

Teaching Units for High School Science Developed by

Duke University Graduate Students in Pharmacology 693/694

Master of Arts in Teaching (MAT)

<http://sites.duke.edu/rise/duke-courses/pharm-693694/>

**Using the Scientific Method for Writing**

This group activity will be an exercise demonstrating how scientists actually use the scientific method as a means of publishing their research. For scientists, publication is oftentimes crucial for landing a sweet research position, professorship, achieving tenure, or even receiving funding for future projects.

**Part A**

In the first part of today’s activity, Mr. Lloyd and Mr. Hewitt have just assigned your group to write a research paper (RELAX! This is a hypothetical scenario…at least for the moment) on a topic of your choosing. Your teachers are demanding that your group uses at least five sources of information. Please answer the following questions:

1. Where might you consider looking for information on your topic? Be specific!

2. What factors would influence how reliable or how “good” or “bad” a source is?

**Part B**

Now we will examine the three different types of literature. **TAKE NOTES! SOME OF THIS MIGHT SHOW UP ON YOUR EXAM!**

*Primary:*

*Secondary:*

*Tertiary:*

**Part C**

When scientists are conducting a controlled experiment, they use and follow the scientific method. Let us do a little review. What are the steps to the scientific method? Please list below and give a general description of each step.

1.

2.

3.

4.

5.

6.

7.

**Part D**

In this exercise, we will actually see how research is published and how scientists write the “scientific method”. Most scientific academic journals follow a similar pattern: abstract 🡪 introduction 🡪 materials and methods 🡪 results 🡪 discussion/conclusion. Each of these subheadings corresponds to a certain part of the scientific method. In your group, please **read your assigned subheading** **and summarize it, and identify the part of the scientific method it represents**. I know the language can be a bit challenging…do your best!

*Introduction:*

*Methods:*

*Results:*

*Discussion:*