

# LUSD STEAM Festival Assignment May 13-14, 2016

Friday 5-8pm

Saturday 9-Noon

Science, Technology, Engineering, Art and Math

## Elementary Assignment

You won't want to miss the opportunity to attend the LUSD STEAM Festival at Cabrillo 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 Computer Coding (Booth 15)</li><li>o iOS App Development (Booth 22)</li></ul>	<ul style="list-style-type: none"><li>o Saturday Only</li><li>o Saturday Only</li></ul>
<b><u>Group 2:</u> Environmental Science</b>	<ul style="list-style-type: none"><li>o Milkweed and Bee Feed Seed Packets (Booth 10)</li><li>o Water Shed Model (Booth 9)</li></ul>	<ul style="list-style-type: none"><li>o Friday Only</li><li>o Friday Only</li></ul>
<b><u>Group 3:</u> Technology</b>	<ul style="list-style-type: none"><li>o Etching, Laser Cutter and 3D Printers Demos (Booth 28)</li><li>o Soldering Practice &amp; Robot Cars (Booth 35)</li><li>o Technical Illustrations (Booth 12)</li><li>o Maneuver Underwater ROV Through a Course (Booth 40)</li><li>o Demo of Capabilities of Spartatroniks Robot (Booth 39)</li><li>o Space X- Estes Rocket Launches (Booth 41)</li><li>o Run RC cars Through Course and Fly Drones (Booth 45)</li></ul>	<ul style="list-style-type: none"><li>o Friday Only</li><li>o Friday Only</li><li>o Friday Only</li><li>o Friday and Saturday</li><li>o Friday and Saturday</li><li>o Friday and Saturday</li><li>o Friday and Saturday</li></ul>
<b><u>Group 4:</u> Life Science</b>	<ul style="list-style-type: none"><li>o Diatomaceous Earth (Booth 2)</li><li>o Interactive Marine Aquaria- with UCSB (Booth 31)</li><li>o Marine Life &amp; Touch Tanks- with Cabrillo High (Booth 27)</li><li>o Microscope Demonstrations (Booth 2)</li></ul>	<ul style="list-style-type: none"><li>o Friday Only</li><li>o Friday Only</li><li>o Friday and Saturday</li><li>o Saturday Only</li></ul>

<p><b><u>Group 5:</u></b> <b>Physical Science</b></p>	<ul style="list-style-type: none"> <li>o Trebuchet (Booth 43)</li> <li>o Infrared Camera Demonstration (Booth 21)</li> <li>o Making Oobleck (Booth 33)</li> <li>o Cloud in a Bottle (Booth 37)</li> <li>o Air Rockets (Booth 42)</li> <li>o Bottle Rockets (Booth 44)</li> <li>o Earth/ Moon Rotation and Revolution (Booth 13)</li> <li>o Display of Sky Dive Santa Barbara Videos &amp; Parachute Target Contest (Booth 30)</li> <li>o Bernoulli's Principle (Booths 11 &amp; 29)</li> <li>o Making Slime (Booth 32)</li> <li>o Float or Sink (Booth 18)</li> </ul>	<ul style="list-style-type: none"> <li>o Friday Only</li> <li>o Friday Only</li> <li>o Friday Only</li> <li>o Friday Only</li> <li>o Friday Only</li> <li>o Friday Only</li> <li>o Friday and Saturday</li> <li>o Friday and Saturday</li> <li>o Saturday Only</li> <li>o Saturday Only</li> <li>o Saturday Only</li> </ul>
<p><b><u>Group 6:</u></b> <b>Art</b></p>	<ul style="list-style-type: none"> <li>o Art Activities- Los Berros (Booth 26)</li> </ul>	<ul style="list-style-type: none"> <li>o Friday and Saturday</li> </ul>
<p><b><u>Group 7:</u></b> <b>Engineering</b></p>	<ul style="list-style-type: none"> <li>o Water Filters (Booth 3)</li> <li>o Magic Nuudles (Booth 4)</li> <li>o Projector w/ Pictures and Engineering Activities (Booth 6)</li> <li>o LEGO Robots, iPad apps, Old Computer Reverse Engineering and More! (Booth 14)</li> <li>o Engineering &amp; Manufacturing Robotics (Booth 14)</li> <li>o STEM Hands-On with Cabrillo High (Booth25)</li> <li>o Engineering Design Process-with Cal Poly (Booth 19)</li> <li>o STEM Hands-On with Allen Hancock (Booth 24)</li> </ul>	<ul style="list-style-type: none"> <li>o Friday Only</li> <li>o Friday Only</li> <li>o Friday Only</li> <li>o Friday and Saturday</li> <li>o Friday and Saturday</li> <li>o Friday and Saturday</li> <li>o Saturday Only</li> <li>o Saturday Only</li> </ul>

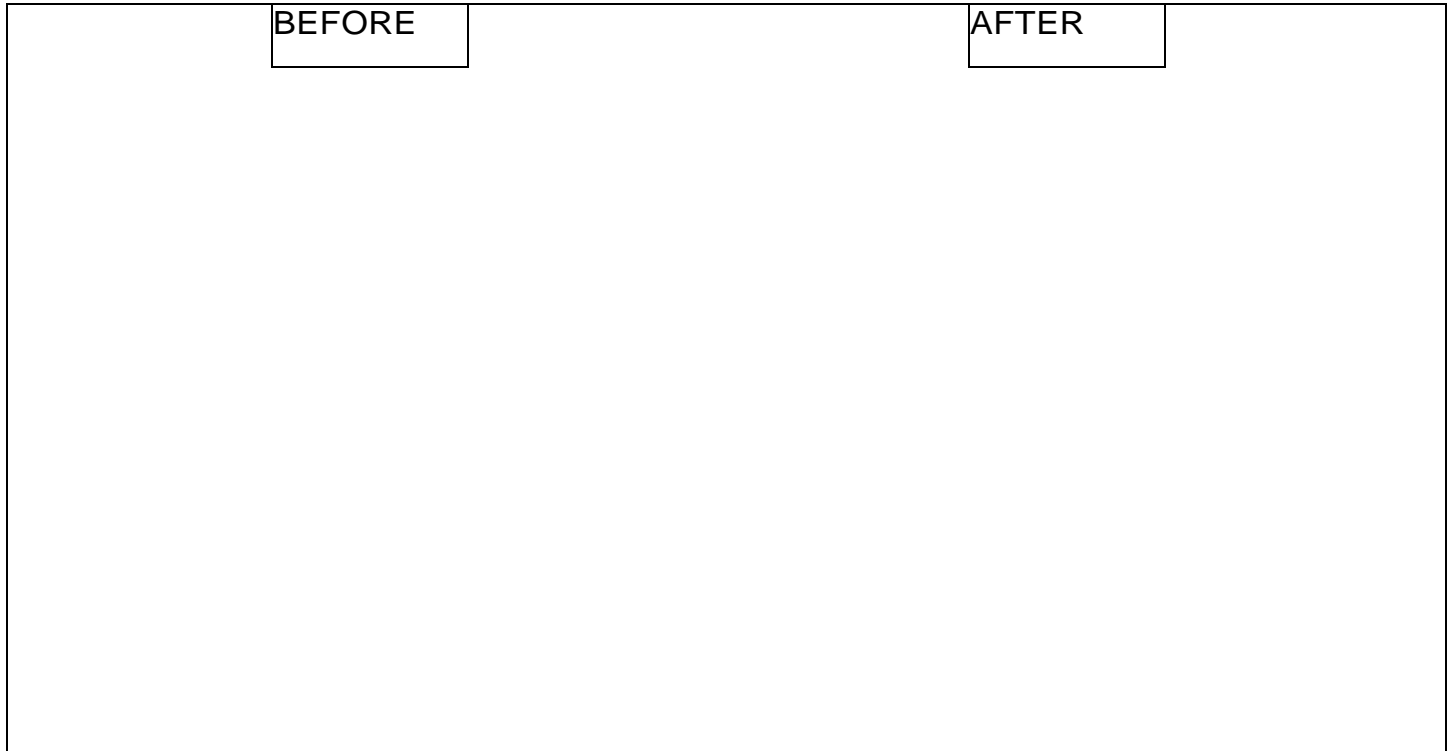
Student Name: \_\_\_\_\_

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

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

**Sketch of Presentation**

BEFORE	AFTER
--------	-------



Explanation of Scientific Concept or Engineering:

---

---

---

---

---

---

---

---

---

---

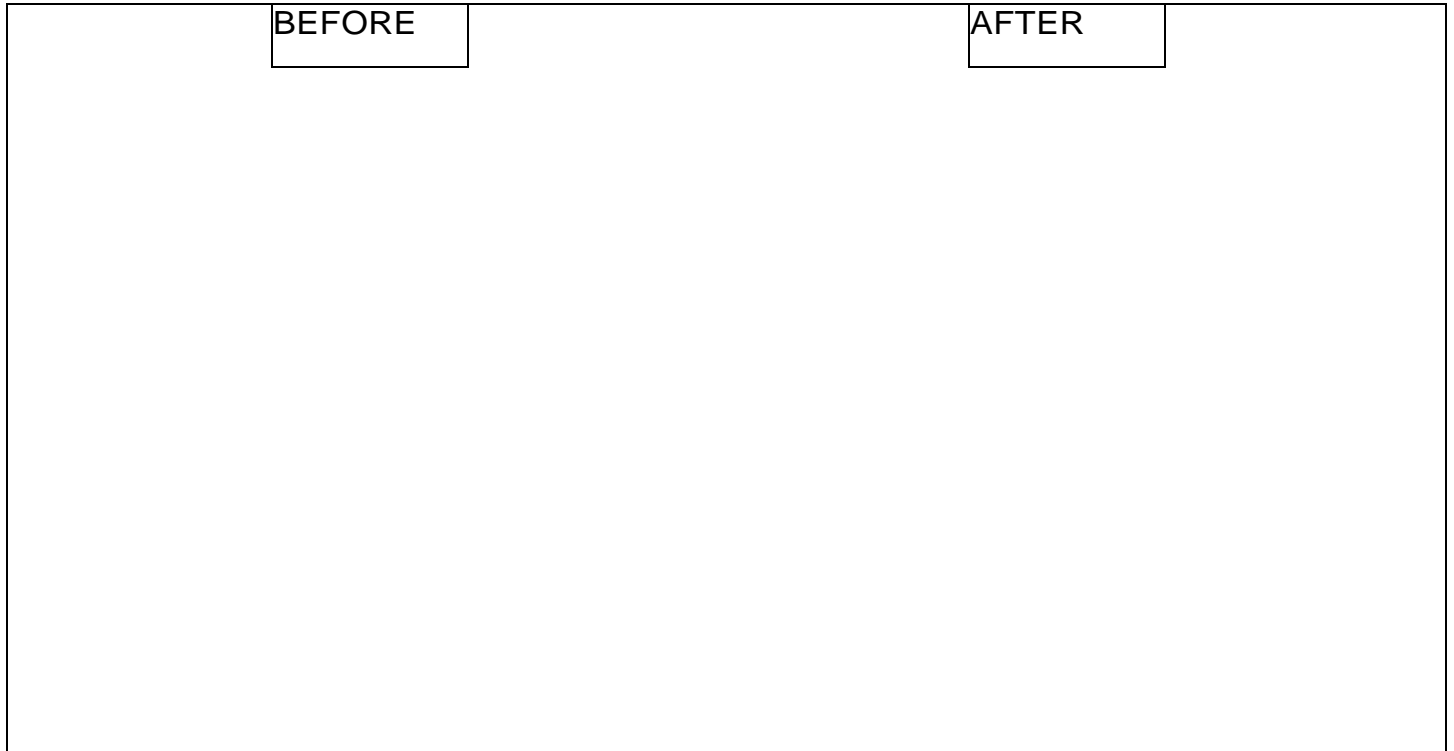
Student Name: \_\_\_\_\_

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

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

**Sketch of Presentation**

BEFORE	AFTER
--------	-------



Explanation of Scientific Concept or Engineering:

---

---

---

---

---

---

---

---

---

---