# Gastineau Studios - Suggested Classroom Activities

If possible, take your class on a field trip to Gastineau's Studios. You can arrange for a visit and/or a hands-on experience by calling the studio at (859) 986-9158 or e-mail kengastineau@gmail.com

You might want to connect this to a class field trip to experience the crafts of Berea.

**Field Trips:** You can arrange tours of Berea College's Historic Campus and/or the Student Craft Industry. Also available on limited dates are hands-on crafts activities in pottery, weaving, broom making, and woodworking, led by the Student Craft Education and Outreach Program. Reimbursement for transportation available on limited basis. Special *Arts across the Curriculum* field trips can be arranged through Berea Tourism. Contact the Berea Tourism Welcome Center at 800-598-5263. On this tour, studio artists demonstrate for your students and explain the history and processes of crafts like glass blowing, pewter casting, weaving, lampwork, watercolor, and multimedia sculpture. Hands-on activities can also be customized to your class.

See the Field Trips file in General Resources for Educators for more complete information.

**Classroom Activities**

## ALL LEVELS

1. **Visual Art: Creating an Original Jewelry Design**
    - Project, read and discuss the power point "Production Techniques" to demonstrate how the Gastineaus progress from a sketch to a model for producing jewelry.
    - Look at the photos of jewelry in the Gastineau Studios Photo Gallery and discuss the characteristics of the designs they use (stylized designs based on nature, simplified yet detailed, etc.) Notice that some pieces are a design within a geometric shape while other pieces are the actual shape of the designs with detailing added (such as the butterfly pendant).
    - Instruct students to create a shape for their jewelry (as Gastineau does on his computer). If possible, have them use a computer program to accomplish this. (They do not need to create a 3-D form as Gastineau does, just a 2-D shape).
    - Have students create an original design suitable for a pendant. If their shape is geometric, have them sketch their design inside the shape. If their shape is the shape of their design, have them add detailing. You may allow free choice or set parameters for size and design

2. **Visual Arts, Economics, Practical Living, Writing: Maker's Mark**
    - Discuss with your students the marketing importance of branding. Ask them to brainstorm a list of brand logos with which they are familiar.
    - Different logos and maker's marks promote different images for the businesses they represent. For example, the well-known Nike Swoosh logo is based on the wing on a famous statue of Nike, the Greek goddess of victory. What image is this company trying to project? Discuss other logos and the images they project.
    - Project the image of the Gastineau Studio maker's mark (attached pdf). Explain that traditionally all pewter smiths have used a maker's mark to identify their work. Ask students why it is a good marketing practice for studio artists like the Gastineaus to "brand" their products.
    - Brainstorm a list of words describing the Gastineau Studio maker's mark. As needed, prompt students with questions like, "Is it classic or ultra-modern?" "Does it appear stable or flighty?"

- What important information is included in the Gastineau Studios maker's mark?
- Ask students to write a paragraph describing the Gastineau maker's mark in terms of the elements of art (color, line, shape, texture, space) and principles of design (balance, unity, contrast, focal point). Ask them to write a second paragraph explaining how the mark conveys a particular image.
- Ask them to imagine a product they might like to create and to design their own maker's mark for the product. You may allow free choice or restrict their choice of medium or potential products.
- Ask them to write a paragraph describing how they have used the elements of art and principles of design in creating their maker's mark. Ask them to write a second paragraph explaining how the mark conveys a particular image.

**Extension:** Whether or not we are aware of it, logos and branding often play a major role in our consumer decisions. Discuss this with your students. Ask them to consider the positive and negative impacts of branding and logos. For example, logos might help you know that you are getting a product that you like, but they may also influence you to buy a product without considering cost, quality, nutritional values, environmental impact or other important factors. When combined with peer pressure, branding and logos become a powerful economic and social force. Ask student to write a short, personal essay about the influence brands and logos have on their choices as consumers.

### 3. Visual Art, Math, Technology, and Economics: Classroom Production of Ornaments

This project can be as simple or complex as you wish to make it, depending on the grade level of your students. You may also wish to partner with another teacher on the project so that you can each concentrate on different aspects.

- Brainstorm with students the jobs that must be done to make and market ornaments. Prompt them to include marketing research, advertising, branding, creating, finishing, packaging, sales, and bookkeeping.
- Have students look at the examples of Gastineau's ornaments in the Photo Gallery and search the Internet for examples of pewter cast ornaments. The reason for looking primarily at pewter casting is that you will be creating a one-piece mold so you don't want students distracted by 3-D cast pieces. Here are some sites to get your started:

1. http://www.christmasgiftgallery.com/pewter-christmas-ornament.htm
2. http://www.silverandpewtergifts.com/pewter-ornaments.html
3. http://www.abetteridea.com/christmas_ornaments.htm
4. http://www.atdesigns.com/Ornaments/Default.aspx
5. http://www.corporategiftshowcase.com/christmasornaments.asp

- Discuss the designs you have found. Most are too complex for your classroom production project, but they could be simplified.
- Decide what type of ornament you want to create. It might be best to develop an ornament that represents your school rather than a religious holiday and that could be used in multiple ways (such as an ornament on a cell phone, key ring, or bag tag) rather than a tree ornament.
- Depending on the type of ornament, determine the size range of the ornaments you will produce.
- At this point, you might want to divide into two teams, the business team and the artist team. The business team needs to do marketing research, create a business plan, and develop a bookkeeping system. They will decide when and where the products will be sold and how they will be advertised.
- The art team should measure and draw rectangles on paper with the maximum dimensions you have determined as a class.
- Within these rectangles, have art team students sketch designs for cast ornaments. These can be inside geometric shapes of free form. (You might wish to use this as a geometry lesson by requiring that they create a particular geometric shape that fits within the pre-determined size range.) Remind students to include a hoop that can be used for attaching or hanging the ornament.
- Have the art team create master models based on one or more sketches using Model Magic or similar modeling material. Remind students that models used for one-piece molds must have a flat back and no undercuts. You may have each student create a model based on his/her sketch and then select 1-5 pieces that have the best potential for production and marketing or you may select 1-5 sketches and have students attempt to make one of these designs, then selecting the ones that have the best potential for production casting.
- The business team should be involved in the selection of the products for production. At this point, you should also discuss if you will include a maker's mark and how you will finish and package the products. If you cast in a white material, do you want to color all the ornaments with a faux metal finish or hand paint them? Will they be packaged in plastic or in boxes?

- Have the business team design packaging for the products and determine what they need to purchase to package 25, 50, 75, or 100 ornaments.
- Have the art team create molds using rubber latex (available from Dick Blick and other suppliers - http://www.dickblick.com/products/amaco-rubber-latex/ )
- The entire class should now consider the cost of materials for producing your ornaments. Depending on grade level, you may factor in the cost of creating the molds or you may just project the expenses from this point forward. What will it cost to produce 25, 50, 75, or 100 ornaments? Be sure they include expenses for casting material, finishing supplies, and packaging. If there are expenses for marketing, these need to be included.
- At this point you may need to reorganize your teams. You will need a team to do the casting, a team to do the finishing, a team to do the packaging.
- Cast multiple pieces using Sculptamold or similar products (available from Dick Blick and other suppliers http://www.dickblick.com/products/amaco-sculptamold/ )
- Finish and package the products.
- Check against your projections. As a class, determine if your expenses were higher or lower than anticipated. Determine the amount you have invested in each piece in terms of materials only. If you added labor costs, how much would that increase the price? What price can you reasonably expect to sell you products for? If you make a profit, what will you use the funds for? Discuss options such as buying supplies for the classroom, donating to charity, or doing a special activity.

**Arts and Humanities/Writing**

1. Review the process of writing a critique (see attached power point). Ask students to write a formal critique of one object from The Gastineau Studios or one piece of jewelry that they created. They may use photos you took or photos from the "Gastineau Studios Photo Gallery."
2. Have students select one of the Gastineau Studio designs related to Kentucky heritage. Have them generate a list of words and phrases describing the image and another describing the aspect of Kentucky history or heritage that relates to the design. Ask them to use these words and phrases to write a poem. Haiku and cinquain are particularly suitable for this assignment. Explain that their goal is not to write a description of the object or an explanation of the tradition, but to express something about the relation of the design to Kentucky's heritage. Students will probably not use

all the words they listed and they may add other words as needed. (see power point "Art and Poetry."

**Social Studies/Economics**

1. Ken Gastineau defines himself as a combination of a fine artist and an industrial artist. In partnership with his wife, he owns and operates a working studio, retail shop, and wholesale business. His success is due as much to his business skills and practices as to his artistic and technical expertise. When entrepreneurs consider the profitability of their products, they must consider the factors of production. Ask students to brainstorm what the factors of production would be for the Gastineau Studios. Project the Factors of Production chart (below) to help them think of broad categories and then to identify specifics within the categories. Have them compare and contrast the Factors for Production in Gastineau Studios with another artist studio they visited.

If they did the Classroom Production of Ornaments Project, have them complete a Factors of Production chart on their classroom business.

| **Factors of Production and Marketing** | | | | |
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| Factors of Production and Marketing | Raw materials (natural resources, recycled resources, purchased materials) | Capital resources (tools, equipment, space) | Human capital (skills, knowledge, abilities) | Marketing (packaging, distribution, pricing, and advertising) |
| Product #1 | | | | |
| Product #2 | | | | |
| Product #3 | | | | |

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## INTERMEDIATE AND MIDDLE

**1. Visual Art and Technology**

These lessons will introduce your students to various techniques for creating art with computer programs:

http://www.lessonplanspage.com/ArtComputerWallpaper.htm
This lesson teaches student to use cut and paste functions on a draw program to create wallpaper

http://www.lessonplanspage.com/CIArtElectronicPizzaPaint56.htm
This lesson teaches students to use the Paint program in MS 95 or 98

http://www.lessonplanspage.com/CIArtPaintbrushCaricatures34.htm
Students learn to use a paintbrush program by creating a caricature

http://www.lessonplanspage.com/CIArtChristmasKidPixMousePadCreationsIdea15.htm
Students create a design for a mouse pad using KidPix

http://www.lessonplanspage.com/CIArtGumballDrawingIdea25.htm
Students learn to use the circle tool in MS Paint

## INTERMEDIATE

**Math**

1. Some of Gastineau's cast jewelry is symmetrical and some is not. Project the pieces from the photo gallery and have students identify the symmetrical pieces. Ask them to design a symmetrical pendant.

**Social Studies/Writing**

1. During the American Colonial period, pewter tableware (bowls, spoons, tankards, teapots) was very popular, but a pewter industry didn't develop in the

United States until after the Revolution. Project the "Gastineau Studios: Material" storyboard and call students' attention to the paragraph about pewter's role in the American Revolution. Lead a discussion about the restrictions that England placed on the colonies to try to force them to buy manufactured products from England instead of producing their own. Ask students to imagine that they are pewter smiths living in the Colonies and to write a journal entry about how difficult it is to practice their trade.

2. Many of Gastineau's designs are based on Kentucky symbols and traditions. Ask students to share which designs they identified in his studio as related to Kentucky and look at the designs in the Photo Gallery for more ideas. Have each student research the story of one of the Kentucky-related designs that Gastineau uses and write a report about why the design or symbol is relevant to Kentucky history and/or heritage.

## MIDDLE SCHOOL

### Math

1. Project the storyboard "Gastineau Studio: Material" and ask students to identify the formula for Britannia, the pewter alloy that Gastineau uses.
   - Ask them to write the formula as an algebraic equation.
   - Ask them to solve the equation for 10 pounds of pewter.
   - Ask them to convert the solution to kilograms.
   - Ask them to create a table showing the amounts of each ingredient needed to produce 100, 250, 500 or 750 pounds of pewter.

2. Share this information with your students. The Gastineaus purchase Britannia pewter in two forms. They buy *ingots* of pewter (blocks of pewter) to melt for casting and pre-formed *disks* for spinning into hollowware. The price for ingots is about $10/pound, while the disks cost about $15/pound.

Project the storyboard "Gastineau Studios: Holloware." Call attention to the middle section that shows the various ways that spinning can fail. Pewter is 100% recyclable, so if a piece is ruined, the pewter can be re-melted for use in cast pewter pieces. However, there is still a net loss because the pewter disks are more expensive than casting pewter.

A 7" X .040" disc of Britannia Metal is 188.6 grams. If Gastineau ruins a piece he is attempting to spin from a 7" disc, how much does it cost him? What if he ruined

5 pieces? Ask students to create and solve an algebraic equation where x=the amount of money lost per ruined disc.

He states that it takes about 100 attempts at spinning an object to become really proficient in creating the desired form. Given this information, calculate how much loss a pewter smith would incur in learning to spin a new piece from a 7" disc.

**Social Studies/Writing**

1. Project the storyboard "Gastineau Studio: Material" and discuss the history of pewter and pewter ware. Ask if any students have antique pewter objects at home. Have seventh grade students visit these websites on the history of pewter in civilizations prior to 1500.

History of pewter and pewter ware
http://www.ramshornstudio.com/pewter.htm
http://en.wikipedia.org/wiki/Pewter

This site has great information and pictures of living history interpreters acting as pewter smiths of the late Viking/early Middle Ages.
http://users.stlcc.edu/mfuller/foteviken2008forge.html

Ask students to write a brief report on the history of pewter from early times through the Medieval craft guilds. Alternatively, they could write a fictitious journal entry from the perspective of a pewter smith in a culture/time period you are studying.

2. Project the storyboard "Gastineau Studio: Material" and discuss the history of pewter and pewter ware. Ask if any students have antique pewter objects at home. Historic Jamestowne National Park has wonderful information about one of the earliest pewter smiths in the colonies at

http://www.nps.gov/jame/historyculture/new-towne-efforts-of-a-virginia-tradesman-1670s.htm

Ask students to write a journal entry as if they were an Early American pewter smith (before or after the Revolution) or a member of a pewter smith's family.

**HIGH SCHOOL**

For a lesson on creative mold making and glass casting in a mold, see attached.

**Visual Art/Technology/Practical Living/Writing**

Much of Gastineau's design and production work is accomplished with the assistance of computer programs. Project the power point "Gastineau Studios: Production Techniques." Discuss the role of computers in his studio. One of the programs he uses is ZBrush by Pixologic, a program widely used by computer animation artists and digital sculptors. Their website includes a gallery, a turntable gallery, information on colleges with computer art courses, and dozens of interviews with artists. You may pre-select items to project and share with the class or assign students to work individually or in small groups to research the website and create written or multimedia reports on

- how technology has provided new opportunities for artists;
- how computer animation has impacted the film industry;
- how computer animation has impacted popular culture;
- a critique of one or more pieces in the gallery or turn table gallery;
- a biosketch of one of the ZBrush artists;
- career opportunities in computer art, including availability of higher education.

You will want to review the site yourself first to determine its suitability for your purposes. http://www.pixologic.com/home.php

You might also want to initiate a discussion on setting criteria for evaluating this style of art work (e.g., skill of artist, originality, emotional impact, variety, interest, technical quality) and why personal responses will differ depending on personal experience, interest, medium used, and effectiveness of message.

If you have ZBrush on your computers, the website has a host of excellent tutorials. If you don't you can download a free trail. Educational licensing is available.

**Visual Art/Technology/Math**

1. Another program Gastineau uses is a computer assisted design program (CAD). He prefers Rhino3, but whatever CAD program you are using, you will find excellent suggestions for lessons at this site:

http://www.lessonplanspage.com/CIAutoCAD-TechnicalDrafting1112.htm

These lessons also address a wide array of math topics.

**Math**

1. Project the storyboard "Gastineau Studio: Material" and ask students to identify the formula for Britannia, the pewter alloy that Gastineau uses.
   - Ask them to write the formula as an algebraic equation.
   - Ask them to solve the equation for 10 pounds of pewter.
   - Ask them to convert the solution to kilograms.
   - Ask them to create a table showing the amounts of each ingredient needed to produce 100, 250, 500 or 750 pounds of pewter.

**Science**

1. It's Elemental

Gastineau Studios use a pewter alloy called Britannia, which is composed of three elements: tin, copper, and antimony. Have your students research the three elements and create a multimedia report about the elements, including their chemical characteristics, where they are found, when they were discovered, and how they are refined.

http://www.chemicool.com/elements/antimony.html
http://education.jlab.org/itselemental/ele050.html
http://education.jlab.org/itselemental/ele029.html

2. Like most commercial metals, pewter is an alloy. In this hands-on project, students create brass, a metal alloy.

http://chemistry.about.com/od/chemistryhowtoguide/a/goldsilverpenny.htm