Bio-engineered Food

Objective:
To assess the risk versus benefit of genetically altered food sources using research to create a persuasive brochure that takes a position in favor of or opposed to labeling genetically altered foods.

Background:
The advancements in the field of biotechnology have allowed scientists to insert genes into food sources so the altered DNA produces new proteins that lead to new characteristics in the plants. By inserting a gene into a particular plant, the resulting protein may make the plant resistant to insects or resistant to a particular herbicide. The farmers' ability to yield larger crops greatly improves when these alterations are made. Other genetic modifications improve the nutritional quality of food.

Many products you buy at the grocery store including corn, beets, canola and soy are probably genetically modified (genetically modified organisms are called GMOs for short), but you have no way of knowing unless the manufacturer chooses to label the product. Opponents to genetically modified food fear that future studies may uncover health risks linked to ingesting this altered form of DNA. Others suggest that the use of genetically altered plants may result in the overuse of chemicals to control weeds, and ultimately cause adverse environmental conditions. Currently there are no laws that mandate the labeling of genetically modified food products.

Your task is to design a persuasive pamphlet in support of or in opposition to the mandatory labeling of genetically altered food based on scientific evidence.

You will need to use several sources to support your stance and remember to consider the credibility of your sources when defending your position.

Here are some websites that will help start your research on the risks and benefits of genetically modified food. Feel free to use books and other internet resources found in the WHS Library

- http://www.pewtrusts.org/en/search#q=GMO
- http://www.who.int/foodsafety/areas_work/food-technology/faq-geneically-modified-food/en/
- http://actionbioscience.org/biotechnology/pusztai.html
- http://www.pbs.org/newshour/rundown/national-debate-genetically-modified-foods-continues/

Be sure to back up your statements with FACTS (numbers, research findings)
You will want to provide answers to some of the following questions

1. What are the basic scientific facts and procedures used to create GMOs?
2. What are some of the possible ways your product can increase or decrease the quality of life of those who use it? (Does it increase food output per acre of land or cause death/diseases?)
3. Should people change to the "modern" method of farming?
4. Should people be concerned about using genetically modified foods? Should foods made from GMOs be labeled? Why or why not?

GMO Brochure Rubric **Name** _____

The only rule is your brochure must be 8 ½ by 11.

Beyond the size constraint you may be as creative as you would like (the more the better) you may fold your paper, draw, type, and or decorate your brochure. The goal is to present your findings and cause others to join your point of view.

You must include a works cited and use parenthetical citations in your brochure.
The WHS Citations Style Sheet is Available in the Library

	Expected = 5	Acceptable = 4	Substandard – 1	Student	Teacher
Research & information	Multiple resources are used and documented. Essential information is found to support the project. Focus questions are answered. Multiple points of view are evaluated.	At least 5 resources are used and documented. Relevant information is found. Most focus questions are answered. One other point of view was examined.	4 or fewer resources are used. Some sources are not relevant. Focus questions are not researched. Alternate points of view are ignored.		
Content	Information supports the purpose and is accurate and current. Content is persuasive and convincing – backed up with facts and reasons. Logical progression of ideas with clear point of view.	Some of the information is not relevant or is out of date. Includes some persuasive information with few facts or reasons. The point of view is a bit unclear.	Information is incomplete, out of date and/or incorrect. Contains little persuasive information and only one or two facts or reasons. Lacks a clear point of view.		
Mechanics	Visual and written communication is informative & engaging	Written communication is informative.	Visual and/or written communication was not informative or appropriate		
Brochure	Makes effective use of text, graphics. Information is thought provoking. Maximum use of allowed space.	Text and graphics are used. Required information is covered. A clear position is taken but may not be persuasive. Size limits were followed	Text is hard to read, missing and/or uninformative. Brochure is lacking in information. Size limits were ignored		
Citations	A great variety of resources are correctly cited using the WHS style sheet.	Few resources found in research are cited. Minor error made in formatting works cited.	No resources are cited. Major errors made in formatting works cited.		
			Total	/ 25	/ 25
				Grade	

There will be no late assignments!!

Basic in-text citation rules

In MLA style, referring to the works of others in your text is done by using what is known as parenthetical citation. This method involves placing relevant source information in parentheses after a quote or a paraphrase.

General Guidelines

The source information required in a parenthetical citation depends on:

1. the source medium (e.g. Print, Web, DVD)
2. the source's entry on the Works Cited page.

Any source information that you provide *in-text* must correspond to the source information on the *Works Cited page*.

More specifically, whatever signal word or phrase you provide to your readers in the text, must be the first thing that appears on the left-hand margin of the corresponding entry in the Works Cited List.

In-text citations: Author-page style

MLA format follows the author-page method of in-text citation. This means that the author's last name and the page number(s) from which the quotation or paraphrase is taken must appear in the text, and a complete reference should appear on your Works Cited page. For example if the following sentence was in your project:

…GMOs will cause your eyes to fall out because science is evil (I Hate GMOs, 263).

You would then also have an entry in your works cited for:

- "I Hate GMOs." Abadsource. N.p., n.d. Web. 24 Feb. 2015. ‹http://ihategmos.com›

Works Cited Tips

A Page on a Web Site
For an individual page on a Web site, list the author or alias if known, followed by the information covered above for entire Web sites. Remember to use *n.p.* if no publisher name is available and *n.d.* if no publishing date is given.
"How to Make Vegetarian Chili." *eHow*. Demand Media, n.d. Web. 24 Feb. 2009.

An Image (Including a Painting, Sculpture, or Photograph)
Provide the artist's name, the work of art italicized, the date of creation, the institution and city where the work is housed. Follow this initial entry with the name of the Website in italics, the medium of publication, and the date of access.
Goya, Francisco. *The Family of Charles IV*. 1800. Museo Nacional del Prado, Madrid. *Museo National del Prado*. Web. 22 May 2006.