

Diffusion of Particles

Summary

Students will design and perform an experiment related to factors that influence the speed at which diffusion occurs. These variables may include differences in water temperature, amount of water, shape of container, if salt water works differently than fresh etc.

Time Frame

1 class periods of 45 minutes each

Group Size

Small Groups

Materials

Have available for the students a variety of materials. They may come up with other items as well.

Suggestions:

- different size and shape beakers
- eye droppers or plastic pipets
- different colors of food coloring
- water of different temperatures
- thermometers
- heat source
- clock with second hand or stopwatch

- [Student Response Sheet](#)

Student Prior Knowledge

The students should have done or discussed experimental design.

They should know how a hypothesis is written and a control established.

They should understand particle theory and have seen diffusion occur as a demonstration or lab experience.

Instructional Procedures

Hand out student response sheets and briefly explain procedure.

Explain where materials are found.

Tell students if they are working as groups, pairs or individually.

Explain to students that they must fill in the hypothesis, procedure and design the data table (or drawings, observations etc) before they begin.

Assessment Plan

1. Students identify hypothesis and procedures.....4
2. Students perform experiment.....4
3. Students record data.....4
4. Students analyze data correctly.....4
5. Conclusion is thoughtfully drawn.....4

Bibliography

Lesson Design by Jordan School District Teachers and Staff.

Authors

[Utah LessonPlans](#)