

A Lesson on Density/Pressure

(AKA Julie's FLIPPIN' Awesome
BEAM Lesson Plan)

Some Information

- Module based lesson plan
- **CHOOSE YOUR OWN ADVENTURE!**
(Hooray!), pick which modules you want to do for you site
- Requires some preparation from site leaders (~45 minutes worth)
- Take into account the amount of time each module will take
- Read the lesson plan for in-depth info on each module

NOW ONTO THE MODULES

- Cartesian Diver (~15 minutes)
- Density Column (~20 minutes)
- Dancing Raisins (~10-15 minutes)
- Crushed Can (~15-20 minutes)
- Egg in a Bottle (~15 minutes)
- Solar Balloon (~30-40 minutes)

Cartesian Diver



http://www.physics.isu.edu/physdemos/fluids/pics/cartdive_a.jpg

Materials For Cartesian Diver

- Eye Dropper - BEAM provides
- ***Plastic Water Bottle** - site leader provides
- Water - site provides

Video Link

- http://youtu.be/G3_yiwyezPY?t=45s

Density Column



<http://0.tqn.com/d/chemistry/1/G/E/V/rainbow.jpg>

Materials for Density Column

- Sugar – BEAM provides
- Food Coloring – BEAM provides
- ***Table spoon of similar sized item** – site leader provides
- Clear Cup – BEAM provides

Dancing Raisins



<http://3.bp.blogspot.com/-e9qITm8cWq0/Tk9RhGSbeMI/AAAAAAAAAfA/cy15znD0hI0/s1600/dancing+raisins+037.JPG>

Materials for Dancing Raisins

- Raisins – BEAM provides
- ***7-up, Sprite or clear soda** – site leader provides, save the can if you're using it for crushed can
- Clear Cups – BEAM provides

Video Link

- <http://youtu.be/m0LxZXyOOEk?t=1m24s>

Crushed Can



<http://serc.carleton.edu/images/earthlabs/hurricanes/can-crush.jpg>

Materials for Crushed Can

- ***Soda Can** (possibly from the dancing raisins!)
- site leader provides
- ***Hot Plate** – BEAM may or may not provide
- ***Container of water** (like a bowl) – site leader provides
- **Tongs** – BEAM provides

Video Link

- <http://youtu.be/vcsxB5dKJMg?t=40s>

Egg in a Bottle



<http://4.bp.blogspot.com/-MRTtlx-bDGs/Tk4CibSJ47I/AAAAAAAAAR8/jQM4zcjlazE/s1600/FSG+Egg+bottle+099.JPG>

Materials for Egg in a Bottle

- ***Glass Bottle** – site leader provides
 - Inner diam. roughly 1.5 inches
- ***Hard-boiled egg** – site leader provides
- Matches, paper (kindle) – BEAM provides

Video Link

- <http://youtu.be/Fhz4xsJ1LUo?t=2m>
- <http://youtu.be/Fhz4xsJ1LUo?t=3m>

Solar Balloon



Materials for Solar Balloon

- Solar Balloon – BEAM provides
- Rubber Band – BEAM provides
- Cotton String – BEAM provides

Video Link

- Blowing up the balloon
<http://youtu.be/UujAMPv3y-A?t=1m>
- Solar Balloon
<http://youtu.be/kmqiwEQAI3Q>

The End!

Any questions? E-mail Julie at
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