-a-kind glass pieces that have gained him recognition around the Bay Area and nationally. In his work, Guerrero draws from his experiences growing up in East Los Angeles as well as from imagery of the Mayan and Aztec cultures. Spark drops in on Guerrero and his team at San Jose's Bay Area Glass Institute (BAGI) as they are hard at work on a new piece.

Guerrero had worked in a variety of sculptural media for years before stumbling into the glass studio while studying at San Francisco's California College of the Arts. The young artist was immediately won over, by the fluidity of the medium as well as by the precise timing and close teamwork that glass demands. Guerrero made a name for himself early on by crafting vivid multicolored glass vessels, but quickly decided that he did not want to become a production glass blower, making the same pieces over and over again.

Discovering a new technique that allowed him to work with multiple colors simultaneously, Guerrero began making his "Homies" series, which explores character types and situations that he experienced as a youth in East Los Angeles. He soon expanded his repertoire to include representations of Aztec and Mayan deities, drawing parallels between these ancient civilizations and contemporary life.

Spark catches Guerrero working on a glass sculpture of the Aztec deity Quetzalcoatl, the feathered serpent. It is a challenging project, demanding perfect coordination among all the members of the Guerrero team. Thanks to a fellowship, Guerrero has at his disposal the BAGI's state-of-the-art facilities, essential for making such a complicated piece.

Once the glass has been liquefied -- at above 2000 degrees -- Guerrero and his team add color by rolling the hot glass in pigment, then they shape the individual pieces of the sculpture while maintaining a constant and even temperature. It is a one-shot deal that will work only if all the crucial elements come together. After the piece has been assembled, the team equalizes its temperature before it is allowed to slowly cool in a 950-degree oven.

Jaime Guerrero lives and works in the San Francisco Bay Area. He earned a B.F.A. from California College of the Arts in 1997. His work has been exhibited at local and national venues, including La Peña Cultural Center, CBS Marketwatch, Galería de la Raza and the Albany Arts Gallery. Guerrero has received grants and awards from the Ryman Master Program and California College of the Arts, and he was an artist-in-residence at San Jose State University in 2001.

THE BIG PICTURE

Glass is made by fusing sand (silica), potash, and soda (alkali) with lime in a kiln, at temperatures in excess of 3000 degrees Fahrenheit. The color of the glass can be changed by adjusting the temperature of the furnace and/or by adding different metal oxides to the molten glass "batch." The addition of cobalt produces a dark blue color, while tin creates opaque white, and antimony or manganese results in clear glass.

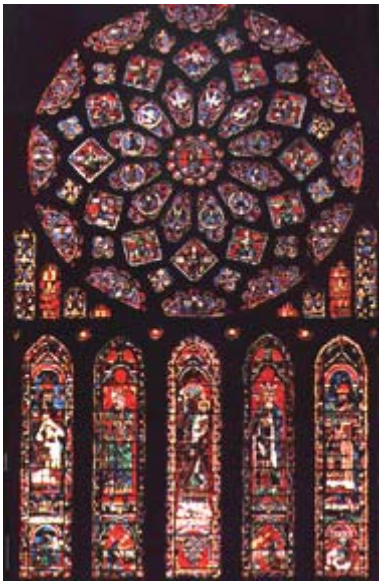
Most scholars date the earliest blown glass works somewhere between the 18th and 16th century B.C. The earliest known examples of blown glass are

three Egyptian vases bearing the inscription of Pharaoh Thoutmosis III, who reigned from 1504-1450 B.C. One of the most important discoveries in terms of modern glassmaking was the first use of a pipe for glassblowing, a discovery attributed to Babylonian craftsmen sometime around 250 B.C. This same process is the one used today by modern glass blowers.

The Romans began to use glass in architecture when they discovered how to make clear glass by adding manganese oxide to the basic mixture in 100 A.D. Rough cast glass windows began to appear in the most important buildings in Rome, Herculaneum and Pompeii around this time.

Blown glass vase, Jerusalem, circa 50BCE
http://www.smith.edu/hsc/museum/ancient_inventions/images/glass1.jpg

The production of sheet glass began in the 11th century in Germany when craftsman discovered that they could make sheets or panes of flat glass by blowing a hollow glass sphere and allowing gravity to pull it into a cylinder that could be cut and laid flat. The panes of glass created by this method could then be joined with lead strips and pieced together to create windows. This laborious process and the cost of materials restricted glass windows to the wealthy until the late Middle Ages. Around the 14th Century, stained glass such as that at Chartres Cathedral became common, and began to be installed in public buildings, inns, and the homes of the wealthy.



A stained glass window from Chartres Cathedral, circa 1200
http://www.ettc.net/njssi/tiproject/symmetry/Chartres_window.jpeg

Glass technology improved dramatically in the 18th century with the invention of a hand-operated split mold in 1821 that ended the age of blowing individual pieces of glass. A semi-automatic bottle machine was created in 1871 that could mass-produce bottles, finally making glass into a material used in everyday household objects.

Although these days glass is produced rapidly and cheaply by large fabrication companies and factories, artists such as Jamie Guerrero still produce custom-made pieces, commissions, and limited edition works of art, and are constantly developing new techniques to stretch the medium further.

SECTION III – RESOURCES

RESOURCES – TEXTS

Burke, Ed. *Glass Blowing: A Technical Manual*. Crowood Press, 2006.

Chihuly, Dale. *Chihuly Projects*. Harry N. Abrams, 2000.

Engle, Anita ed. *Readings in Glass History. Volume 1 - 8*. Jerusalem: Phoenix Publications, 1973-77.

Fyson, Nance Lui. *Decorative Glass of the 19th and Early 20th Centuries: A Source Book*. David & Charles, 1997.

Giberson, Dudley. *A Glassblower's Companion: A Compilation of Studio Equipment Designs, Essays, & Glassblowing Ideas*. Joppa Glassworks Inc, 1998.

Kuspit, Donald. *Chihuly*. Harry N. Abrams, 1999.

Schmid, Edward T. *Beginning Glassblowing*. Glass Mountain Press, 2005.

RESOURCES – WEB SITES

Corning Museum of Glass - The largest and oldest collection of glass in the US, including exhibitions, history, and extensive details about the process of making and working with glass.
www.cmog.org

Dale Chihuly Studios website – One of the world's most famous glass artists, with works in collections internationally
www.chihuly.com. .

Jamie Guerrero's personal site
www.guerreroglass.com

Museum of Glass in Tacoma, WA.
http://www.museumofglass.org/

Stained Glass Association of America – Association of stained glass makers and organizations, including resources, history, and links to site for schools and further study www.stainedglass.org.

VIDEO RESOURCES

Streamable videos detailing the work of Dale Chihuly
http://www.chihuly.com/Video/screening.html

DVDs about Dale Chihuly available for purchase
http://www.portlandpress.net/dvds.html

BAY AREA FIELD TRIPS

Association of Clay and Glass Artists of California in San Carlos, CA – Offering exhibitions, festivals, and workshops in clay and glass
www.acga.net.

Bay Area Glass Institute – A San Jose based non-profit organization dedicated to educating the public about glass, supporting glass artists, and encouraging up-and-coming artists pursue careers in glass http://www.bagi.org

City College of San Francisco – Offering introduction, beginner, and intermediate classes in Stained Glass
www.ccsf.edu/Pub/Search/cgi-bin/htsearch.pl.

The Crucible - An arts education center featuring glass blowing classes and exhibits.
1260 7th Street
Oakland, CA 94607
www.thecrucible.org

SECTION III – VOCABULARY

DISCIPLINE-BASED VOCABULARY AND WORDS AND CONCEPTS IN THE SPARK STORY

Fellowship
The financial grant made to a fellow in a college, university, or other academic organization.

Aztec
The Aztecs were a Pre-Columbian Mesoamerican people of central Mexico in the 14th, 15th and 16th centuries. The Aztec civilization had a vibrant culture which included mandatory education and a rich and complex mythology.

Deity
A god or goddess.

Vessels
A container.

Homies
Homies are a series of 2-inch figurines loosely based upon Chicano (Mexican American) characters in the life of artist David Gonzales. First created in 1998, these plastic figuerines were initially sold via vending machines typically positioned in supermarkets, but quickly became collectibles among young children through teenagers. Gonzales' characters were an inspiration for Jaime Guerrero's "Homies" series.

Maya Civilization
An historical Mesoamerican civilization, noted for the only known fully developed written language of the pre-Columbian Americas, spectacular art and architecture, and sophisticated mathematical and astronomical systems. The Classical period of the Maya civilization extended from 250 to 900 CE. At its zenith it was one of the most densely populated and culturally dynamic societies in the world. The area of the Maya civilization extended throughout the northern Central American region which includes the present-day nations of Guatemala, Belize, western Honduras and El Salvador, as well as the southern Mexican states of Chiapas, Tabasco, and the Yucatán Peninsula states of Quintana Roo, Campeche and Yucatán.

Pigment
A substance used as coloring.

SECTION IV – ENGAGING WITH SPARK

STANDARDS-BASED ACTIVITITES AND DISCUSSION POINTS

The Glass-working Process
Ask students to work in small groups to research the primary different forms of glass-working, including blowing, molding, drawing, pressing, and casting. Each group should choose ONE process, and use the following questions to structure their inquiries.

- What are the differences between these processes?
- For each process, what different equipment is needed?
- What are the different skills needed?
- How many people are needed to accomplish a work?

Invite each group to present their findings, using illustration as much as possible. Encourage students to bring in books or photographs or other material to pass round the room after each presentation.

Focus on the different skills required and ask students to watch the SPARK episode and identify the different roles of the artists assisting Guerrero. Ask students to look for these roles as they watch, and to think about how each studio member depends upon each other in the production of the works.

Challenge students to name other work situations in which people have different jobs and rely on each other.

<u>Different Forms of Glass</u>
Glass is made from sand (silica), potash, and soda (alkali), and lime. Challenge students to break down these ingredients into their elements, to locate the elements on the periodic table, and to then write down the chemical formula for glass.

Assign groups of students to research different forms and uses of glass in history, such as blown vases and bowls, stained glass, plate glass, glass beads, and glass art, noting how the objects were made, by who, and when. Ask students to present their findings to the class.

Move on to ask students to identify the different forms of glass in their environment at school and at home. Make a list of the forms of glass on the board. Using this guide, and the "A Few Good Stories" SPARK episode, ask students to guess how each different form of glass was made – whether it was blown, molded, drawn, pressed or cast.

For students who become particularly engaged by glass-working, draw their attention to the range of classes offered in the Bay Area in glass-working techniques, including stained glass, leaded glass and mosaic.

There is also the opportunity to view gallery works and architectural projects at the John Lewis Glass Studio – an East Oakland artist who has been making glass works since 1969, including part of the Oklahoma City Memorial (2000). Studio visitors are welcome by appointment – http://www.johnlewisglass.com/

SPARKLERS:
∗ Encourage students to think about the difference between viewing glass-working at a studio where the process is witnessed first hand, at a gallery where the artwork is exhibited or watching the SPARK episode on Guerrero on video or DVD. Is there a difference?
∗ Invite students to explore the imagery of the Guerrero's "Homies" series. He draws both from Mayan and Aztec art, as well as his experiences growing up in East L.A. Challenge students to describe a symbol that represents their own culture or experience. The symbol does not have to be

representative of a person - it could be an animal or object. Encourage them to use descriptive adjectives to define the shapes, color, texture, size, etc. Ask students to draw the symbol or icon they design using paper and pencil, capturing all of the elements. To support their illustration, students should write a 500-word essay about the process of choosing their symbol, and how it represents their personal experience.

For more information about SPARK and its educational content, including the Visual & Performing Arts Standards, visit the Web site at http://www.kqed.org/spark/education.

For more information about the California Visual & Performing Arts Standards, visit the CA Dept. of Education at http://www.cde.ca.gov/

RELATED STANDARDS
VISUAL ARTS

Kindergarten
CAREER AND CAREER-RELATED SKILLS
5.4 Discuss the various works of art (e.g., ceramics, paintings, sculpture) that artists create and the media used.

Grade 1
5.4 Describe objects designed by artists (e.g., furniture, appliances, cars) that are used at home and at school.

Grade 2
5.4 Discuss artists in the community who create different kinds of art (e.g., prints, ceramics, paintings, sculpture).

Grade 5
5.3 Research and report on what various types of artists (e.g., architects, designers, graphic artists, animators) produce and how their works play a role in our everyday environment.

Grade 7
5.4 Identify professions in or related to the visual arts and some of the specific skills needed for those professions.

Grades 9-12
5.4 Demonstrate an understanding of the various skills of an artist, art critic, art historian, art collector, art gallery owner, and philosopher of art (aesthetician).