

Biology's Biggest Loser!

Summary

This is an inquiry lab. The students will prepare and conduct an experiment to force their potato to lose the greatest percentage of its mass using osmosis.

Time Frame

1 class periods of 60 minutes each

Group Size

Small Groups

Materials

- potatoes
- small knives or scalpels
- salt
- water
- triple beam
- beakers of various sizes
- graduated cylinder
- paper towels
- [student worksheet](#)
(attached)
- [chart for overhead](#)
(attached)

Support materials: Make an overhead or other way of collecting the class measurements as you start and then conclude the lab.

Background for Teachers

Safety issues or specialized background knowledge:

Be careful with sharp objects. Students should already know about properties of water, osmosis and diffusion. If you have talked about hypertonic and hypotonic cells it can be helpful.

Instructional Procedures

Who has heard of the show called Biggest Loser? What is the premise? How do they determine the winner?

Divide the students into groups of 3 or 4.

Each group is to write a specific plan that they will follow. They cannot deviate from this plan during the lab. Specific measurements must be used.

Each group must bring their potato to the teacher at a specific time to make the first measurement. This is about 15 minutes into the class period.

The class will then have 15 to 20 minutes to run their lab.

At a designated time, ten minutes till the end of class, all groups must bring up their potato and re-measure.

Assessment Plan

Scoring Rubric:

1. Complete, best effort, used equipment correctly.....4
2. Complete, best effort,3
3. Partially complete and lacking effort.....2
4. Started lab and did not complete.....1

Bibliography

Lesson Design by Jordan School District Teachers and Staff.

Authors

[Utah LessonPlans](#)