Project: Chemistry & Art Exhibition

FOR THE TEACHER

Summary
In this project, students will use chemistry techniques to construct a piece of artwork.

Resource Type: Project
Grade Level: High school

Objectives
By the end of this lesson, students should be able to
• Understand how chemistry is used in certain art techniques.

Chemistry Topics
This lesson supports students’ understanding of
• Chemistry basics

Time
Teacher Preparation: 2 hours
Lesson: 3 days

Materials
• Dependent on student projects

Safety
No specific safety precautions need to be noted.

Teacher Notes
• Inspired by the Active Chemistry “Chemist as Artist” unit, it is one of the most memorable, but also chemically fascinating units I do with students. They see real connections between the chemistry they are learning and how both chemists and artists manipulate materials for a purpose.
• Suggested timeline (with other activities happening on blank days)

<table>
<thead>
<tr>
<th>Mon</th>
<th>Tue</th>
<th>Wed</th>
<th>Thu</th>
<th>Fri</th>
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</thead>
<tbody>
<tr>
<td>Exhibition</td>
<td>Due: Proposal</td>
<td>Continue</td>
<td>Finish Artwork</td>
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<tr>
<td>Intro</td>
<td>Proposal</td>
<td>Artwork</td>
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<tr>
<td>HW: Proposal</td>
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<tr>
<td>Due: Placard Draft</td>
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<td>Placard Draft</td>
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<td>Continue</td>
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<td>CHEM ROUNDTABLES</td>
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<tr>
<td>Roundtable Prep</td>
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<td>Last Day of</td>
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<tr>
<td>Roundtable Prep</td>
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<td>Roundtable Prep</td>
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FOR THE STUDENT
Student Activity Sheet: Chemistry & Art Exhibition

Lesson
Purpose
- Construct a piece of artwork by creatively and effectively using three techniques studied in class.
- Prepare a typed Placard describing your artwork (and the chemistry behind it)

Techniques & Materials

<table>
<thead>
<tr>
<th>Air-dry Clay</th>
<th>Making Steel Alloy</th>
<th>Electroplating Metals</th>
<th>Making Paint</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wire &amp; Tools for Sculpting</td>
<td>for making steel Bunsen Burner Beaker of H₂O</td>
<td>Cu Metal &amp; CuSO₄ Power Supply Alligator clips</td>
<td>Different color Tempera Paint (egg-binder)</td>
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</tbody>
</table>

Assessment Criteria

<table>
<thead>
<tr>
<th>ARTWORK</th>
<th>PLACARD</th>
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</thead>
<tbody>
<tr>
<td>Creativity, Expression, Effort</td>
<td>10%</td>
</tr>
<tr>
<td>Proficient Use of Techniques</td>
<td>30%</td>
</tr>
<tr>
<td>Human Connection / Function</td>
<td>10%</td>
</tr>
</tbody>
</table>

You must COMPLETE your proposal and submit it for approval
BEFORE you can start making your artwork.

Teacher’s Initials

Artwork Proposal: Make a DETAILED sketch of your piece of artwork.
LABEL the materials, techniques required, color, shape, size, texture, etc.

Title of Your Artwork

ADD CHECKLIST TO THIS PROPOSAL SO ALL THREE TECHNIQUES ARE INCLUDED

What is the inspiration for your artwork? Where did you get your idea?
Describe the human connection of your artwork? Elaborate on an idea(s) from below.

- Have a function
- Create a mood
- Represent the artist
- Represent culture
- Represent a time period
- Be pleasing to the eye
- Inspire emotion
- Have a purpose