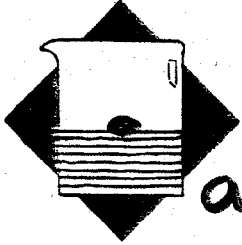


Name \_\_\_\_\_

Actv 3 "Life of a Raisin"

Date

9/10/14



Make some inferences about your observations. Remember that an inference is a tentative explanation. Explain the activities of the raisins in the solution by completing the following statements.

a.

Some of the raisins floated because \_\_\_\_\_

b.

After rising, most of the raisins sank because \_\_\_\_\_

c.

After rising, some bubbles attached to the raisin popped at the top of the solution because \_\_\_\_\_

d.

After rising, some raisins turned or flipped over as they sank because \_\_\_\_\_

e.

After a period of time, most raisins stopped rising because \_\_\_\_\_

f.

Some raisins did not rise because \_\_\_\_\_

g.

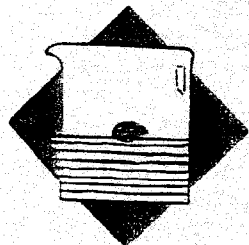
Some raisins bumped and turned around on the bottom of the container because \_\_\_\_\_

h.

Bubbles are round (spherical) in shape because \_\_\_\_\_

i.

Raisins with a lot of bubbles rise but raisins with fewer bubbles don't rise because \_\_\_\_\_



**PART SIX**

The story below explains the activity of the raisins. However, certain key words or phrases have been omitted. Write the missing word(s) or phrase(s) that will make each sentence correct.

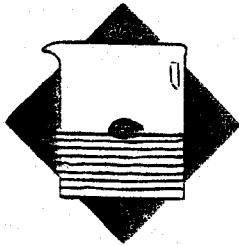
**About Force**

Raisins float and sink because of two kinds of forces. One kind of force is a lifting force called *buoyancy*. The second kind of force is a sinking force called *gravity*. When an object is placed in a liquid, the liquid and the object push on each other. In the case of the baking soda and vinegar solution, the heavier vinegar solution pushed the lighter bubbles upward. These rising bubbles created a lifting force. The bubbles accumulated on the raisins. As more and more bubbles accumulated on the raisins, there was a greater \_\_\_\_\_ force present.

**The Rise (about bubbles)**

Bubbles were made by a chemical reaction of the two main ingredients in the solution, \_\_\_\_\_<sub>1</sub> and vinegar. The bubbles consist of a gas called carbon dioxide. Since the bubbles were lighter than the vinegar solution, they \_\_\_\_\_<sub>2</sub>. This action of the bubbles created a buoyant force. Sometimes the bubbles bumped into raisins and sometimes they \_\_\_\_\_<sub>3</sub>. If enough bubbles accumulated on a raisin, the lifting force made by the \_\_\_\_\_<sub>4</sub> caused the raisin to rise. As a result, the raisins floated to the top of the solution.

X 2



x 3

### The Fall

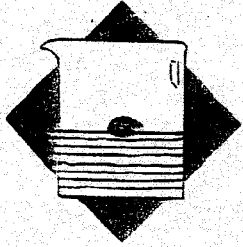
At the surface of the solution, some of the bubbles near the top of the raisins \_\_\_\_\_<sub>1</sub>. This happened because the bubbles were no longer surrounded by the \_\_\_\_\_<sub>2</sub>. Now the floating raisins had fewer bubbles. With fewer bubbles, the raisins had less \_\_\_\_\_<sub>3</sub> force. The raisins sank to the bottom of the container because the lifting force was less than the sinking force.

### The Flip

Some raisins flipped as they began to sink. This happened because \_\_\_\_\_<sub>1</sub> on only one side of the raisins popped. This caused the lifting and sinking forces to be unbalanced. The side of the raisins that lost the bubbles began to \_\_\_\_\_<sub>2</sub>. Some raisins did not behave this way. They simply sank straight down, because the bubbles \_\_\_\_\_<sub>3</sub> equally on all sides of the raisins. Some raisins floated to the top and stayed there because there were still enough unpopped bubbles under the raisins.

### The End

Some raisins did not rise at all because they were too \_\_\_\_\_<sub>1</sub>. They acquired some bubbles but they could not get enough lift to overcome the sinking force. After a period of time the raisin activity stopped. This occurred because the ingredients were all used up and no more \_\_\_\_\_<sub>2</sub> were chemically produced.



**PART SEVEN**

Conclusion:

In your own words, explain the activities of the raisins in the baking soda and vinegar solution. Include drawings if you think they will help explain your ideas.

\_\_\_\_\_

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