Organic Farming and Genetically Modified Organisms

WebQuest Description: In this webquest we will be diving in the world of farming in order to discover where our food comes from. You will be discovering the characteristics of organic farming and how it compares to conventional farming methods. You will also learn about genetically modified organisms in relation to what we eat. In addition you will practice writing, communication and presentation skills.

Grade Level: 9-12
Curriculum: Health / PE
Keywords: Organic Farming, Conventional Farming, Genetically Modified Organism.
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Introduction

Currently in Malta, there are twenty farmers using organic methods of production, which tends to increase in the future years. The number of customers seeking organic products have increased and this triggered more importation of foreign organic products to be displayed on supermarket shelves. Maltese organic products are starting to appear on the market as well. Gaia is one of the first certified organic producers on the island. The following questions will get you to think about the current situation a lot of consumers and farmers are facing, that is, the transition from conventional farming to organic farming.

Would you choose to consume food products loaded with potentially harmful chemicals, growth hormones and antibiotics? Would you drink water from a farm that uses chemical pesticides and fertilizers on the crops and soil? What are the impacts on our health?

Did you know that farming without chemicals is more labour intensive and more expensive than traditional farming methods? Why does organic farming even exists? Will organic products always be just a niche?

By the end of the webquest, you will develop a reliable point of view siding with either organic or traditional farming methods, based on the research and activities present, and defending why you feel the style of farming you chose is the best for use.

Tasks

As an initiative of the Health Promotion Campaign, you are invited on a television talk show in order to criticize an article published in a local newspaper regarding the theme of Organic Farming. As you were reviewing the article, you realized that it lacks data and facts to back up the statements for or against organic farming. Your task is to divide into four groups and take an assigned role. You need to research the theme from your role's point of view and present in the information in any visual aid you like including banners, posters, power point presentations, pamphlets or advertisements, so you can share your knowledge with the class.

Prepare a five minute presentation to be viewed in the talk show arguing for or against Organic Farming from your role's point of view. Make use of the resources/ visuals you produced to communicate the message effectively. Remember that the programme will be aimed for the general public including consumers, farmers, household workers as well as students.

Process

1. Divide into four groups, each group taking one of the following roles:
   - Nutritionist
   - Farmer
   - Consumer
   - Environmentalist

   Discuss roles with the teacher, so there is no overlapping of roles.

2. To all groups:

   Follow the links listed below to gain some perspective on organic farming, and how it differs from traditional farming methods. Record any answers or important points on a separate piece of paper so you can use them as notes later. The questions below will help you guide your research.

   - What is organic farming?
   - What are the pros and cons of organic farming?
   - How is it different from conventional methods of farming?
   - Why is organic farming important?

   ![http://www.moam.org.mt](http://www.moam.org.mt)
   ![http://www.organic-store.co.uk/organic-farms.html](http://www.organic-store.co.uk/organic-farms.html)
3. To all groups:
Now that you learnt about organic farming, go through the following links to build an organic farm of your own:

4. Find your role’s file from the ‘Resources Section’ and download it on the computer. Read the questions carefully and use the links provided to guide you in doing the research. Jot down important points.

5. Present the information either in the form of advert, power point presentation, brochure, poster or product cards. Prepare a five minute oral presentation on the area assigned to you so to share knowledge with the other classmates. Make use of the visual aids produced.

Under the ‘Resources Section’ found in the ‘Task’ tab, you can find templates of various visual aids to help you produce your own.

### Evaluation

<table>
<thead>
<tr>
<th>Category and Score</th>
<th>Unacceptable (1-3marks)</th>
<th>Fair (4-6marks)</th>
<th>Good (6-8marks)</th>
<th>Very Good (9-10marks)</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Answering Questions</td>
<td>Did not answer all of the question</td>
<td>Answers all questions but not all questions in full sentences</td>
<td>Thorough answers to all questions. All in complete sentences</td>
<td>Answers to questions were very in-depth and all in complete sentences</td>
<td>10 marks</td>
</tr>
<tr>
<td>Power Point Presentation, Brochures, Posters, Banners and other tools</td>
<td>Presentation is hard to read, no pictures, and slides are out of order</td>
<td>Presentation not easy to read, a few unrelated pictures, and order of slides is questionable</td>
<td>Presentation is easy to read, each page includes relevant pictures, and follows a logical order.</td>
<td>Description of identifiable performance characteristics reflecting the highest level of performance</td>
<td>10 marks</td>
</tr>
<tr>
<td>Citations</td>
<td>No citations</td>
<td>Few of the pictures and little of the information is properly cited</td>
<td>Most of the pictures and information is properly cited</td>
<td>All information and pictures in slides are properly cited.</td>
<td>10 marks</td>
</tr>
<tr>
<td>Presentation Skills during the Role Play</td>
<td>Presentation did not include clear voice, the volume was not appropriate, there was no eye contact, and little or no understanding of material</td>
<td>Presentation included a sufficiently clear voice, some eye contact, and basic understanding of material</td>
<td>Presentation included clear voice with appropriate volume, eye contact, and understanding of material</td>
<td>Presentation included clear voice with appropriate volume, eye contact, thorough understanding of material, and confidence and practical examples</td>
<td>10 marks</td>
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<tr>
<td>Total Score</td>
<td></td>
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<td>/40 marks</td>
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### Conclusion

Now, you should be able to appreciate the choices farmers make which affect our bodies, our environment and our financial status. By the end of this webquest you should be able to:
- Explain the term organic farming
- State two benefits and two disadvantages of organic farming
- Outline the importance of organic farming
- List three ways how it differs to conventional methods of farming
- Explain the term genetically modified organisms
- Give three reasons why people are showing more awareness regarding GMO’s

Students should also enhance their skills in:
- Working in groups
- Communication skills
- Using the internet effectively for educational purposes
- Using ICT to produce visual aids
- Presentation and writing skills

Food for thought: Question
If all farms went organic, what do you think would happen?
After completing this webquest, please go to the wikispace (link given below) and give your views regarding the issue.
This webquest is designed for Form 4 students. It is aimed to reach students with various learning abilities and encourage the participation of everyone. It is best to use this webquest during a double lesson in classroom equipped with at least three computers or else in a computer lab, which can be used as an extension for homework or projects.
This webquest can be used also with other groups such as youth groups or during lifelong learning programmes to increase the knowledge and awareness of Organic Farming and Genetically Modified products.

Bibliography:
- http://ec.europa.eu/agriculture/organic/home_en

Standards

Credits

Other