**Grade 8 Osmosis and Diffusion Labs – Soaking Spuds and The Naked Egg**

**Soaking Spuds**

[**https://www.youtube.com/watch?v=jTDATlaBV-o**](https://www.youtube.com/watch?v=jTDATlaBV-o)

* First: read through everything. Follow instructions carefully!
* Determine **Safety** considerations and procedures SPECIFIC to this lab. List them here as a group:
* You will choose your own **Groups** for this task. Note them here and what they are responsible for. Each person has to fill in the question and observations sheet, but the group sheet is for the lab.

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| --- | --- | --- | --- |
| Name: | Name: | Name: | Name: |
| Job: | Job: | Job: | Job: |

* **Supplies**

|  |  |
| --- | --- |
| What you need: | Amount: |
| ½ potato | 2 cubes or slices in similar sizes and shapes |
| 500mL Beaker | 2 |
| Table Salt | 2 tbsp = ? tsp (convert, because we only has tsp!) |
| Distilled Water (actually just tap today) | 250ml in each Beaker |

**Procedure:**

1. Slice the potato into cube or slices. They should be a similar shape and size.
2. Fill two beakers with water.
3. Place 1 potato cube/slice into one of the beakers with water. Place the other slice in this other beaker.
4. Add the equivalent of 2tbsp. to only 1 beaker and stir in the salt.
5. Return all dirty supplies to the teacher that can be returned.
6. Let the potatoes soak at your station while you complete the hypothesis and then work on other tasks.

**Checklist before you gather supplies and begin the lab:**

* Read through everything first.
* Determine Safety Procedures specific to this lab.
* Record the equivalent of tsp and tbsp.
* Fill in the group chart.
* **Fill in the hypothesis**: What is going to happen to the potato soaking in salt water vs. the potato soaking in regular water (be specific)? WHY and HOW will this happen?

**Grade 8 Osmosis and Diffusion Labs**

**Question and Observations Sheet**

1. Put the **definition** of the following vocabulary into your own words:
   1. Osmosis
   2. Diffusion
   3. Cell Membrane
2. What are the **variables** in the Soaking Spuds Lab?
   1. Manipulated
   2. Responding
   3. At least 2 controlled
3. What MIGHT affect the outcome based on our procedure?
4. When the time is done, take the potatoes out of the water. Make **observations** here:

|  |  |
| --- | --- |
| **Salt Water** | **Regular Water** |
| Potato: | Potato: |
| Water level: | Water level: |

1. Make **inferences** based on your observations.

|  |  |
| --- | --- |
| **Salt Water** | **Regular Water** |
| Potato: | Potato: |
| Water level: | Water level: |

1. Write a **conclusion**: Was your hypothesis correct or incorrect? Why? Demonstrate your understanding of osmosis, diffusion and the cell membrane to explain what happened.
2. Watch the Sci Guys Video about *The Naked Egg and Osmosis*. **Fill in the chart**:

<https://www.youtube.com/watch?v=SrON0nEEWmo&t=1s&list=PLACe3Wxle2fEaNNd7hLb7DoVedSG9Qb4w&index=27>

|  |  |  |
| --- | --- | --- |
| Egg in | Egg in | Egg in |
| Observations: | Observations: | Observations: |
| Inferences: | Inferences: | Inferences: |