Sketches: Draw the three gummy bears (plain water, salt water, and no water) in the box below.

Plain Water	Salt Water	No Water

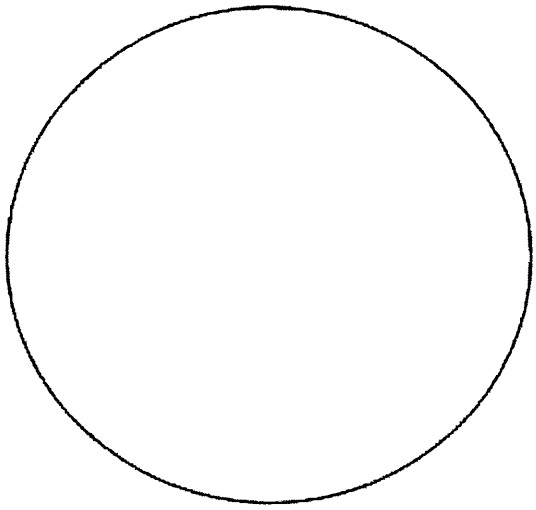
***WATCH AMOEBA SISTERS OSMOSIS: https://www.youtube.com/watch?v=laZ8MtF3C6M
(Stop at 1:15 min.)

*****Go back to the gummy bear sketches. Draw arrows to show the directions of diffusion of water molecules if it occurred**

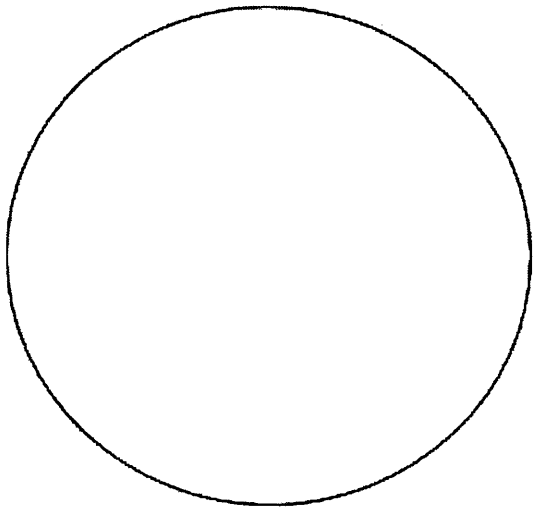
HOW DOES THIS RELATE TO CELLS?

IMAGINE the gummy bears are living things. If we could take a tissue sample of the gummies and place it under the microscope, _____ (the basic building blocks of living things) should be observable.

At the cellular level:
Take a look at a sample of red onion/elodea. Sketch the ONE onion/elodea cell in the field of view below at 400x.



Add salt water to the onion/elodea slide Magnify the specimen to 400x. Sketch the ONE onion/elodea cell in the field of view below.



Describe a difference between the first cell in freshwater vs. the second cell after salt water was applied. _____

_____

_____

_____

_____ is the process in which cells lose water, shrinking of the cytoplasm occurs; in plants, the cell membrane shrinks away from the cell wall. As the cells collapse and are unable to maintain homeostasis and cannot perform their necessary processes.

Conclusion: Using the provided word banks, complete each section of the conclusion by filling in the missing information. The answers should be based on results from the lab and your notes.

water	membrane	cells	selectively permeable	osmosis

Why did the results occur? It has to do with a process called _____.

Imagine the gummy bear is a real living thing; it would be made of tiny, living units called _____. Each cell is surrounded by a _____ that protects the cell by keeping the cells parts inside and keeping other things outside. While it stops most things, _____ can pass through it. The membrane is called _____ because it regulates what comes in and out.

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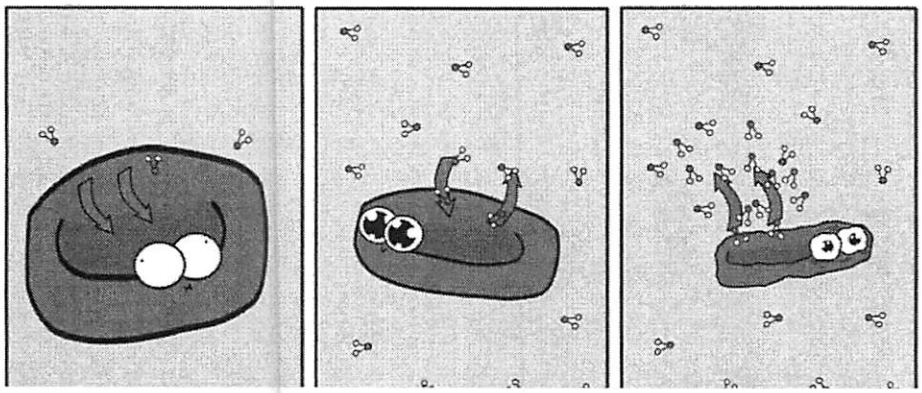
inside	outside	inside	outside	salt	plain	higher
lower	diffusion	osmosis	losing	increased	smaller	larger

Osmosis is a kind of _____. When diffusion occurs, molecules move from a _____ concentration of water towards a _____ concentration of water. If outside the cell has LESS water than inside, water will move from the _____ of the cell to the _____. That is what happened to the gummy bear in the _____ water. The water had to move out of the gummy bear to "even out" the concentration of water. The gummy bear became _____ with less water to fill it up.

The opposite happened to the gummy bear in the _____ water. Water moved from the _____ of the gummy bear to the _____ to "even out" the concentration of water. As more and more "cells" gained water, the gummy bear became _____ as more water filled it up.

So what does all of this have to do with me? Osmosis works the same way for your cells as it does in the gummy bear. When you are sweating, you are _____ water. Osmosis takes over and starts to pull water out of your cells, which is not a good thing (for starters: dehydration…cell collapse)! Now that water left your cells, the concentration of salt in your cell has _____ (this can lead to mineral imbalances that could stop enzymes which are needed for most cell functions from working properly). It is very important to drink a lot of water if you are sweating because _____ would occur again and balance out the water to keep you healthy.



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