The eMolecules Project: Guidelines for Constructing Your Web Page

Barbara A. Gage and Scott A. Sinex
Prince George's Community College

Introduction

The eMolecules Project is a web page design assignment utilizing a template. A variety of templates for different disciplines are available to select from based on instructions from your instructor. Students will research chemical information providing proper citation of sources. Chemical structures as 2D drawings and interactive Chime (3D) molecular graphics are included on the templates. The templates will go through an editing phase by your instructor and some will be selected to be posted to the eMolecules Project site.

Accessing the Template

On a storage device such as a USB drive, zip disk or floppy disk, set up a folder with the name of your substance. Go to the eMolecules Project site:

http://academic.pgcc.edu/psc/eMol

You will find a table with a series of project options. If you click on the link in any table cell called "template" you will see the template that needs to be completed for the project. To download the template for completion, **right-click** on the template link in the table and select **Save Target As**…. Save the file to your folder, changing the file name word "template" to **substance name_your last name** (such as benzene_Gross). The template will be saved as an htm file. Be sure that you save any other images that will be used for the web page in the same folder before you begin to edit the web page. It is recommended that you save the project often while you are working on it. If you are familiar with web page design and have an application to modify the template, proceed with your application. If you do not have these resources, you will be expected to use FrontPage with the directions given below.

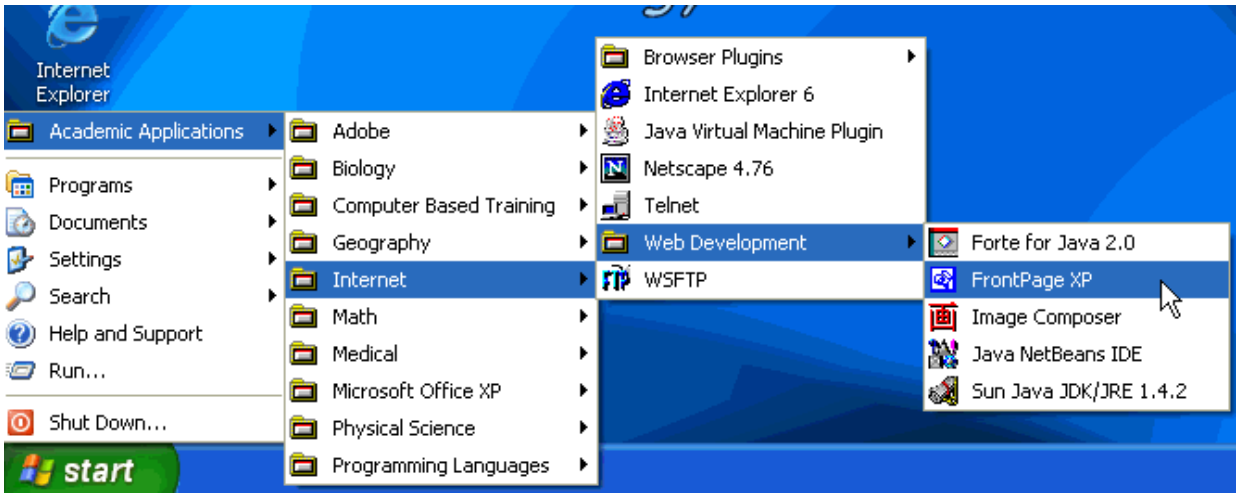
In each table cell you will also find a link entitled "data format". This link will take you to a text document that opens with the Adobe Reader (pdf format). This document provides an explanation of the information that has to be provided in the template with specifications on details such as units. It is important that you access and use this document.

Opening and Modifying the Template in FrontPage

The college uses a web page design and editing application called Microsoft FrontPage. To launch this application in a college computer lab go to:

Start
Academic Applications
Internet
Web Development
FrontPage XP

A graphic of the computer screen is shown here.



Once you have opened the application, go to File and browse for your folder to select the file. When you select it, the file will open in FrontPage and you are ready to enter information. If you double click on the htm file in the folder, it opens in your browser (Internet Explorer or Netscape) and cannot be modified.

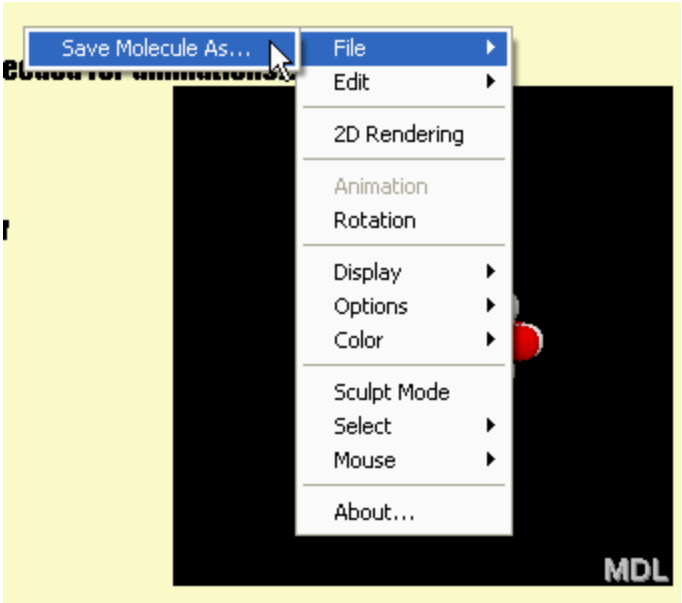
Do not change any of the heading information on the template. You must use the proper format for subscripts or superscripts. To generate subscripts or superscripts in FrontPage: highlight the number; go to **Format** on the menu bar; select **Font…** and when the Font menubox opens, check the small box for subscript or superscript.

Researching Information

Any reference source in the library or on the Internet is acceptable with proper citation following the APA or MLA guidelines – see the library web site for a tutorial on researching at http://www.pgcc.edu/library/tutorial. All written material must be original. Do not copy and paste text from web pages, since this is plagiarism.

Here are instructions to locate the Chime structures required in some of the templates. On a computer with Chime loaded, go to a search engine, such as www.google.com, and type

in the name of your chemical followed by the word chime as shown above. To save the Chime molecule from the webpage, **right-click** on the structure so the following menu appears. Go to **File** and select **Save Molecule As...** and direct it to your folder. Chime files



save in a variety of formats, the most common being pdb and mol. After you download the Chime file in your folder, double click it to see that the structure appears in the wireframe mode in the browser. Remember to get the URL of the page where you locate the structure file when you save the image.

If you cannot locate the structure through the Internet the structure can be built in

Spartan (available on college computers in the Physical Sciences folder) or using the molecular editor found on the Mol4D website at http://www.cmbi.kun.nl/wetche/organic/. See your instructor for assistance.

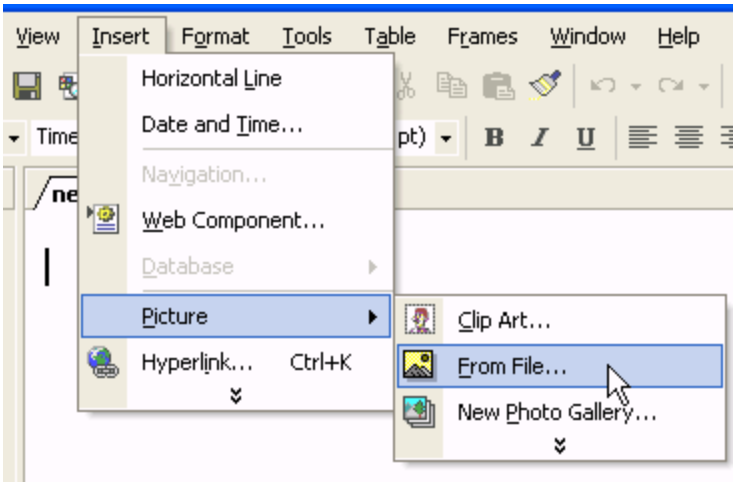
Inserting Graphics, Plug-ins, and Hyperlinks

To place a picture (or graphics such as a chemical structure) into the template, go to:

Insert

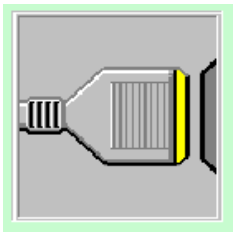
Picture

From File…



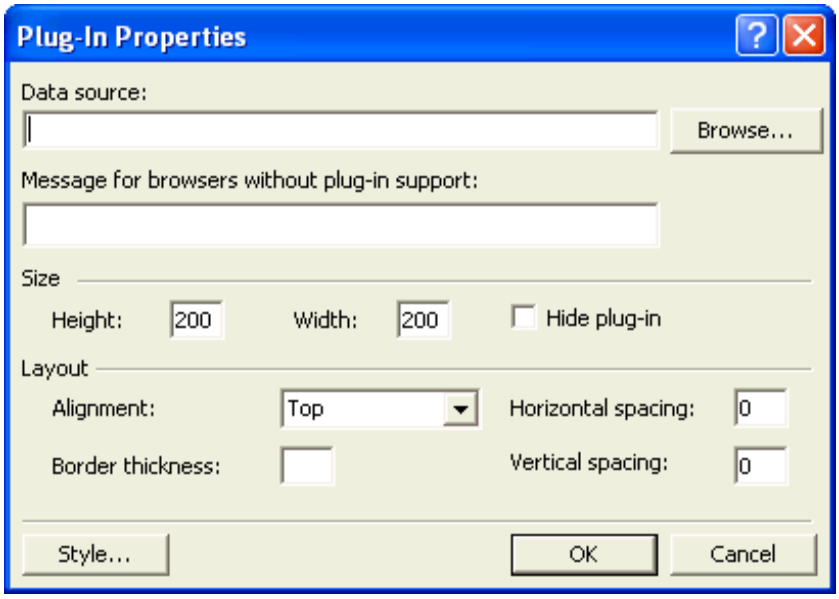
Locate the file in your folder and click on it. It should be inserted into the space. Adjust the size of the image at the corners if necessary so that the picture box remains the same size as it was in the blank template. Under the image, include a citation for the site where you obtained the picture.

If your project requires a structural formula you can insert that as a picture file. If you cannot locate a suitable structure that is pre-drawn, you can generate one using a freeware application called ChemSketch. For information on using ChemSketch see the tutorial at http://academic.pgcc.edu/psc/ChemSketch_Guide.pdf. ChemSketch contains a large collection of pre-drawn structures under the template button (see page 6 of the ChemSketch Guide). Instructions for saving a chemical structure as a gif file (picture) are given on page 8 of the ChemSketch Guide. ChemSketch is available in the Physical Sciences folder under Academic Applications in the open computer labs. To download ChemSketch go to http://www.acdlabs.com/download/chemsk.html.



If a Chime image is required, it must be placed in the cell labeled "Plug-In" where you will see the image given at the right. To insert the Chime file, double click on the plug-in image in FrontPage and the Plug-in properties box should appear as shown on the next page. Click on the **Browse…** button and locate and then select your Chime file in your folder. Then click on the OK button. You will need to do this twice using the same file for those templates that display the molecule in two modes (ball and stick and space-filling). You will not see what the Chime molecule looks like until you preview the page by clicking on the **Preview** tab at the bottom of the screen (assuming Chime is available on the system you are using). This cell has special formatting

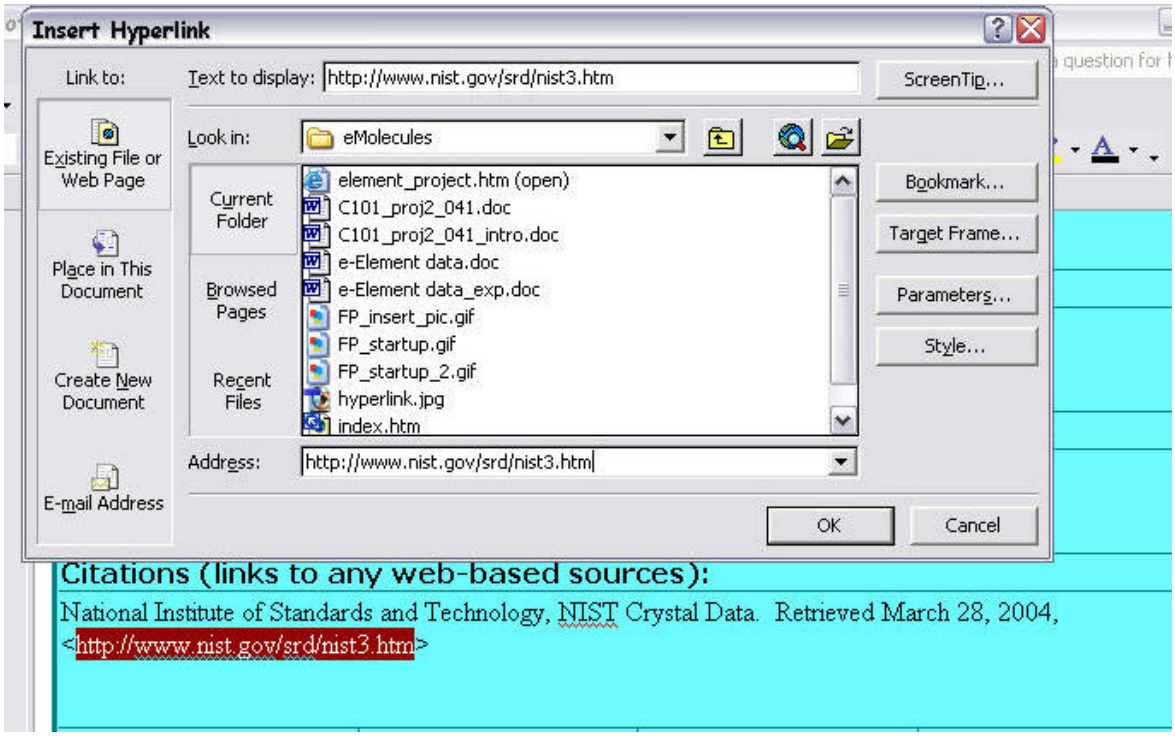
that will allow you to display and manipulate the image when the page is viewed with a browser. If you are unfamiliar with Chime, see the student tutorial located at http://academic.pgcc.edu/psc/chime_guide.html (Chime must be loaded on your computer). Be sure that the source of the image is properly cited.



Citations

All citations that are from websites must be "hot-linked". To do this highlight the URL (web address) and click on **Insert**. Select **Hyperlink...** When the hyperlink screen appears, type the URL in the address box. There is a graphic that shows this on the next page. Or, when the hyperlink screen appears, open your browser (i.e. Internet Explorer) in the web page you want and return to FrontPage. The URL for the page you opened will be in the address box. This method eliminates spelling errors.

Make sure that the pages you cite are the actual pages where the information was acquired, not the home page or splash page. Here are examples for information about francium from WebElements:
Home page or splash page: http://www.webelements.com
Actual data page: http://www.webelements.com/webelements/elements/text/Fr/key.html



Checking and Submitting the Project

Before you submit the project, you need to be sure that the page is complete and the links work. To do this, open the page in a browser by double clicking on the file in your folder. Be sure **to check all the links** to verify that they go to the pages you want.

Send the completed project and accompanying files (graphics, Chime file) as attachments to an e-mail message unless other provisions are made by your instructor. Be sure that you include "The eMolecules Project" in the subject line of the e-mail or the report may be treated as "spam" and trashed. All files should be sent to the address provided by your instructor and must be **received by the deadline**, not sent by the deadline…so do not procrastinate.

You instructor will return the file with comments. You will need to amend it and resubmit it to your instructor.