



# Rio Grande Educational Collaborative Before and After School Program Lesson Plan



## Guidelines:

Lessons should be at least (60) minutes, and **MUST** pertain to literacy.

<b>Lesson Title:</b>	Big Floating Bubbles
<b>School:</b>	Pajarito Mesa Portable
<b>Date:</b>	2017-11-30
<b>Instructor Name:</b>	Kevin Saavedra
<b>Class Size:</b>	15

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Lessons should be at least (60) minutes, and **MUST** pertain to literacy.

<p><b>NM Common Core/State Standards:</b> New Mexico K-4 Benchmark Standard I: Understand the processes of scientific investigations and use inquiry and scientific ways of observing, experimenting, predicting and validating to think critically.</p>	<p><i>For more information on NM Common Core/State Standards visit:</i> <a href="http://newmexicocommoncore.org/">http://newmexicocommoncore.org/</a> <a href="http://www.mystandards.org/">http://www.mystandards.org/</a></p>
<p><b>Learning Objectives:</b> -Students will observe and discuss the properties of soap film--the tendency of soap film to shrink and pull itself together--and consider more about the behavior of soap and bubbles.</p>	<p><i>[Instructional context:]</i> i.e. After listening to "If You Decide to Go to the Moon" by Faith McNulty and identifying relevant words during the readaloud <i>[what students will do:]</i> i.e. Students will write a list of words <i>[Standard was met as demonstrated by:]</i> i.e. Students can identify, spell and define sight words as demonstrated by post activity trivia</p>
<p><b>Lesson Materials &amp; Equipment:</b> (For each team):</p> <ul style="list-style-type: none"> <li>-2 drinking straws</li> <li>-36 inches of string</li> </ul> <p>Shared:</p> <ul style="list-style-type: none"> <li>-3 dipping trays</li> </ul>	<p>Please include all items and the quantity.</p>



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-several buckets of solution prepared from 3 different dishwashing soaps	
<b>Special Requests for RGEC Equipment:</b> None	

## Instructional Sequence:

*Please Note: This section should be written so that another Instructor could pick it up and teach the lesson successfully. Include estimates of wait time, questions you may ask, and as many specific details as possible.*

### Body of the Lesson

1. (What you will say/do to assess, connect to, or build, necessary background knowledge.
2. Describe step-by-step what the students will be doing during the lesson.
3. Opportunities to participate in small groups.
4. Activity to process daily participation

### Instructional Sequence:

**-Before the activity, prepare 3 trays with soap solution (different types of soap in each tray) and three bubble launcher out of two straws and the string (loop the string through the two straws and tie the ends to form a rectangle. The solution should be fairly soapy, and easily able to produce thick bubbles--don't use too much water. The students will rotate in teams of ~5 from these three stations.**

**-Assign three student aids to monitor each station. Have them practice making bubbles beforehand with the bubble launcher and explain to them that they will assist students who are having trouble. They should also be making sure that students take more than five attempts at making a bubble before moving to the next student at that station.**

**-Students place the bubble launcher all the way into the solution. It's fine if their hands are soapy, too. Open the frame slowly and launch the bubble by moving the frame upward, bringing the two straws back together, and tilting them and the string away from the bubble to that it peels off of the string.**



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**-Go around to each station and begin a dialogue with the students. Ask them stuff from a list of questions:**

**-What shape are the bubbles when they are first forming from the launcher?**

**-What shape do they take when they are free from the frame?**

**-Is there a limit to the biggest bubble you can make?**

**-How did the bubbles move? Did they float and move, or sink immediately?**

**They can describe shapes by sketching or using their hands.**

**-The most important questions should discuss the differences between the different solutions. Ask them if they notice a difference in how easily bubbles are formed, if some solutions have soap dripping off of them, or if they look different.**

### **Lesson Credits:**

**Where did you get your ideas for your lesson? (i.e. website, etc.)**

Adapted from Explore It! EDC Center for Science Education STEM kit (Bubbles Manual)