

# AP Biology Summer Study Unit

Students entering AP Biology in the fall are expected to have a strong background in biology and chemistry. It is fundamental to success in AP Biology that students review materials prior to the beginning of school.

This study packet includes a pdf version of a portion of the first edition of the *Principles of Life*. Chapters 1-3 are provided and review concepts from both Chemistry and Biology courses. Students should carefully read these chapters, and for Chapters 2 and 3, answer the questions in and/or carefully review the side boxes labelled “Do You Understand the Concept,” “Applying the Concept” and “Investigation: Analyze the Data.” Students should check answers which are included in the study packet.

Students should read the two primary articles that are included in the summer assignment (by Cuthill and Robinson, and by Lutz et al.). Each article reports on a study that has more than one sub-experiment. After reading, students should **handwrite** an experimental design paragraph (EDP) for *one* of the *sub*-experiments from *each* article (two EDPs total). Each EDP should include, if applicable, the following items: null and experimental hypotheses, independent variable(s), levels/controls with units, number of trials, dependent variable(s) with units, constants with units/specifications, and a statement of the statistics used to analyze the data. Also include the relevant results and conclusions in each EDP. Bring this work to class on your first day of AP Biology.

Students should also watch the *seven* Bozeman videos that explain the “AP Biology Practices” (see the link below). These videos briefly cover each of the seven Science Practices included as part of the AP Biology curriculum. Questions on this content will be included on the first test.

**Bozeman videos link: (<http://www.bozemanscience.com/ap-biology>)**

Students should also read the “Survival Skills” document. It describes skills, practices and perspectives that will help students to succeed in the AP Biology course.

All students will be given a test covering the content of this Summer Study Unit within the *first three or four classes* of school in September (*Test 1*). We are providing these materials in advance so that students may use them over the summer to prepare. ***Performance on Test 1 usually predicts success in AP Biology.***

Lastly, during the summer, students should obtain a hard-cover graphing composition book that has a least 100 pages sewn in (refer to the image below). Because this item is scarce in stores late in the summer, consider purchasing the notebook earlier. Students should bring the notebook *to the first meeting* of their AP Biology class.



While not required or essential, students *may* want to purchase an *inexpensive* used book to further explore content. The Campbell Biology book is very good. We have copies of the 7<sup>th</sup> edition at school. ISBN: 978-0805371468

# Checklist for AP Biology Summer Study Unit

## Read:

- Articles (2)
- Survival skills
- Chapters 1-3 in POL

## Watch:

- Seven Bozeman videos on AP Biology Practices
- May watch additional videos relating to chapters 1-3:  
<http://www.bozemanscience.com/042-biological-molecules>  
<http://www.bozemanscience.com/048-enzymes>

## Bring to class first day (*no exceptions*):

- Two EDPs including statement of statistics used, results and conclusion
- One hard-covered, graphing composition group, with 100+ pages sewn in.