

# Honors Biology Summer Assignment

## Part I

You must read any one of the following books. You will be expected to give me a written synopsis the first week of school, not one prepared over the summer, but a synopsis you will do in class. Some of you intend to be future scientists, and they will give you an idea of the planning, conflicts and work involved in some areas of science. Some of the books are recent publications and all should make you think about careers in the biological sciences.

Rodney Barker, And the Waters Turned To Blood.

Richard Preston, The Hot Zone.

Matt Ridley, Genome

You do not have to buy or keep these books. Just read them and take general notes about themes, key people, and scientific procedures used, and scientific errors made. You will be given an open notebook assignment the first week of school on the one that you have read.

## Part 2

You will be expected to complete a quiz within the first week of school which will evaluate the following objectives:

- \* Describe the general structure of the atom, and explain how the properties of the first 20 elements in the Periodic Table are related to their atomic structures.
- \* Describe how atoms combine to form new substances by transferring electrons (ionic bonding) or sharing electrons (covalent bonding).
- \* Describe and explain Neils Bohr's model of the atom.
- \* Explain the chemical composition of acids and bases, and explain the change of pH in neutralization reactions.
- \* Explain how the structure of the carbon atom affects the type of bonds it forms in organic and inorganic molecules.

To assist in your studies, we suggest the use of the following web sites. However, as perspective honor students you should be able to search out additional primary resources that would help you in your task.

American Association for the Advancement of Science	<a href="http://www.aaas.org">http://www.aaas.org</a>
American Chemical Society (ACS)	<a href="http://www.chemistry.org">http://www.chemistry.org</a> <a href="http://www.chemistry.org/education/k8.html">http://www.chemistry.org/education/k8.html</a>
Chemical Heritage Foundation	<a href="http://www.chemheritage.org">http://www.chemheritage.org</a>
Chicago Web Docent (Origins of the Elements)	<a href="http://www.chicagowebdocent.org">http://www.chicagowebdocent.org</a>
EPA (Learn About Chemicals Around Your House)	<a href="http://www.epa.gov/kidshometour">http://www.epa.gov/kidshometour</a>
Hands On Plastics	<a href="http://www.handsonplastic.org">http://www.handsonplastic.org</a>
National Association for the Education of Young Children (NAEYC)	<a href="http://www.naeyc.org">http://www.naeyc.org</a>
National Science Foundation (NSF)	<a href="http://www.nsf.gov">http://www.nsf.gov</a>
Science News for Kids	<a href="http://www.sciencenewsforkids.org/">http://www.sciencenewsforkids.org/</a>
Science in the Box (Proctor & Gamble)	<a href="http://www.scienceinthebox.com">http://www.scienceinthebox.com</a>
The Institute for Chemical Education	<a href="http://www.icechem.wisc.edu">http://www.icechem.wisc.edu</a>
The Science Center from the Chlorine Chemistry Council (CCC)	<a href="http://www.science-education.org">http://www.science-education.org</a>
The Science Place	<a href="http://www.scienceplace.org">http://www.scienceplace.org</a>
Understanding Our Planet Through Chemistry	<a href="http://minerals.cr.usgs.gov/gips/aii-home.htm">http://minerals.cr.usgs.gov/gips/aii-home.htm</a>
Web Elements Scholar Edition	<a href="http://www.webelements.com">http://www.webelements.com</a>
Wow!Science Lab for Students	<a href="http://www.wowsciencelab.com/">http://www.wowsciencelab.com/</a>

The above information will also be available at the Brien McMahon High school main office as well as the Guidance office. For an electronic copy, see one of the following web pages:

<http://www.norwalk.k12.ct.us/bmhs/>

<http://aherne.npsteachers.org>

Please sign below indicating you have read and received a copy of the Honors Biology Summer Assignments.

Honors Biology Summer Assignments

Student Name: \_\_\_\_\_ (please print)

\_\_\_\_\_  
Parent Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Student Signature

\_\_\_\_\_  
Date

Please return to Mr. Seuch in Room 2002 or Ms. Ahern in room 2013 before the end of finals.