

**AP Biology Summer Assignment**  
**Due Thursday, August 18<sup>th</sup>**

Hi there:

I'd like you to join my CK-12 class: AP Biology 2016-2017

Joining my class allows me to share content with you and keep track of how well you do on upcoming CK-12 practice assignments. We will be using this website as one of our many tools for the 2016-2017 school year. For the summer assignment, you will be using it as a reference resource to complete your summer assignment. The summer assignment is to help you prepare for material you may not have discussed in Honors Biology, or perhaps just need a refresher. And since many of you are rising sophomores or juniors and have not had chemistry, the summer assignment introduces you to chemistry terms and concepts that you have not yet covered.

To Join:

1. Go to [www.ck12.org](http://www.ck12.org)
2. Click Join to create an account, or Sign in if you already have an account. (It's free to join).
3. Click Groups.
4. Click Join a Group.
5. Enter code: 5a4fq

You can also join the class by using this link: <http://www.ck12.org/join/group/?accessCode=5a4fq>

I am really looking forward to seeing you next year in AP Biology, we're going to learn a lot and have a good time doing it. Yes, it is a lot of work, but I try to make it fun and engaging.

Have a great summer!! and please pace yourself with the assignment. You might want to keep a picture of the word list in your phone and while you're out and about you can take photos of items that cover the list.

Cheers!

Dr. Nancy L. Hilbun  
[nhilbun@ums-wright.org](mailto:nhilbun@ums-wright.org)

Go to NEXT PAGE for Summer Assignment Instructions and Guidelines.

**AP Biology Summer Assignment**  
**Due Thursday, August 18<sup>th</sup>**

An understanding of chemistry will be vital to your success in our first unit of study, biochemistry. In order to make sure you are prepared to start off the year well, I am asking you to brush up on some chemistry concepts and a few biology concepts. Your task is to create flashcards for the terms below. You may use notecards for your assignment or you may create flashcards using regular paper or you may create digital flashcards (online). I do ask that you make all of your flashcards the same size and same format (cards, paper or digital). If you do digital flashcards, please "share" them with me or give me access - my email: [nhilbun@ums-wright.org](mailto:nhilbun@ums-wright.org)

Flashcard Details

Side one:

- The word or phrase

Side two:

- A definition of the word or phrase *in your own words*.
- A photograph\* of something you find around your house or something you see while you are around town or on vacation that serves as an analogy or reminds you of what the word or phrase means.
- An explanation relating how that picture is a good representation of what that word means.

\*Note about photographs: Photos must be original. They may not come from the internet. You may take them using a camera or your phone. Print them small enough to fit on your notecard or insert to digital card. Photos may be printed in black and white or in color. In order to ensure that all work is original, please include an object (such as a lego or a coin) in each picture. Use the same object for each picture. Remember for most of these you simply can't photograph an example, i.e. Electron. Instead perhaps find an ANALOGOUS example for that word. Use your imagination, think outside the box - it will help you really understand the term. You may glue or tape the photos to side two of the card, or insert/paste on digital cards.

Words and Phrases

- |                        |               |                                  |
|------------------------|---------------|----------------------------------|
| 1. Atom                | 15. Ion       | 29. Ribosome                     |
| 2. Neutron             | 16. Anion     | 30. Plasma membrane              |
| 3. Proton              | 17. Cation    | 31. Phospholipid                 |
| 4. Electron            | 18. Reactants | 32. Transport protein            |
| 5. Atomic number       | 19. Products  | 33. Cytoplasm                    |
| 6. Mass number         | 20. Solvent   | 34. Mitochondrion                |
| 7. Atomic mass         | 21. Solute    | 35. Chloroplast                  |
| 8. Isotope             | 22. Solution  | 36. Vacuole                      |
| 9. Radioactive isotope | 23. Acid      | 37. Golgi apparatus              |
| 10. Potential energy   | 24. Base      | 38. Rough endoplasmic reticulum  |
| 11. Valence electrons  | 25. Buffer    | 39. Smooth endoplasmic reticulum |
| 12. Covalent bond      | 26. Nucleus   | 40. Lysosome                     |
| 13. Ionic bond         | 27. DNA       |                                  |
| 14. Electronegativity  | 28. Gene      |                                  |

Grading Rubric

Component	Points Available	Points Earned
Definition or explanation of word/phrase	20 (0.5 for each word/phrase)	
Photo analogy of word/phrase	40 (1 for each word/phrase)	
Explanation of photo	40 (1 for each word/phrase)	
Cards held together with rubber band and name on top	-5 points if not complete	
Project turned in early	+5 bonus points	

If you have any questions regarding your assignment or regarding our AP Biology class, feel free to email Dr. Hilbun at [nhilbun@ums-wright.org](mailto:nhilbun@ums-wright.org). Also, check out our CK-12 class website at <http://www.ck12.org/join/group/?accessCode=5a4fq> to see a website we will be using in AP Biology. On the website, you'll find online "flexbooks" with material covering topics we will be discussing, but also to help you with your summer assignment. In the "2016-2017 AP Biology" group I have 'shared' some flexbooks on "Advanced Biology Concepts", "Biology Concepts" and "Chemistry". When you open these books you will see chapters covering material you will need for the summer assignment. These online flexbooks will serve as good additional study resources.