

Bluff Park Maker Faire

Thursday, January 26, 2017

Maker Faire is a family-friendly showcase of invention, creativity, and resourcefulness which "celebrates arts, crafts, engineering, science projects and the Do-It-Yourself (DIY) mindset". A Maker Faire allows one to imagine, envision, create, innovate, play, formatively learn, experiment, collaborate, share, and most of all dream of possibilities via traditional methods or through the integration of technology. What can you make to: **Inform, educate others/teach, improve lives, or entertain, etc.**

Goals of the Maker Faire:

- Engage students in an authentic learning experience which has relevance and connection to their ideas.
- Allow for student intrinsic motivation and self-directed learning
- Facilitation of the 4 C's: Critical thinking, communication, collaboration, and creativity
- Provide students opportunities that allow them to fail in order to succeed
- Provide for student opportunities to enhance Project, Problem, Design, Inquiry, and Challenge Based Learning
- Promote student literacy through writing, reflecting, and journal writing while Making in specific subject areas
- Promote service student learning by identifying and inventing solutions to local and world problems
- Give students the opportunity to learn through kinesthetic opportunities
- Introduce students to the iterative process for problem solving
- Support student inquiry by relaying the importance of good questions and continued questioning

1. Show evidence, through research and documentation, of three design ideas.
2. Show evidence, using the documentation forms, of your final idea selected. What makes your idea unique? Give details.
3. Show evidence, using the documentation forms below, of your experimentation.
4. Show evidence, using the documentation forms below, of the evolution of your project.

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Step 1:

Brainstorm project ideas. List your ideas? Describe each. What is your inspiration, usefulness/purpose? Original or a remix? How is your project unique? Challenge yourself to come up with **at least three** different ideas and give thought to why you would choose this idea as one of your top three. What purpose are you trying to achieve? (To inform, educate others/teach, improve lives, entertain, etc.)

I. Idea #1: _____

II. How did this idea originate & what qualifies your idea as unique?

III. Research your idea. Provide sufficient information in the event you will use this resource as part of your **bibliography**. (Sites, books, magazines, etc.)

Formatting: <http://www.citationmachine.net/>

IV. What questions can you pose that will help guide your research?

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V. What materials will you need in order make your idea a reality?

VI. If you were going to make this item today, draw out a plan below that would include all steps that would be necessary.

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I. Idea #2: _____
II. How did this idea originate & what qualifies your idea as <u>unique</u> ? _____ _____ _____ _____ _____ _____ _____
III. Research your idea. Provide sufficient information in the event you will use this resource as part of your bibliography . (Sites, books, magazines, etc.) Formatting: http://www.citationmachine.net/ _____ _____ _____ _____ _____ _____ _____ _____
IV. What questions can you pose that will help guide your research? _____ _____ _____ _____ _____ _____ _____

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V. What materials will you need in order make your idea a reality?

VI. If you were going to make this item today, draw out a plan below that would include all steps that would be necessary.

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I. Idea #3: _____

II. How did this idea originate & what qualifies your idea as unique?

III. Research your idea. Provide sufficient information in the event you will use this resource as part of your **bibliography**. (Sites, books, magazines, etc.)

Formatting: <http://www.citationmachine.net/>

IV. What questions can you pose that will help guide your research?

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V. What materials will you need in order make your idea a reality?

VI. If you were going to make this item today, draw out a plan below that would include all steps that would be necessary.

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Step 3:

Constructing a prototype

Using your original plan and the steps of design thinking formulate your plan for constructing a prototype. Please include drawings, materials, tools, instructions, and any other resources that you may need. As you begin to make your prototype, include experiments conducted, results, adjustments, and the results of these adjustments.

Sketching space: Add Additional pages as needed.

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	Developing Maker	Novice Maker	Expert Maker
Inspiration	Identified or described ONE opportunity/idea. Student may have surface level description of one issue.	Identified or described TWO opportunities/ideas. Student may have surface level description of a few issues or a deeper description of only one idea.	Identified or described THREE or more opportunities/ideas. Student explored multiple issues and constraints in depth.
Ideation	Student chose one idea. The idea is a duplication of an existing idea with little personal development or justification for constructing it again to make the idea unique.	Student documented several ideas and zeroed in on one idea that is a "remix" of an existing idea providing a strong explanation for selection. Student elaborated on a singled idea to explain how this choice was best and would meet the overall goal selected.	Student documented several ideas and zeroed in on one unique idea supported by a strong explanation for selection. The student documented the development process and elaborated on the explanation as to how this choice would best meet the overall goal selected.
Experimentation	Student documented one change or adjustment to the design, experiment, or model. Student documented the outcomes of the change at a surface level.	Student documented several general changes and the reasoning for changes as well as the outcomes resulting from the change.	Student provided detailed documentation of several specific changes or adjustments as well as the outcomes resulting from the change.
Evolution & Reflection	Student shows surface level reflection of the making process by addressing only one of the following: How the design met the original purpose, design obstacles, knowledge obstacles, frustrations, improvements in process or product, or potential future exploration. Student provided minimal elaboration of their experience; challenges listed.	Student reflected on the making process by addressing two of the following: How the design met the original purpose, design obstacles, knowledge obstacles, frustrations, improvements in process or product, or potential future exploration. Student provided some elaboration of their experience.	Student reflected on the making process by addressing three or more of the following: How the design met the original purpose, design obstacles, knowledge obstacles, frustrations, improvements in process or product, or potential future exploration. Student provided detailed elaboration of their experience using written and pictorial examples.

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Timeline:

- December 2016 Maker Faire Information
- January 2016 Student sign up link available
- December 2016-January 2017: Student develops Maker Faire Project (Ideation, Research, Prototype)
- Wednesday, January 25, 2017 3PM-7PM: Maker Faire Project set up. Deliver student prototype plus research and design documentation to the cafeteria. Please make sure all items are clearly marked with student name.
- Thursday, January 26, 2017: Maker Faire presentations in cafeteria (8 AM-2:30 PM)
- Thursday, January 26, 2017: Maker Faire Parent Night cafeteria/Book Fair library
- Project pick up at close of Maker Faire Thursday, January 26, 2017