

Meet an Organism Web Project

There are many organisms in the world. This is your chance to get to know one of them and to share your knowledge with the other members of the class. You will be assigned a species and must find information about this organism and report your findings by constructing a web page. The actual page uses a pre-made template with subject boxes for text and/or graphic material about your organism. The handout “Making the Webpage” contains detailed instructions about creating your page.

Getting to know your organism

1. *Who are its relatives?* You will be given the proper scientific name for the organism. In the box provided, identify the domain, kingdom, phylum (sometimes called division), class, order, family, and genus to which it belongs.
2. *What does it look like?* Insert a picture or pictures of your organism. Images that include some indication of actual sizes are helpful. Don't forget to number your figures, write **informative** figure captions, and give citations for the sources of your images!
3. *Where does it live?* Provide information on the habitat or environment where your organism lives. Does it dwell in deep ocean vents, or does it live on the tundra? Are they marine, freshwater, or terrestrial organisms? Do they live between the grains of sand on a beach or within the blood cells of a human? Are there any other unique or interesting aspects of where your organism lives?
4. *What is its lifestyle?* Does it stay in one spot or move around? Is it autotrophic or heterotrophic? Does it make other organisms sick, is it a symbiont, or is it a free-living organism?
5. *How does it obtain energy?* Describe the ways that your organism obtains energy. Include information regarding its energy source (chemotrophic, phototrophic), carbon source (autotroph, heterotroph), and the electron donor/receptor it needs for metabolism. Characterize any special metabolic systems (anaerobic fermentation, aerobic respiration, oxidative phosphorylation, C₃ or C₄ photosynthesis) used by your organism. Note that in some cases only one metabolic system operates (for example plants only use photosynthesis and aerobic metabolism) while other organisms are able to switch between different ways of obtaining energy (a hallmark of bacteria). If applicable, include information regarding unique or interesting aspects about how your organism acquires or manages energy (special digestive tract because it is a herbivore, produces enzymes that break down cellulose, filter feeder, has a special and unique gullet where phagocytosis occurs, etc.).

6. *How does your organism obtain and use water?* Describe the context and circumstances that affect how your organism needs and uses water. Describe any special adaptations or structures which have an impact on how your organism obtains and uses water (for example non-vascular plants have rhizoids that absorb water on their lower surfaces, but are limited in their ability to transport water internally because they lack tracheids or water vessels). Also include in this box any special structures or uses of water (for example circulatory systems, excretion systems) that your organism has evolved.
7. *How does it reproduce?* Describe your organism's basic reproductive strategy: sexual reproduction? asexual reproduction? both? If sexual reproduction is involved, describe the specialized adaptations that have evolved to ensure that gametes meet and fuse. You should also include a discussion of how reproduction fits into the organism's lifecycle and lifestyle.
8. *Does your organism move?* If so, how does it locomote? Does it use cilia or muscles, articulating skeleton or hydrostatic skeleton? If it doesn't move itself, does it have any other adaptations for acquiring food or dealing with changes in environmental conditions?
9. *How does it perceive and coordinate its response to its environment?* Describe how it senses environmental change and then acts upon that information.
10. *How does it defend itself against other organisms?* Does it use physical structures such as bark or shell? Does it use chemical (toxins) or cellular (leukocytes) means to fight off foreign invaders or predators?
11. *Is there anything that is particularly interesting or unique about your organism?* For example, is it used for medicinal purposes, or is it economically important?
12. *Where did you find your information?* You **must** list the sources of all of your information. If you obtained information from a book or paper, you should give the full citation for the work. If your information comes from the internet, provide the URL along with the date the page was accessed. You should give the addresses to some of the more useful web pages you find so that readers can access that information. Please refer to the handout "Guidelines for Citing Sources" for more information about citing sources.

Researching your organism

As a biologist you must be able to use all of the various resources available to find information. While your textbook is a good starting point, you must incorporate information from other sources that pertain to your organism. Primary research papers, encyclopedias (for example Grzimek's), magazine articles, and more advanced textbooks are some possibilities. The internet is a very quick way to find information about your organism, but you should take care to evaluate the quality of any information you find on the Web.

Some key points regarding your search:

1. In some cases you may find a lot of useful information and in other cases you may only find a little. If you don't find much about your particular species, then back up one taxonomic level and see what information you can find about the genus, family, or even higher taxonomic levels. Your particular species will have characteristics and features of the higher taxonomic level. In some cases you may need to use information about the entire phylum since it will hold true for your particular species.
2. You should evaluate the quality of the information you find and the degree to which it is trustworthy. This is particularly true for information found on the World Wide Web. Ultimately, you are responsible for the accuracy of any information you include on your web page, so check carefully and use good judgment.
3. At least one of your sources must be a non-Web, published source, such as a journal article or a book.
4. You may need to scan pictures from books or magazines in order to incorporate them into your web page. If you need assistance in scanning material, check with the computer aid station or see me. If you find a picture on the internet, place the cursor over it, right click, and "save image as..." a file. You can search for just images with Google. **The sources of your images must be acknowledged.**

You must provide figure numbers, captions, and sources for all images or graphics (tables, charts, cladograms) you incorporate into your page. Each figure should illustrate some point or idea that you have, and that point or idea must be explicitly written in your text. Consequently you must refer to each figure in your text.

5. **DO NOT CUT AND PASTE TEXT MATERIAL DIRECTLY FROM THE WWW OR ANY OTHER SOURCE.** Simply changing a couple of words or the order of phrases is the same as cutting and pasting blocks of text. This is plagiarism and will not be tolerated. You should put information you use into your own words; scientists rarely use quotations in their writing. If you are not sure about whether you are plagiarizing, ask for guidance and check the web page at www.depts.drew.edu/composition/Avoiding_Plagiarism.htm.

No matter what information you find, it is important that you provide specific references to all of the sources used. Please be careful and give proper attribution to all of your sources and be sure to properly cite your sources in your text.

Your page will be posted on the World Wide Web and potentially viewable by anyone in the world.

6. Use a scientific style to cite your information and prepare your bibliography. Follow the CBE (Council of Biology Editors) format, not MLA or APA styles. You should use the author-date format to link information in your text to its proper source in the bibliography. Information on how to properly format your bibliography can be found at <http://www.monroecc.edu/depts/library/cbe.htm>, in your Longman Writer's Companion, and in the "Guidelines for Citing Sources" handout.