



Name: \_\_\_\_\_

Date: \_\_\_\_\_

Class: \_\_\_\_\_

**Lab sheet 3.1**

## Make It Germinate!

### Directed Inquiry

 20 minutes to set up experiment, 5 minutes per day for 2 weeks to observe and record results

 small groups

### Objective

- Follow directions for an investigation to find out how temperature affects germination of seeds.

### Inquiry Skills

- Observe
- Compare
- Gather, Record, Display or Interpret Data
- Plan and Conduct a Simple Investigation
- Infer

Location	Observation
Closet	Seeds germinate
Freezer	Seeds didn't germinate
Refrigerator	Seeds didn't germinate

- Conclusion:** Seeds need water, air, soil (or cotton) and suitable temperature to germinate.

Temperature is an important factor in seeds germination.

# Make It Germinate!

Different plants germinate at different temperatures. How can you find out how temperature affects germination?

## Materials

plastic cups  
15 lettuce seeds  
water

## Follow This Procedure

- 1 Fill a plastic cup with soil, and plant 5 seeds in the soil.
- 2 Add only enough water to moisten the soil.
- 3 Repeat Steps 1 and 2 for the other two cups.
- 4 Place one cup in a dark closet. Place one cup in a freezer. Place the last cup in a refrigerator.

- 5 Water the seeds once more after five days. Observe the seeds for two weeks.

## Analyze Your Results

- 6 Did the seeds in the three cups germinate at different times? If so, infer why.
- 7 Do you think all types of seeds would respond this way? Explain.

closet

freezer

refrigerator

# Flowers and Cones

Flowers and cones have similar functions. Both help plants reproduce. Flowers and cones are different in many ways. Use tools to observe flowers and cones. Record your observations in your Science Notebook.

## Science Notebook

Flowers and Cones

Flower

Cone

This is how one student recorded her observations.