Applying the Steps of the Scientific Method to Writing

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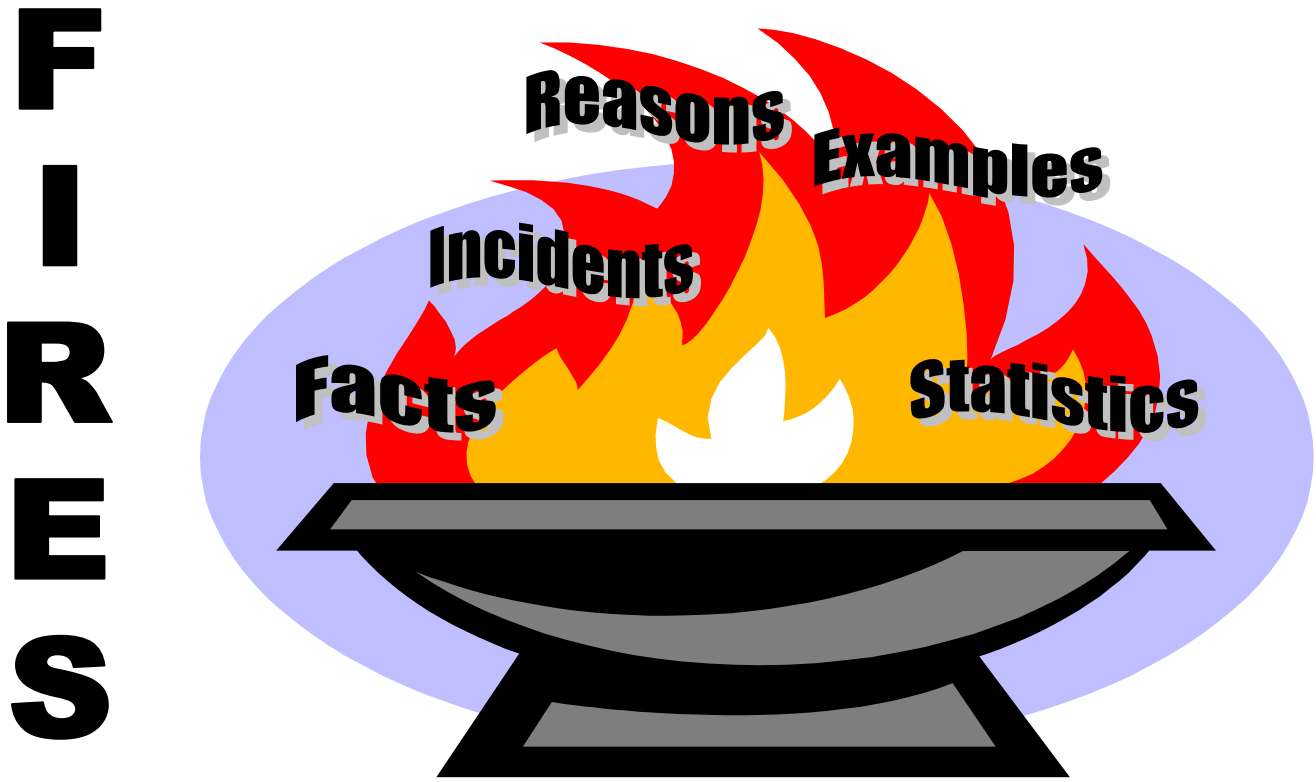
In science, we use the steps of the scientific method as a system for finding the answer to a question through an experiment. When we write to explain things to others, we can use those same steps as a system for answering someone's questions about a topic by reading our writing.

Here are the steps of the scientific method and how you can use them to write to explain something to others.

Problem Statement: In an experiment, the problem statement tells what you want to find out by doing the experiment. In writing, you use your introduction like a problem statement by telling what you want your reader to find out by reading your work.

Hypothesis: In an experiment, the hypothesis can be stated as an **if/then** statement that predicts the outcome of the experiment. In writing, the hypothesis is used to plan what you are going to say in your writing and what you want the reader to know afterward. For example, **if** I write about the causes and consequences of global warming, **then** the reader should understand why it is important that they take an active role to stop it. We will use the example of a report on global warming throughout the rest of this guide.

Experiment: In the scientific method, you would do the experiment and record and analyze the data to find out if your hypothesis was correct. Using the data, you would also find out the answer to your problem statement. But, in writing, there is no experiment! But there are many sources you can use like data to help you explain your topic. We will call them **FIRES**:



F stands for FACTS: Tell the reader all the facts you need to help explain your idea or topic. In a global warming report, you could tell how the earth's temperature has risen over the past several years.

I stands for INCIDENTS: An incident is an example of a time when something specific happened. You can tell your reader about things that happened because of something related to your topic. In a global warming report, you could tell about some of the severe storms that are created when very warm air circulates in the atmosphere.

R stands for REASONS: Tell your reader reasons why things happen related to your topic, or causes for it. You could tell the reader exactly what causes global warming to take place.

E stands for EXAMPLES: Give your reader examples of what you want them to know about your topic. You could give the reader examples of what products cause dangerous gasses to be released when they are burned.

S stands for STATISTICS: Statistics are numbers that tell an important story about your topic. For example, if you were writing the report on global warming, you could tell how many degrees the Earth's temperature has risen over the past several years. Or, you could tell how many cars that put gasses that increase global warming in the atmosphere are driven in California.

Conclusion: In the scientific method, you use your conclusion to tell if your hypothesis was correct and to tell anything else you believe was important about your investigation. Sometimes you may have a suggestion for another experiment related to the one you just performed. In writing, the conclusion tries to bring your writing to a close by summarizing the most important parts for your reader and possibly suggesting a direction for the future of your topic. In the conclusion of a report on global warming, you could summarize the main points of your writing and encourage the reader to do all s/he can to reduce the amount of harmful gasses released into the air.

