

Teaching Writing to Science Undergraduates: A Workshop for Instructors of Introductory Science Courses



Purdue OWL Staff

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Why Focus on Writing in an Introductory Science Course?

Undergraduates in introductory courses sometimes lack basic writing skills such as:

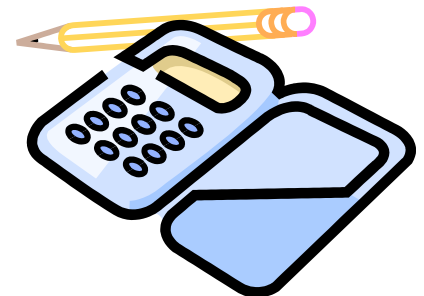
- Grammatical knowledge;
- Purpose and conventions for common genres of scientific writing like the lab report; and
- Revising and editing techniques.





Students' past *instructors* may not have stressed writing, so **students may:**

- Believe all types of writing are the same.
- Have limited or no training in scientific writing.
- Feel writing is unimportant for those in the sciences.





Some actions you as an instructor can take to help:

- Plan to **spend class time** discussing the writing concepts important to your discipline.
- Schedule **peer review sessions** and workshops before major reports are due.
- Make organized, precise, and grammatically correct writing worth a significant **portion of the students' grades**.
- Encourage students to attend workshops and tutorial sessions at their **Writing Center**.



Composition Vocabulary Words

Beginning a writing process

- prewriting
- brainstorming
- freewriting
- planning
- outlining

Writing in progress

- draft
- project
- report
- paper

Self-critique

- revising
- editing
- proofreading

Group critique

- peer reviewing
- conferencing
- workshopping



Composition Vocabulary Words (cont.)

Parts of a paragraph

- **topic sentence**
- **connector**
- **transition**
- **logical bridge**

Organization

- **structure**
- **arrangement**
- **flow**
- **outline**



Putting Composition Vocabulary to Work

Writing Assignments in BIO 109

In BIO 109, you will be asked to complete a number of writing assignments throughout the semester. These include lab reports. Each lab report will be co-written with your partner; you are expected to share all responsibilities for writing these assignments. You are encouraged to see your instructor during his or her office hours for help.

Writing Assignments in BIO 109

In BIO 109, you will be asked to complete a number of writing assignments throughout the semester. These include lab reports which have a particular style and **structure** to which you must adhere; learning to adapt to the genre of the lab report will require more time **planning**, **drafting**, **revising** and **editing**. Each lab report will be co-written with your partner; you are expected to share all responsibilities for writing these assignments including **peer reviewing** each of your **drafts**. Writing in this course is important and worth a significant part of your overall project grades. You are encouraged to see your instructor during his or her office hours for **conferences** on your written **projects**.



Good Writing Practices
In...

The Humanities:

Active voice

Flexible conventions for structure

- Transitions, rather than headings, are commonly used to demarcate subsections

Reliance on text, rather than visual elements, to convey main ideas

The Sciences:

Passive voice

Strict adherence to preset, structural conventions

- For example: the Abstract, Introduction, Methods, Results, & References sections of a lab report

Use of multiple visual elements, such as charts or graphs, to demonstrate important concepts



Good Writing Practices In... (cont.)

The Humanities:

Transitions generally signify changes in or emphasize particular aspects of the author's position
•Ex: "therefore," "furthermore," "in any case"

Use MLA (Modern Language Association) or other appropriate style to cite sources

The Sciences:

Clear procedural transitions signal particular steps in an experiment
•e.g.: "first," "second," "third"

Use a discipline-appropriate scientific style of citation



These **activities and exercises** may help you reinforce important science writing concepts:

- **The Reverse Paramedic Method** (Editing for passive voice)
- **Methods Mousetrap** (Precision and use of procedural transitions)
- **Peer Review** Activity





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