



Scientific Method

By: Jessica Shaffer

5th grade teacher; M.A. in Administration and Leadership, Georgian Court University, NJ

Science
Grades 6–8



Introduction

Whodunnit?!? The scientific method exists throughout science from elementary school to high school! Students will observe the scientific method in action while investigating “The Death of the Iceman”!

Learning Objectives

WALT apply the Scientific Method to real-life situations and observe how you have to revisit the steps multiple times.

Materials Needed

- [Adapted Iceman article](#)
- Chart paper/markers
- Website links
- Chromebook/tablet/computer

Procedure

1. Before beginning this lesson, have chart paper ready to use to create an anchor chart with the class outlining the steps of the scientific method. You will be creating this chart as you walk through the method. This chart can be laminated and utilized as a reference throughout the school year. For virtual learning, this can easily be modified by making it a Google Slideshow or Document that you can share with the class. It is important to remember that there is not one specific scientific method, meaning terminology may differ. This is one example.
 - Observation
 - Question
 - Hypothesis
 - Experiment
 - Analysis
 - Conclusion
2. There are multiple videos available online that discuss the scientific method. Make sure to preview the videos before you share them with the class, as they can change.

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- [Moo Moo Math: Scientific Method](#)
- [The Scientific Method](#)
- [The Scientific Method: Steps, Terms, and Examples](#)

3. After watching the videos (either as a class or have the students watch in small groups), have a discussion about and finish creating the anchor chart with your students.
4. Have students work in groups of two or three on the Adapted Iceman article. This reading will take students through the scientific method and will show students how the scientific method can be applied to a real-life scientific “mystery.” At the end of the reading, students will answer the question in complete sentences. Using at least three specific examples from the Iceman case study, explain how hypotheses and conclusions can change during an investigation.
5. After reading the article and answering the questions, the class will come back together to discuss the article and the different ways that the hypothesis and conclusions changed throughout the investigation.
6. Students are generally intrigued and interested in the mystery of the Iceman. The “Otzi the Iceman Documentary” walks through the mystery, but shows much of the science behind the discoveries that are made. It shows the testing done on the body and talks about how it was preserved. This is about a 50-minute video. Upon the completion of watching the video (this may have to carry into a second day depending on the time you have in your science block), have another discussion about what more you learned during the documentary.
7. There are many additional resources that students can use to further investigate this mystery. You can have students investigate these resources before the video or after.
 - [Live Science: Otzi the Iceman's Unfortunate Last Journey](#)
 - [CNN: Frozen Moss Reveals...](#)
 - [Encyclopedia Britannica: Otzi](#)
 - [12 Things You May Not Know About Otzi the Iceman](#)

Extension Activity: Have students prepare for a debate on why they think the Iceman had the arrow in his shoulder and who they think killed him. This will be challenging as there is not an actual conclusion in real life as of now and the students will have to research material to back up their claims.

Evaluation

As this is an introductory lesson, you can use various activities as classwork grades. The questions at the end of the article can be used as a classwork grade, and the discussions you can use as a participation grade as well.