



# Lesson Plan: Accidental Discoveries

## Overview

The students will understand that science theories change in the face of new evidence, but those changes can be slow in coming.

## Objectives

Students will

- Research scientific discoveries that happened by accident in the past
- Learn how gamma-rays were discovered by 20th century scientists

## Assessment Strategies

Ask the students how our explanations have changed about gamma-ray activity from the new evidence and ask them to explain how theories change with new information. See [Teachers Notes](#) PDF Document for elaboration.

## Grade Level: 5-8

## Suggested Time

45 minutes

## Multimedia Resources

- [Accidental Discoveries](#) QuickTime Video

## Materials

- Five large pieces of art paper
- One set of large cut letters S-W-I-F-T
- [Student Handout](#) PDF Document: Stories of Accidental Discoveries (p. 5) (to each student)
- [Student Handout](#) PDF Document: Stories of Accidental Discoveries (p. 6-10) (one letter/story per team)
- Tape, pencils, markers
- A computer and internet connection are useful for this activity

## Procedures

See [Teachers Notes](#) PDF Document for elaboration.

Part 1: First, discuss with the students that every once in a while there are accidental discoveries in science. Ask them if they know any examples of accidental discoveries in science. Next, provide some examples such as about the discovery of quinine as an anti-malarial drug (see [Teachers Notes](#) PDF Document, p. 2).

Part 2: Showing Video 3:

[Accidental Discoveries](#) QuickTime Video

[Time – 3:39]. Have your students share what they have learned about the discovery of gamma-ray bursts. Supplement any missing information using the provided summary (see [Teachers Notes](#) PDF Document, p. 2)

Part 3: Allow students to work on Stories of Accidental Discoveries ([Student Handout](#) PDF Document, pg. 2-10) in groups. When finished, have each group present their work, to the larger group. Encourage the rest of the students to copy down the summary sentence being presented.