

# LUSD STEAM Festival Assignment May 29, 2015 6-8 PM

## Science, Technology, Engineering, Art and Math

### Elementary Assignment

You won't want to miss the opportunity to attend the Friday night LUSD STEAM Festival at Lompoc High School. For more information go to: <http://www.ccstemexpo.org/> and click on "STEAM Festival".

There will be a variety of hands-on demonstrations and activities of various scientific & engineering principles. You are to study some of these, sketch how the demonstrations work, and write a few brief sentences discussing the scientific and/or engineering principles at work in the demonstrations.

You must choose 2 different demonstrations.

You are to choose one demonstration from two different categories.

For each demo sketch a figure showing how the apparatus was set-up. Label the figure with important pieces of equipment. For many demos you should draw both a before and an after picture.

In a few sentences, explain the scientific concepts or engineering demonstrated (see the next page for a template).

<b><u>Group 1:</u> Computer Science</b>	<ul style="list-style-type: none"> <li>o Writing Computer Code -Code.org</li> <li>o Gizmos Simulations</li> </ul>	<ul style="list-style-type: none"> <li>o Booth 3</li> <li>o Booth 4</li> </ul>
<b><u>Group 2:</u> Environmental Science</b>	<ul style="list-style-type: none"> <li>o Watershed Model</li> <li>o Intro to Environmental Sciences</li> </ul>	<ul style="list-style-type: none"> <li>o Booth 1</li> <li>o Booth 5</li> </ul>
<b><u>Group 3:</u> Health Science</b>	<ul style="list-style-type: none"> <li>o Smoking Effects on Lungs &amp; Environment</li> <li>o Human Gastrointestinal Tract</li> <li>o CPR Demonstration</li> <li>o Lung Development After Pollution</li> </ul>	<ul style="list-style-type: none"> <li>o Booth 11</li> <li>o Booth 29</li> <li>o Booth 30</li> <li>o Booth 31</li> </ul>
<b><u>Group 4:</u> Life Science</b>	<ul style="list-style-type: none"> <li>o CHS Life Science &amp; Physical Science</li> <li>o Marine Touch Tanks and Kelp Holdfast dissection</li> <li>o Animal Tracks; Bone I.D.; Milkweed</li> <li>o Microscopes Pond Water, Elodea &amp; Cheek Cells</li> <li>o Aquarium touch tanks</li> <li>o Petting Zoo</li> <li>o Fossils, Diatoms &amp; Air Classification of Diatomaceous Earth</li> </ul>	<ul style="list-style-type: none"> <li>o Booth 24</li> <li>o Booth 6</li> <li>o Booth 10</li> <li>o Booth 16</li> <li>o Booth 20</li> <li>o Booth 43</li> <li>o Booth 2</li> </ul>

<p><b><u>Group 5:</u></b> <b>Physical Science</b></p>	<ul style="list-style-type: none"> <li>o CHS Life Science &amp; Physical Science</li> <li>o Making Slime</li> <li>o Cloud in a Bottle</li> <li>o Making a Lava Lamp</li> <li>o Miguelito- Hands on Activities</li> <li>o Infrared Camera</li> <li>o Making Ice Cream</li> <li>o Lompoc Valley Radio Control Race Track</li> <li>o Action Figures Zip Line Races</li> <li>o Elephant Toothpaste</li> <li>o Making Oobleck a Non-Newtonian Fluid (Magic Mud)</li> </ul>	<ul style="list-style-type: none"> <li>o Booth 24</li> <li>o Booth 7</li> <li>o Booth 8</li> <li>o Booth 12</li> <li>o Booth 18</li> <li>o Booth 19</li> <li>o Booth 22</li> <li>o Booth 26</li> <li>o Booth 36</li> <li>o Booth 38</li> <li>o Booth 39</li> </ul>
<p><b><u>Group 6:</u></b> <b>Art</b></p>	<ul style="list-style-type: none"> <li>o Butterfly Art</li> <li>o Visual Arts- Arts, Color &amp; Light</li> </ul>	<ul style="list-style-type: none"> <li>o Booth 9</li> <li>o Booth 13</li> </ul>
<p><b><u>Group 7:</u></b> <b>Engineering</b></p>	<ul style="list-style-type: none"> <li>o Building Castles and Bridges</li> <li>o Catapults</li> <li>o Engineering; Electronics; Robotics; Manufacturing, &amp; 3D printing</li> <li>o Scaled Rocket Models</li> <li>o Making &amp; Testing Bridges</li> <li>o Water Balloon Cannon Target Shoot</li> <li>o Trebuchet</li> <li>o Launch Rockets</li> <li>o Air Rockets</li> <li>o ROVs</li> <li>o Making Rubber Band Powered Helicopters</li> <li>o Egg Drop Contest</li> <li>o Skateboard Wheels Hardness and Size Impact on Performance or "What's So Special about Skateboard Wheels?"</li> </ul>	<ul style="list-style-type: none"> <li>o Booth 14</li> <li>o Booth 17</li> <li>o Booth 21</li> <li>o Booth 25</li> <li>o Booth 27</li> <li>o Booth 32</li> <li>o Booth 33</li> <li>o Booth 34</li> <li>o Booth 35</li> <li>o Booth 37</li> <li>o Booth 40</li> <li>o Booth 41</li> <li>o Booth 42</li> </ul>

Student Name: \_\_\_\_\_

Student School: \_\_\_\_\_

Demonstration Name: \_\_\_\_\_

### Sketch of Presentation

BEFORE	AFTER

Explanation of Scientific Concept or Engineering:

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### Sketch of Presentation

BEFORE	AFTER

Explanation of Scientific Concept or Engineering:

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