

Catalase and Hydrogen Peroxide Chemical Reaction Experiment Grades: 3-9



Big Questions: How do living cells interact with the environment around them?

Learning Objectives: Enzymes are molecules that enable the chemical reactions that occur in all living things on earth. In this one, we will learn about the enzyme catalase, which is contained within a potato).

Activity Plan: Discover how enzymes cause chemical reactions to occur more quickly within living things.

Materials:

- 1 Potato
- Hydrogen peroxide
- Small glass beaker, cup or drinking glass
- Cleanup materials such as towels

Procedure:

1. Divide the potato into three roughly equal sections.
2. Keep one section raw and at room temperature.
3. Place another section in the freezer for at least 30 minutes.
4. Boil the last section for at least 5 minutes.
5. Chop a small sample (about a tablespoon) of the room temperature potato and place into a beaker or cup.
6. Pour enough hydrogen peroxide into the cup so that the potato is submerged and observe what happens.
7. Repeat steps 5 & 6 with the boiled and frozen potato sections.

Sharing: Share your experience with me using the [Project Experiment Notes](#) and share them with me. Don't forget to include photos and/or drawings!

Credits: <https://www.education.com/science-fair/article/activator/>