

# Diffusion in a Dish

## Summary

An introductory diffusion activity.

## Time Frame

1 class periods of 30 minutes each

## Group Size

Small Groups

## Materials

- petri dishes (unsterile) water
- beakers
- food coloring in dropper bottles
- [laminated circles the size of the petri dish](#)  
(see below for sample (They do not have to be laminated but they will last longer if they are.)
- [student worksheet](#)  
circles template

## Student Prior Knowledge

Students need to be reminded that both water and food color are made of molecules. They cannot see the individual molecules but they can see them when there are many. You might introduce this activity by spraying a strong smelling chemical (perfume, cleaner) in the room and having students raise their hands when they smell it. Discuss how particles are always moving.

## Instructional Procedures

- Show students where materials are located and read procedures from student sheet.
- Allow students time to collect data. If 8 minutes is too long, shorten it.
- Discuss outcomes of the first experiment.
- Ask student to make a prediction concerning their second experiment. It can be written as an "if, then" statement. Allow them to choose a new variable such as hot water, cold water, salt water, more water, less water, more food coloring, color of the food color, etc.
- Give students time to answer analysis questions and conclusion.

## Assessment Plan

1. Students follow procedures and collect data.....4
2. Students analyze data correctly.....4
3. Students thoughtfully write conclusion.....4

## Bibliography

Lesson Design by Jordan School District Teachers and Staff.

## Authors

[Utah LessonPlans](#)