

Napoleon's Buttons: 17 Molecules that Changed History

by Penny Le Couteur and Jay Burreson

An Advanced Chemistry Critical Reading and Research Project

Napoleon's Buttons is the fascinating account of seventeen groups of molecules that have greatly influenced the course of history. These molecules provided the impetus for early exploration, and made possible the voyages of discovery that ensued. The molecules resulted in grand feats of engineering and spurred advances in medicine and law; they determined what we now eat, drink, and wear. A change as small as the position of an atom can lead to enormous alterations in the properties of a substance—which, in turn, can result in great historical shifts. With lively prose and an eye for colorful and unusual details, Le Couteur and Burreson offer a novel way to understand the shaping of civilization and the workings of our contemporary world. (Publisher's Description)

Napoleon's Buttons is divided into seventeen chapters, each treating a group of molecules and discussing that group's impact on historical events. Each chapter contains some "technical" information—the chemistry of the molecules—as well as the historical discussions. The introduction of the book includes a primer on the structures of organic compounds and nomenclature in a refreshingly simple and understandable format. This book was written for the layman—not the scientist—and the presentation of the material makes this book pleasantly readable.

The assignment

Each student will "sign up" for one of the seventeen chapters—you can select any one that you choose, but the instructor reserves the right to veto a choice for the sake of balancing the distribution in the class. Every student will be required to read the "Introduction," "Epilogue," and the selected chapter.

You will complete the following assignments after completing the reading:

- 1.) You will write the equivalent of a 1-2 page synopsis and reflection on your chapter. This synopsis will be posted on the instructor's creative projects class website. Your writing on the chapter should include:
 - a. A summary of the molecules and their chemistry.
 - b. Major points of impact on historical events.
 - c. Your opinion of the impact of these molecules in the modern world—has it changed, faded, become more prominent, etc. You should do some research for current info on your molecule/compounds.
 - d. If the author's argument makes sense, and why (if so, what points stand out; if not, where do you think their evidence could use improvement?).
- 2.) Pick an issue within your topic (molecule) area and analyze how culture and society have and/or are promoting or hindering science with that molecule (or class of compounds). For example, if your topic area is sugar, you may wish to discuss the explosion of people with diabetes. This section will require some research and should be about one or two paragraphs.
- 3.) Write a few paragraphs that discuss careers that fall within your topic area.
- 4.) Create a references page using MLA or APA style.

Poster—Each student will choose one of their topics on which to design and briefly present a poster. The poster will be a visual synopsis of the topic—the chemistry, the history, and some modern applications and opinions (controversy makes for great posters). These posters have no minimum size or specific visual requirements. They should, however, be large enough to be readable at a distance, vibrant, and clear. The exact format is also not specified. Creativity is encouraged.

Alternatively, you may create a website, a video, or a Prezi presentation on your topic.

You will do a 3-5 minute presentation of your project to an audience (peers and faculty).