

# **You're a Scientist – The Scientific Method**

## **Grade 9 – Lesson 1**

### **Objectives**

- discuss the tools of scientific method
- develop a template to solve scientific problems
- use the template to work through a problem in science.

### **Materials**

- Paper and pencils
- Newsprint / large paper and markers
- Computer with Internet access

### **Procedure**

1. Discuss the idea of the scientific method with your at-home parent. Along with your at-home teacher write your ideas on a piece of newsprint or large piece of paper. These might be examples of ideas you could write:
  - Inquiry is the way that scientists ask questions.
  - Inquiry has something to do with conducting experiments.
  - Inquiry involves solving problems.
2. Research the scientific method for yourself on the Internet. There are plenty of websites where you can find information, but here is one:

<http://regentsprep.org/Regents/biology/units/laboratory/scientificmethods.cfm>

3. Develop a template to solve a problem using the steps of the scientific method.
4. Use your template to solve one of the following scientific problems:
  - Why did the dinosaurs die out?
  - Why do scientists think that birds may be descended from dinosaurs?
  - Why did the woolly mammoth die out?
5. The Web sites listed below have information on each of these topics if you need help finding good information

*Why did the dinosaurs die out?*

<http://pubs.usgs.gov/gip/dinosaurs/die.html>

<http://teacher.scholastic.com/researchtools/articlearchives/dinos/extinct.htm>

*Why do scientists think that birds are descended from dinosaurs?*

<http://teacher.scholastic.com/researchtools/articlearchives/dinos/evolut.htm>

<http://www.ucmp.berkeley.edu/diapsids/avians.html>

<http://www.bbc.co.uk/dinosaurs/howdoweknow/q62.shtml>

*Why did the woolly mammoth die out?*

<http://www.crystalinks.com/woollymammoth.html>

<http://www.unmuseum.org/missingm.htm>

<http://www.explorenorth.com/library/weekly/aa032400a.htm>

6. Do you think scientific inquiry is an effective way to solve problems? Do you think you can use it to solve other kinds of problems? How do you think this approach will help you in other academic areas?

***You're a Scientist – The Scientific Method***  
***Grade 9 – Lesson 1***

---

**For At-Home Parents**

Complete templates should include the following information:

- identification of the problem
- hypothesis
- steps taken to solve the problem
- organization of results
- conclusion
- comparison of the initial hypothesis with conclusion