

# DEBATE: GENETICALLY MODIFIED FOOD

## 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 should greatly improve when these alterations are made. Other genetic modifications can be used to improve the nutritional quality of food.

Many products you buy at the grocery store including corn, beets, canola and soy are probably genetically modified organisms (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 in the United States that mandate the labeling of genetically modified food products.

The **FDA** has assembled a representative group of citizens (our class) to hold a debate on the topic in order to guide their decision on GMOs.

## TOPIC OF THE DEBATE

1. Should people be concerned about using (growing or eating) genetically modified foods?
2. Should foods made from GMOs be labeled?
3. Should research and development money be spent on creating GMOs instead of directly sending food aid to starving people?

## THE SETUP

Each of you will have a chance to step into the shoes of the person who is involved with or impacted by the debate over GMOs. **After completing the research phase of this assignment you will construct a two page paper in the form of a personal essay with proper citations that reflects your characters position on the topic questions for the debate.** Your paper should be persuasive and should cover the answers to the topic questions of the debate. Your answers should be supported by research materials but must reflect the point of view and interests of your assigned character. (A Biotech Scientist working for a GMO lab would generally be for the use of this technology while an Agronomist arguing for a return to non-industrial organic farming would be against.)

# TIPS ON BEING PERSUASIVE

Setting up a persuasive argument for either a paper or debate can take many different forms. The following outline is simple, yet effective strategy to present and defend a persuasive argument.

1. **Introduction** - Inform the reader/listener about the issue at hand. State the facts that surround the situation.
2. **State your case** - Discuss why your way is the best way. Share evidence and expert opinions supporting your position.
3. **Examine and refute the opposition** - It is vital that you recognize and discredit opposing views. Look for flaws, loopholes, and reasons to reject other suggestions. If there are positive aspects of the opposing view, point them out, but compare them to the overall benefit of your case.
4. **Reconfirm your position** - Now it is time to review the main points of your arguments. Be sure to address any items that may have come while refuting the opposition.
5. **Conclude that your position is superior** - Be confident in your closing that your way, is indeed, the only way based upon all the information just provided.

Available characters:

1. Scientist against Genetically Modified food
2. Scientist working for a Genetically modified food lab
3. Environmental health specialist involved in Genetically Modified Foods
4. Reporter of the local newspaper
5. Scientist studying the habitats of the monarch butterfly
6. Agronomist arguing for organic farming
7. Small business owner if a supermarket with a large produce section
8. Small Family farmer using Genetically modified Seeds
9. Large corporate farmer
10. Parent with small children
11. Banana Farmer from developing nation
12. Pesticide and Fertilizer chemical worker
13. Owner of a hotel on the beach
14. Director of the health department
15. Politician with limited funds and resources for public and environmental health
16. Lawyer representing the union against importation of Genetically modified foods
17. Lawyer representing the US Government on the export of Genetically modified foods
18. A member of the ELF (Earth Liberation Front)

# GMO Library Research Sheet

Name: \_\_\_\_\_

Role: \_\_\_\_\_

1. What are GMOs?
2. How are GMOs made?
3. Are GMOs needed? Why?

To help focus your research what are 2 international aid organizations that are involved with the issue of global hunger. What are they currently doing to alleviate hunger?

- 1.
- 2.

**List 3 sources of information that are not websites (magazines, newspapers)**

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

What is the main argument for promoting your position of genetic modification of food?

What is an argument against your position that you must be prepared to answer?

Based upon what you have learned so far what will be your two next steps in preparing for your brochure and debate? (The answer is not more research & write paper... I want specifics)

- 1.
- 2.

## GMO Character Essay Rubric

**Name:** \_\_\_\_\_

**Final Score:** \_\_\_\_\_

This rubric is used to verify specific tasks performed when producing a persuasive essay. If the task has been successfully completed, all points are awarded. If the task is mostly complete half points may be awarded. No points are awarded if the task is not attempted.

Category	Scoring Criteria	Points	Student Evaluation	Teacher Evaluation
<b>Introduction</b> <i>20 points</i>	A thesis or position statement makes the purpose of the essay clear. <i>(Thesis statements do not begin, "this essay is about".)</i>	<b>10</b>		
	Background information is provided to establish the importance of the essay topic. <i>(Include definitions of key terms and a short outline of the topic.)</i>	<b>10</b>		
<b>Body</b> <i>30 points</i>	<b>At Least Three</b> body paragraphs (one for each argument).	<b>10</b>		
	Each argument is supported with scientific fact, not just what you feel. (your opinion doesn't matter, unless supported)	<b>10</b>		
	Information in the essay is presented in the student's own words (or should we say your character's), not "cut and pasted" from research sources. <i>(complex terms must be explained)</i>	<b>10</b>		
<b>Conclusion</b> <i>20 points</i>	Your position and arguments are summarized. <i>(This is your chance to emphasize the point of the essay.)</i>	<b>10</b>		
	The most important supporting information is restated. <i>(What do you want the reader to remember?)</i>	<b>5</b>		
	No new information is introduced.	<b>5</b>		
<b>Overall</b> <i>30 points</i>	The essay is printed double spaced using Times New Roman or Arial 12-point font on white paper using black ink with 1-inch margins on all edges.	<b>5</b>		
	Citations are used to credit source materials	<b>10</b>		
	Works Cited page follows the DHS Style Sheet	<b>10</b>		
	There are no obvious grammar, spelling or punctuation errors. <i>(Such as the use of "their - there", and "to - too - two")</i>	<b>5</b>		
<b>Score</b>	<b>Total Points</b>	<b>100</b>		
<b>Self-evaluation</b>	Students are expected to honestly evaluate their own work. If the difference between the student evaluation and the teacher evaluation is more than 10 points, 5 points will be deducted from the final score when the grade is recorded.			
<b>Deadline</b>	All assignments are due at the start of the period on the assigned date. Essays submitted after the deadline will receive 3/4 credit. Papers turned more than one day late will be mulched for use in the greenhouse. The due date for this assignment is: _____			