

# Biotechnology Web sites

**Access Excellence** <http://www.accessexcellence.org>

This site has links to a lot of links but little in the way of biotechnology labs but it does have a biology lab section of reviewed and in the process of being reviewed labs, some of which are biotech labs. This area called biology education online: (<http://www.accessexcellence.org/LC/BEOn/>) requires a free login but you must sign on.

**National Association of Biology Teachers NABT**

Download able labs, links to workshops, publications, and downloadable books.

Link to biotech labs: <http://www.nabt.org/sites/S1/index.php?p=9>

**Students as models of Chromosomes for Mitosis and meiosis**

<http://www.nabt.org/sites/S1/File/pdf/066-01-0035.pdf>

**DNA Fingerprinting Lab**

<http://www.nabt.org/sites/S1/File/pdf/063-08-0596.pdf>

**Canine paternity testing simulation**

<http://www.nabt.org/sites/S1/File/pdf/063-08-0596.pdf>

**Action Bioscience Articles on Biotechnology**

<http://www.actionbioscience.org/biotech/>

Articles on Genomics (the study of whole genomes and their parts in organisms)

<http://www.actionbioscience.org/genomic/>

**The Biology Place** [http://www.phschool.com/science/biology\\_place/index.html](http://www.phschool.com/science/biology_place/index.html)

This is a commercial site for Pearson textbook company, but the biology place link does have simulations and animations for biotech concepts.

Bacterial transformation and the gel electrophoresis simulation were pretty good.

[http://www.phschool.com/science/biology\\_place/labbench/lab6/intro.html](http://www.phschool.com/science/biology_place/labbench/lab6/intro.html)

**Bioinformatics resource page;** Bioinformatics concern the creation and maintenance of databases of biological information. A lot of good definitions and explanations!

<http://www.geocities.com/bioinformaticsweb/>

**HHMI BioInteractive web site.** Virtual fruit fly lab, immunology lab, links to holiday lecture series, and animations and videos. Really good simulations, ie sex and gender.

<http://www.hhmi.org/biointeractive/>

**Biolab questions and discussion**

This site allows teachers and professors to discuss lab related questions and suggestions. Not much biotech, but certainly looks like a good site to post a question on biotech, or learn what others are doing. Both college professors and H.S. teachers involved.

<http://biowww.clemson.edu/biolab/home.html>

**The Biology Lab Clearinghouse.** <http://blc.biolog.udel.edu/>

A few biotech and genetics labs on this site, they are teacher generated, so they seemed well written and workable.

**Biology Online** [http://www.biology-online.org/1/1\\_cell.htm](http://www.biology-online.org/1/1_cell.htm)

This site has discussion groups on many areas , a wiki dictionary, a tutorial area, and a section of both published and unpublished (paper) articles. Lots of info here, some of it related to biotechnology, a lot on bioinformatics.

**The Biology Place** <http://www.biology.arizona.edu/>

This is a great site with tutorials, problem sets, and student activities. There is a section on the summer programs for teachers and students.

**Science Niche Biotechnology Resources** <http://scienceniche.com/science/biotech.cfm>

This site has a collection of biotech animations from many different sites, look here for an animation first as it is easy to search and is very comprehensive.

**DNA From the Beginning** <http://www.dnaftb.org/dnaftb/>

This site has a whole series of animations, tutorials, and information on genetics and everything from eugenics to cancer. Looks very well done and engaging for students.

**Gene School** <http://library.thinkquest.org/28599/>

A well done site developed by H.S. Students about genetics and DNA information with links, and activities for students to explore. Good for home work online.

**Bionet Newsgroups** <http://www.bio.net/>

This is a Researcher blog site for those in biomedical research, interesting but higher level than H.S. for the most part.

**BEN Bioscience Educational Network**

<http://www.bioscienet.org/portal/>

This is a very large site with a lot of resources for College and H.S. Teachers. Teaching resources section not very helpful, but laboratory exercises for all areas of biology, some very high level to middle school level activities. Great Section of articles on teaching and learning in the sciences.

**Biotech** <http://biotech.icmb.utexas.edu/>

While this site is designed for college students and professors there are some good links to biotech and genetics sites and activities. Bioinformatics info is ok, but the cyberbotanica site on plant constituents used in cancer treatment is fascinating.

### **Connecting Concepts: Interactive lessons in Biology**

<http://ats.doit.wisc.edu/biology/lessons.htm>

This site has some very good web based activities with questions and checks for understanding as you go. The animations are easy to follow for the one I looked at. The Biotechnology lesson has a simulation on increasing vitamin E production in canola plants through genetic manipulation. The Natural selection activity was also very good.

### **Cell and Molecular Biology Online** <http://cellbio.com/>

This site has a lot of links and the animation and video link has some good info. The free online biology text is full of great illustrations and other links to specific content. Here is the link to the text which has well written HS biology type content:

<http://www.estrellamountain.edu/faculty/farabee/biobk/biobooktoc.html>

Gene interaction section is very good and has good examples.

### **Bioscience image bank**

<http://www.bioscience.heacademy.ac.uk/imagebank/default.aspx>

Site has biological images including biotech processes and products.

### **BioEd Online**

<http://www.bioedonline.org/>

Biology teacher resources website with video, still images, labs, and a current events page that gives up to date new findings in biology. This site is quite extensive and even has stand alone lab activities that look like inquiry.

### **University of Colorado Bioinformatics site**

<http://www.colorado.edu/chemistry/bioinfo/>

While this site is designed for undergraduate students, it has tutorials and information about all kinds of applications and programs plus problem sets and links that are very informative and user friendly for even high school students.

### **National Center for Biotechnology Information Education site**

This site has all kinds of information as well as animations and education about biotechnology including bioinformatics to amino acid characteristics and structures

<http://www.ncbi.nlm.nih.gov/Education/>

The science primer is especially good at explaining an overview of current biology concepts from cells and basic genetics to bioinformatics and microarray technology.

<http://www.ncbi.nlm.nih.gov/About/primer/index.html>