

Design: e-Bracelet | Fashion & Science a New Media Literacy | Session # 5 | Date:

Overview:

The goal of session 5 is to introduce students to paper prototypes and the importance of sketching in the design process. Students will troubleshoot possible issues they may encounter during the production phase through the use of paper.

Targeted principles, standards and skills:

Standards	Fashion Design Principles	Skill
<p>Students will be able to: Sketch, propose and compare design solutions to the possible problems considering available materials, tools, effectiveness and safety Select the most appropriate design and build a prototype</p>	<p>Students will be able to: Explain how color impacts design</p>	<p>Students will be able to: Create a paper prototype. Troubleshoot possible design challenges. Use color effectively</p>

Objectives	Assessment
<ul style="list-style-type: none"> • Ensure students have working understanding of the purpose of a prototype or simulation. • Make connections between color and the role it plays in human psychology. 	<ul style="list-style-type: none"> • Role: Scientist <ul style="list-style-type: none"> ○ Ability to produce a prototype • Role: Fashion Designer <ul style="list-style-type: none"> ○ Use principle of color to make design choices

Vocab and Key Concepts	Resources
<ul style="list-style-type: none"> • Concept: <ul style="list-style-type: none"> ○ Troubleshooting • Vocabulary: <ul style="list-style-type: none"> ○ Paper prototype - is a paper version used to explain how the interface is intended to work. 	<ul style="list-style-type: none"> • Digital Divas Video <ul style="list-style-type: none"> ○ http://www.youtube.com/watch?v=HCX3ReOekJ4 • Digital Divas Tumblr <ul style="list-style-type: none"> ○ http://dyndivas.tumblr.com/ • Paper prototypes <ul style="list-style-type: none"> ○ http://www.paperprototyping.com/what.html • The Effect of Color Off Book PBS Digital Studios <ul style="list-style-type: none"> ○ https://www.youtube.com/watch?v=nX0DHd5QNS8

Materials:

- 3V Batteries
- White LED's
- Needle nose pliers
- Conductive thread

- Felt
- Internet access
- Laptop or Desktop
- Divas Journal
- Color wheel
- Psychology of color worksheet
- Alligator clips
- Paper
- Crayons, colored pencils, markers
- Pencil
- Multi-Meters

Preparation:

- Space should be designed so that students are sitting together at a large table or with desks facing each other.

Lesson Outline:

Opener (5 mins.)

- Student round circle prompt (a round circle is an open discussion where students come together to focus their thoughts and ideas on the goals for the day):
 - Prompt: Aprille Ericsson, Ph.D. was the first black woman to receive a Ph.D. in Mechanical Engineering, why is this important to know?
 - By the end of the discussion students should have an understanding of another STEM field avenue.
- Review the day's goals and outcomes:
 - Sketch fashion bracelet with working circuits.
 - Troubleshoot possible problems during production of e-bracelet
 - Choose complimentary colors based on impact psychologically.

Activities (60 mins.)

Part 1: Colors make you feel different things (20 mins).

- Show PBS video (in resources) The Effect of Color (7 mins)
- Pass out psychology of color worksheet, begin discussion around color choices and what they mean on human beings (3-5 mins)
- Give students felt and design materials for building final e-bracelet. Students should make choices based on color compliments and the psychology behind their choice. (3 mins)
- Students will reflect in their journal on the following questions: What colors did you choose? What do these colors mean? (5 mins)

Part 2: Building & testing my paper simulation (20 mins).

- Students use paper, pencils, crayons, colored pencils, and markers to sketch their

<p>fashion design ideas.</p> <ul style="list-style-type: none"> • Students use different colors to sketch the positive and negative circuits within their e-bracelet. Black should be used to define the direction of the positive stitching of conductive thread. Red should be use to define the negative stitching of the conductive thread. <ul style="list-style-type: none"> ◦ Using an LED, 3V battery and alligator clips students should troubleshoot their circuit. A multi-meter can be used to test conductivity of parts.
<hr/> <p>FINAL ACTIVITY: 20 mins</p> <ul style="list-style-type: none"> • Students will create a video blog that explains working circuit design as sketched in paper prototype and the solutions to possible problems encountered during troubleshooting of parts.

<p>Exit slip</p> <ul style="list-style-type: none"> • Complete final video blog 	<p>Practice Opportunities</p> <ul style="list-style-type: none"> • Practice stitching and knotting. • Practice creating parallel and series circuits.
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Teacher Reflection:

<p>How Did it Go?</p> <ul style="list-style-type: none"> • Were students able to troubleshoot malfunctioning circuits? • Did students find it important to identify with other African American females in STEM careers? • Were students able to complete video blogs? <hr/>
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