Our Organic World
Pre-AP Chemistry-Project

**Purpose:** To study specific areas of organic chemistry and have student-lead teams teach the concepts/topics to the class.

**Procedure:**

1. Students will divide into teams of two students and select one of the topics from the list provided by the teacher.
2. Through research and group planning, the team will provide a lesson and visual that will teach the concept to the class. **One class period in the computer lab only and any additional planning will be done outside the classroom.**
3. An assessment will be used to measure the class’ comprehension of the topic. The assessment can be an essay, diagram, cues & questions, journal entry, product (short-term only and be written or physical), quiz, retelling (oral or written), or test questions (one test with all teams’ questions).
4. A LEARNING BOX will be made to teach the lesson to a feeder school elementary class. All items will be purchased by the school and a request list must be submitted five school days prior to lesson. **“When developing the learning book just remember what you liked to do when you were a little kid.”**
5. Time limit of lesson is 15 minutes maximum and 10 minutes minimum.
6. Both team members must participate in one form or fashion (develop the assessment, lecture, etc.)

**LIST:** Each topic can only be chosen by one team from each class

- **Types of Carbon** (include C-60)
- **Saturated Hydrocarbons**
- **Unsaturated Hydrocarbons**
- **Aromatic Hydrocarbons**
- **Functional Groups**
- **Stereochemistry**
- **Biopolymers**
- **Nanotubes**
- **Richard E. Smalley**
- **Types of Polymers**
- **Plastics**
- **Coal**
- **Propane**
- **Oil**
- **Nanotechnology**
- **C.B.E.N.**

*(Center for Biological and Environmental Nanotechnology)*
<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collaboration with Peers</td>
<td>Almost always listens to, shares with, and supports the efforts of others in the group. Tries to keep people working well together.</td>
<td>Usually listens to, shares with, and supports the efforts of others in the group. Does not cause “waves” in the group.</td>
<td>Often listens to, shares with, and supports the efforts of others in the group but sometimes is not a good team member.</td>
<td>Rarely listens to, shares with, and supports the efforts of others in the group. Often is not a good team member.</td>
</tr>
<tr>
<td>Content</td>
<td>Shows a full understanding of the topic.</td>
<td>Shows a good understanding of the topic.</td>
<td>Shows a good understanding of parts of the topic.</td>
<td>Does not seem to understand the topic very well.</td>
</tr>
<tr>
<td>Comprehension</td>
<td>Student is able to accurately answer almost all questions posed by classmates about the topic.</td>
<td>Student is able to accurately answer most questions posed by classmates about the topic.</td>
<td>Student is able to accurately answer a few questions posed by classmates about the topic.</td>
<td>Student is unable to accurately answer questions posed by classmates about the topic.</td>
</tr>
<tr>
<td>Speaks Clearly</td>
<td>Speaks clearly and distinctly all (100-95%) the time, and mispronounces no words.</td>
<td>Speaks clearly and distinctly all (100-95%) the time, but mispronounces one word.</td>
<td>Speaks clearly and distinctly most (94-85%) of the time. Mispronounces no more than one word.</td>
<td>Often mumbles or can not be understood OR mispronounces more than one word.</td>
</tr>
<tr>
<td>Posture and Eye Contact</td>
<td>Stands up straight, looks relaxed and confident. Establishes eye contact with everyone in the room during the presentation.</td>
<td>Stands up straight and establishes eye contact with everyone in the room during the presentation.</td>
<td>Sometimes stands up straight and establishes eye contact.</td>
<td>Slouches and/or does not look at people during the presentation.</td>
</tr>
<tr>
<td>Props</td>
<td>Student uses several props (could include costume) that show considerable work/creativity and which make the presentation better.</td>
<td>Student uses 1 prop that shows considerable work/creativity and which make the presentation better.</td>
<td>Student uses 1 prop which makes the presentation better.</td>
<td>The student uses no props OR the props chosen detract from the presentation.</td>
</tr>
<tr>
<td>Time-Limit</td>
<td>Presentation is 15-10 minutes long.</td>
<td>Presentation is 15-17 minutes long.</td>
<td>Presentation less than 10 minutes long.</td>
<td>Presentation is less than 7 minutes OR more than 17 minutes.</td>
</tr>
<tr>
<td>Listens to Other Presentations</td>
<td>Listens intently. Does not make distracting noises or movements.</td>
<td>Listens intently but has one distracting noise or movement.</td>
<td>Sometimes does not appear to be listening but is not distracting.</td>
<td>Sometimes does not appear to be listening and has distracting noises or movements.</td>
</tr>
</tbody>
</table>