

TIES 2006

Teachers in Industry for Educational Support

Agriculture and the Environment

Developed by:

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Agriculture and the Environment Curriculum Unit Overview

Summary

This unit is of particular significance to the agricultural industry today. In order to compete globally, remain productive, and continue to produce a cheap food source, farms in the United States are being forced to increase in size. This increase in size brings with it many benefits such as increased efficiency and lower costs. There is, however, some concerns from members of communities located close to these large farms. Many of the neighbors fear that these farms will have a negative impact on the local environment. In order to ensure that this does not happen, it is important for the farm operator to follow strict guidelines that will allow them to be both a productive business operator as well as a steward of the land. Through the teaching of this unit, we will make high school students aware of the steps that these operations go through to keep their environment safe and clean. It is our hope that these students will then become stewards of the land as well as supporters of modern agriculture.

Big Picture

The introductory activity will include investigating the Ohio Department of Agriculture's website and locating a current farm that is going through the permit process. This farm will be an example that the class will look at throughout the unit. Although there are many benefits to these large farms, the class will focus on the negative opinions that are brought up concerning the creation of the large farm. This activity will give them a little insight into the major issues that are involved with the creation of a large livestock operation.

Preparation for the Unit

Work with (whomever) to:

It will be important for the instructor to research current livestock expansion examples and select examples that would hold more significance to the students in the class. It is also suggested that guest speakers be secured. Ideally, these speakers will be operators of the large operations as well as those individuals who are in charge of making sure the operations continue to be environmentally friendly.

Overview

On the following page is a summary of the unit including brief summaries of each of the competencies that must be taught before students approach the culminating, or transfer, activity. The individual competencies, or skills and concepts, within single subject areas that must be addressed can be considered building blocks for the transfer activity. The skills and competencies are "transferred" to a new, less defined, more open-ended context. The individual competencies, or building blocks, should be, as much as possible, "Authentic Learning Tasks" (ALTs), meaning that the competencies should be taught in as realistic a

way as possible to reflect the application of the skills in a real life, or workplace, context. The summary table on the next page provides an overview of the tasks in the unit sections (ALTs), and shows how the activities in the different subject areas relate to each other. Demonstration and application of the individual subject area competencies are required for the student to effectively complete the transfer, or culminating, activity.

Curriculum Unit Summary Agriculture and the Environment

Fact Finding Mission	Develop the Plan	Deliver the Goods
<p>ALT 1 - Environmental Audit During this segment of the unit, the students will select several large livestock operations and begin looking at how they are currently effecting the environment around them. They will identify possible environmental issues that these operations may have to deal with.</p>	<p>ALT 1 - Environmental Audit In this segment of the unit, the students will begin using technology available to them to perform an Environmental Audit. They will use the internet to search and find information that will help them identify the key components of an environmental audit.</p>	<p>ALT 1 – Environmental Audit Upon completion of the last section of this ALT, the students will have produced a written document that they can then present to the owners of the livestock operations highlighting the information that they found in their study. This will be an excellent way to improve both their written and verbal communication.</p>
<p>ALT 2 – Bio-Security Plan Through the assistance of several guest speakers, the students will begin creating a list of possible bio-security issues that could cause problems for local livestock producers. One issue of particular concern right now is Avian Influenza. Upon completion of this section, students will have generated a list of issues and the problems that these issues could cause for livestock producers.</p>	<p>ALT 2 - Bio-Security Plan The students will use the internet as well as CD’s and other information produced by the Ohio Department of Agriculture to determine what types of things need to be included in a Bio-Security Plan.</p>	<p>ALT 2 - Bio-Security Plan Groups of students will take the vast amount of information that is available to producers and they will create a plan for a specific enterprise. They will identify the information that is most important in their situation and they will create a user friendly document for the livestock operator. They will then present their project to the producer.</p>
<p>ALT 3 – Site Evaluation Students will work the instructor to determine what makes a good site for the construction of a large scale livestock operation. What kinds of things need to be looked at before a site is approved for construction.</p>	<p>ALT 3 - Site Evaluation During this section of the unit, students will use the many tools that are employed during the sight evaluation process. Tools such as hand held GPS units and transits. They will learn how these tools make the site evaluation possible.</p>	<p>ALT 3 – Site Evaluation The student will create a “Site Evaluation Handbook” that will outline the entire process that one must go through to determine whether or not a site is acceptable.</p>
<p>Transfer or Culminating Activity or Project</p> <p>The students will be given a Darke County Soil Survey book with an area identified as a possible place for a large layer operation to be built. They will need use all of the knowledge they gained from the above activities to determine if this sight is acceptable. The students will complete an environmental audit as well as create a bio-security plan for the enterprise. The class will also travel to the site and do an on-site evaluation using all of the necessary equipment. The final result of this project will be the group’s decision as to whether or not the site is an acceptable location.</p>		

Please check the boxes for the subject areas that are represented in your module. These are the categories used for indexing the curriculum as it's posted to our website.

- English/Communications/Language Arts
- Science/Engineering/Design
- Business/Technology
- Teamwork/Problem-solving
- Careers/Life Skills/Family & Consumer Science
- Foreign Language

- Social Studies/History/Economics/Marketing
- Media/Graphics/Art/Music
- Health/Physical Education

Section One: Fact Finding Mission

ALT 1: Environmental Audit

Summary

Utilizing the classroom for classroom discussions, the computer lab, and the ability to travel to an from area CFO's, the students will become activity engaged in researching the environmental impacts of CFO's and as a result will be prepared to successfully complete ALT 2.

Competencies

1. The students will with 95% accuracy be able to compare ecosystems.
2. The students will with 95% accuracy be able to analyze trends and issues in the environmental and agricultural industries.
3. The students will with 95% accuracy be able to analyze relationships between individual choices and their impact on environmental and agricultural industries.
4. The students will with 95% accuracy be able to analyze the economic importance of the environmental and agricultural industries.

Time

Ten hours of instructional time should be devoted to this activity.

Materials

Internet Connection

Computer Lab

Transportation to and from area Concentrated Feeding Operations (CFO's)

Instructions

1. Students will utilize the Internet to research livestock permits that have been granted recently by the Ohio Department of Agriculture.
2. Students will dissect each of the permits and in doing so will gain an appreciation for their individual components.
3. Students will engage in an in-depth discussion with regards to the potential for positive and negative impacts by the CFO's on the environments surrounding each of them.
4. Students will travel to local CFO's and meet with owners to discuss management practices that have been implemented to positively effect the environment.
5. Students will engage in an in-depth discussion with regards to the site visits and as a result of their discussions will derive a list of commonalties of management practices between the visited CFO's and will compose a list of environmental issues that each operation has to be mindful of on a daily basis.

Evaluation/Assessment of Student's Competency

40-50	30-40	20-30	0-20	Total Score
The student has been actively engaged in the activity and as a result has mastered at least 90% of the	The student has been engaged in the activity most of the time and as a result has mastered at least	The student has not been engaged in the activity and as a result has mastered only 50-60% of the	The student has not been engaged in the activity and as a result has mastered less than 50% of the	

competencies outlined for the activity.	75% of the competencies outlined for the activity.	competencies outlined for the activity.	competencies outlined for the activity.	
The student has successfully answered at least 90% of review, quiz, and test questions reading the information presented in the lesson	The student has successfully answered at least 75% of review, quiz, and test questions reading the information presented in the lesson	The student has successfully answered only 50-60% of review, quiz, and test questions reading the information presented in the lesson	The student has successfully answered less than 50% of review, quiz, and test questions reading the information presented in the lesson	

Closure

The students will engage in a classroom discussion pertaining to the information they gathered by visiting the area CFO’s. These discussions will encompass not only what they learned while on the site visits but will incorporate what they learned about the permits obtained by the CFO’s as they are written and published on the Ohio Department of Agriculture’s website. The instructor will guide the students through the discussion in a manner that will lead them into ALT 2 which is the development of a mock bio-security plan for a CFO. The student, through their investigations and on-site visits will have the knowledge needed to complete a bio-security plan.

(Agriculture and the Environment) ALT One:

Website Reference

1. . <http://www.ohioagriculture.gov/lepp/curr/othr/lepp-ot-permittedfarms.stm>

Section One: Fact Finding Mission

ALT 2: Bio-Security Plan

Summary

Utilizing the classroom for classroom discussions, guest speakers and the computer lab to research bio-security issues facing livestock, the students will be able to generate a list of issues related to bio-security that could face livestock producers.

Competencies

1. The students will with 95% accuracy be able to develop a local environmental and agricultural perspective concerning economic and social impacts.
2. The students will with 95% accuracy be able to develop a global environmental and agricultural perspective concerning the nations and peoples of the world.
3. The students will be able to with 95% accuracy be able to analyze the relationships between group and community choices and their impact on environmental and agricultural industries.

Time

Five hours of instructional time should be devoted to this activity.

Materials

Internet Connection
Computer Lab
Guest Speakers

Instructions

1. Students will utilize the Internet to research bio-security issues currently facing livestock producers
2. Students will scrutinize current bio-security plan in place for area CFO's and in doing so will gain an appreciation for their individual components.
3. Students will engage in an in-depth discussion with regards to the potential for positive and negative impacts of bio-security plans on the environments surrounding each of them.
4. Students hear from guest speakers to discuss bio-security plans that have been implemented and the effects they have had on the environment.

- Students will engage in an in-depth discussion with regards to the bio-security plans that they have researched and as a result of their discussions will derive a list of commonalties between them.

Evaluation/Assessment of Student’s Competency

40-50	30-40	20-30	0-20	Total Score
The student has been actively engaged in the activity and as a result has mastered at least 90% of the competencies outlined for the activity.	The student has been engaged in the activity most of the time and as a result has mastered at least 75% of the competencies outlined for the activity.	The student has not been engaged in the activity and as a result has mastered only 50-60% of the competencies outlined for the activity.	The student has not been engaged in the activity and as a result has mastered less than 50% of the competencies outlined for the activity.	
The student has successfully answered at least 90% of review, quiz, and test questions reading the information presented in the lesson	The student has successfully answered at least 75% of review, quiz, and test questions reading the information presented in the lesson	The student has successfully answered only 50-60% of review, quiz, and test questions reading the information presented in the lesson	The student has successfully answered less then 50% of review, quiz, and test questions reading the information presented in the lesson	

Closure

The students will engage in a classroom discussion pertaining to the information they gathered by researching current bio-security plans in place on area CFO’s. There discussions will encompass what they learned while researching bio-security plans. The instructor will guide the students through the discussion in a manner that will lead them into ALT 3 which is the preparation for a site evaluation for a potential CFO. The student will utilize the information gained about bio-security plans and the livestock permitting process to develop a plan for making a site visit which will include a list of items to look for in a potential site that will make it a site a good site for the construction of a CFO.

Internet References

- <http://www.ianrpubs.unl.edu/epublic/pages/publicationD.jsp?publicationId=434>
- http://www.oznet.ksu.edu/news/sty/2003/biosecurity_plan051503.htm
- http://www.ext.vt.edu/news/periodicals/livestock/aps-02_03/aps-078.html

Section One: Fact Finding Mission

ALT 3: Site Evaluation

Summary

Utilizing the classroom for classroom discussions and the computer lab to research, the students will develop a list of things that makes a site a good one for the construction of a CFO. Students, as a result of their previous research, now have an understanding of all environmental concerns that come about with the proposed construction of a CFO and should be able to develop this list with much success.

Competencies

1. The students will be able to with 95% accuracy use scientific inquiry to solve problems.
2. The students will be able to with 95% accuracy conduct research projects.
3. The students will be able to with 95% accuracy perform accounting functions.

Time

Three hours of instructional time should be devoted to this activity.

Materials

Internet Connection
Computer Lab

Instructions

1. Students will develop a list of things to look for when approving a site for the construction of a CFO.
2. Students will utilize information obtained on the Ohio Department of Agriculture's website to develop their list.
3. Students will engage in classroom discussions as they arrive at the list and will all agree on the contents of the list prior to it being finalized.

Evaluation/Assessment of Student's Competency

40-50	30-40	20-30	0-20	Total Score
The student has been actively engaged in the activity and as a result has mastered at least 90% of the competencies outlined for the activity.	The student has been engaged in the activity most of the time and as a result has mastered at least 75% of the competencies outlined for the activity.	The student has not been engaged in the activity and as a result has mastered only 50-60% of the competencies outlined for the activity.	The student has not been engaged in the activity and as a result has mastered less than 50% of the competencies outlined for the activity.	
The student has successfully answered at least 90% of review, quiz, and test questions reading the information presented in the lesson	The student has successfully answered at least 75% of review, quiz, and test questions reading the information presented in the lesson	The student has successfully answered only 50-60% of review, quiz, and test questions reading the information presented in the lesson	The student has successfully answered less than 50% of review, quiz, and test questions reading the information presented in the lesson	

Closure

The students will engage in a classroom discussion pertaining to the information they gathered about the permitting process and bio-security plans to develop a list of things to look for in selecting a site for a CFO in order that it will have no negative effects on the surrounding environment. The instructor will guide the students through the discussion in a manner that will lead to the development of such a list and will also discuss with the students how what they have learned to date will be helpful as they move forward into the actual development and implementation stages of the unit.

Section Two: Develop the Plan

ALT 1: Environmental Audit

Summary

Utilizing the classroom for classroom discussions and the computer lab, the students will become activity engaged in the development of an environmental audit.

Competencies

1. The students will with 95% accuracy be able to compare ecosystems.
2. The students will with 95% accuracy be able to analyze trends and issues in the environmental and agricultural industries.
3. The students will with 95% accuracy be able to analyze relationships between individual choices and their impact on environmental and agricultural industries.
4. The students will with 95% accuracy be able to analyze the economic importance of the environmental and agricultural industries.

Time

Four hours of instructional time should be devoted to this activity.

Materials

Internet Connection
Computer Lab

Instructions

1. Students will utilize the Internet to research suggested components of an environmental audit.
2. Students will utilize information obtained through their research and through classroom discussions to develop an environmental audit to be utilized during a site visit to a local CFO.

Evaluation/Assessment of Student's Competency

40-50	30-40	20-30	0-20	Total Score
The student has been actively engaged in the activity and as a result has mastered at least 90% of the competencies outlined for the activity.	The student has been engaged in the activity most of the time and as a result has mastered at least 75% of the competencies outlined for the activity.	The student has not been engaged in the activity and as a result has mastered only 50-60% of the competencies outlined for the activity.	The student has not been engaged in the activity and as a result has mastered less than 50% of the competencies outlined for the activity.	
The student has successfully incorporated all of the necessary components into a plan. The plan is comprehensive in nature.	The student has successfully incorporated at least 75% of the necessary components into a plan. The plan is comprehensive in nature.	The student has successfully incorporated between 50 and 60% of the necessary components into a plan.	The student has successfully incorporated less than half of the necessary components into a plan. The plan is not comprehensive in nature.	

Closure

The students will engage in a classroom discussion pertaining to the information they gathered by visiting the area CFO's. These discussions will encompass not only what they learned while on the site visits but will incorporate what they learned about the permits obtained by the CFO's as they are written and published on the Ohio Department of Agriculture's website. The students will see the above mentioned to develop an environmental audit that they will later put into use as they perform an environmental audit of an actual CFO. The instructor will lead a discussion as to what types of technology may be used to accomplish an environmental audit and this discussion will lead into ALT 2.

Website Reference

1. <http://www.epa.gov/agriculture/tems.html>

Section Two: Develop the Plan

ALT 2: Bio-Security Plan

Summary

Utilizing the classroom for classroom discussions and computer-based software developed by the U.S. Poultry & Egg Association and the Ohio Department of Agriculture, the students will outline what needs to be contained within a Bio-Security plan for a CFO.

Competencies

1. The students will with 95% accuracy be able to develop a local environmental and agricultural perspective concerning economic and social impacts.
2. The students will with 95% accuracy be able to develop a global environmental and agricultural perspective concerning the nations and peoples of the world.
3. The students will be able to with 95% accuracy be able to analyze the relationships between group and community choices and their impact on environmental and agricultural industries.

Time

Three hours of instructional time should be devoted to this activity.

Materials

Internet Connection

Computer Lab

U.S. Poultry & Egg Association Practical Bio-Security Recourses CD

Ohio Department of Agriculture Website

Instructions

1. Students will utilize the Internet to research bio-security plans currently being utilized by livestock producers
2. Students will scrutinize current bio-security plans in place for area CFO's and in doing so will gain an appreciation for their individual components.
3. Students will utilize the U.S. Poultry & Egg Associations Practical Bio-Security Resources CD as a means of determining components for a bio-security plan.
4. Students will engage in an in-depth discussion with regards to the bio-security plans that they have researched and as a result of their discussions will develop an outline to be used later as they complete a bio-security plan for an actual CFO.

Evaluation/Assessment of Student's Competency

40-50	30-40	20-30	0-20	Total Score
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The student has been actively engaged in the activity and as a result has mastered at least 90% of the competencies outlined for the activity.	The student has been engaged in the activity most of the time and as a result has mastered at least 75% of the competencies outlined for the activity.	The student has not been engaged in the activity and as a result has mastered only 50-60% of the competencies outlined for the activity.	The student has not been engaged in the activity and as a result has mastered less than 50% of the competencies outlined for the activity.	
The student has successfully incorporated all of the necessary components into a plan. The plan is comprehensive in nature.	The student has successfully incorporated at least 75% of the necessary components into a plan. The plan is comprehensive in nature.	The student has successfully incorporated between 50 and 60% of the necessary components into a plan.	The student has successfully incorporated less than half of the necessary components into a plan. The plan is not comprehensive in nature.	

Closure

The students will engage in a classroom discussion pertaining to the information they gathered by researching current bio-security plans in place on area CFO's. These discussions will encompass what they learned while researching bio-security plans. The student will utilize the information gained about bio-security plans and the livestock permitting process to develop an outline for a bio-security plan.

Internet References

1. U.S. Poultry & Egg Association Practical Bio-Security Resources CD
2. <http://www.ianrpubs.unl.edu/epublic/pages/publicationD.jsp?publicationId=434>
3. http://www.oznet.ksu.edu/news/sty/2003/biosecurity_plan051503.htm
4. http://www.ext.vt.edu/news/periodicals/livestock/aps-02_03/aps-078.html

Section Two: Develop the Plan

ALT 3: Site Evaluation

Summary

Utilizing the classroom for classroom discussions, computer lab to research, land lab for outdoor activities, and GPS units, the students will learn about the procedures used in completing a CFO site evaluation.

Competencies

1. The students will be able to with 95% accuracy use scientific inquiry to solve problems.
2. The students will be able to with 95% accuracy conduct research projects.
3. The students will be able to with 95% accuracy perform accounting functions.

Time

Ten hours of instructional time should be devoted to this activity.

Materials

Internet Connection
 Computer Lab
 Land Lab
 GPS Units

Instructions

1. Students will learn how to use GPS units in the classroom as a means of later completing a site evaluation for a CFO.
2. Students will move to an outdoor land nab to practice what they have learned in the classroom as it related to the proper use of the GPS units.
3. Students will engage in a classroom discussion pertaining to the use of GPS units to complete a site evaluation for a potential CFO. Evaluations based on elevation, distance to nearby homeowners, distances to drainage ditches, accessible highway transportation, and access to feed will all be a part of the GPS portion of the site evaluation.

Evaluation/Assessment of Student's Competency

40-50	30-40	20-30	0-20	Total Score
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The student has been actively engaged in the activity and as a result has mastered at least 90% of the competencies outlined for the activity.	The student has been engaged in the activity most of the time and as a result has mastered at least 75% of the competencies outlined for the activity.	The student has not been engaged in the activity and as a result has mastered only 50-60% of the competencies outlined for the activity.	The student has not been engaged in the activity and as a result has mastered less than 50% of the competencies outlined for the activity.	
The student has successfully completed a GPS exercise with more than 90% accuracy.	The student has successfully completed a GPS exercise with at least 75% accuracy.	The student has successfully completed a GPS exercise with only 50-60% accuracy	The student has not successfully completed a GPS exercise.	

Closure

The students will engage in a classroom discussion pertaining to the use of a GPS unit in completing a site evaluation. The instructor will guide the students through the discussion. Students will have the opportunity to practice using the GPS unit on the land lab. Having mastered the ALT, the students will be well on track to deliver the goods to local CFO's. The instructor will discuss where the students have been, what they have learned along the way, and where they are headed with regards to the unit of study.

Section Three: Deliver the Goods

ALT 1: Environmental Audit

Summary

The students will utilize the information learned throughout the unit to deliver to the local CFO's an environmental audit that can be utilized by such producers to ensure that all environmental issues are addressed in the day to day operations of the CFO.

Competencies

1. The students will be able to with 95% accuracy identify types and purposes of presentations for business use.
2. The students will be able to with 95% accuracy gather information for presentations.
3. The students will be able to with 95% accuracy develop presentation outlines.
4. The students will be able to with 95% accuracy compose presentations.
5. The students will be able to with 95% accuracy evaluate audience and demographic variables.

Time

Two hours of instructional time should be devoted to this activity.

Materials

Internet Connection
Computer Lab
Site Visit to local CFO's

Instructions

1. Students will utilize the Internet to finalize the environmental audit that will later be passed on to local CFO's
2. Students will deliver the environmental audits that they have developed to local CFO's and will offer explanations as well.

Evaluation/Assessment of Student's Competency

40-50	30-40	20-30	0-20	Total Score
The student has been	The student has been	The student has not	The student has not	

actively engaged in the activity and as a result has mastered at least 90% of the competencies outlined for the activity.	engaged in the activity most of the time and as a result has mastered at least 75% of the competencies outlined for the activity.	been engaged in the activity and as a result has mastered only 50-60% of the competencies outlined for the activity.	been engaged in the activity and as a result has mastered less than 50% of the competencies outlined for the activity.	
The student has successfully incorporated all of the necessary components into a plan. The plan is comprehensive in nature.	The student has successfully incorporated at least 75% of the necessary components into a plan. The plan is comprehensive in nature.	The student has successfully incorporated between 50 and 60% of the necessary components into a plan.	The student has successfully incorporated less than half of the necessary components into a plan. The plan is not comprehensive in nature.	

Closure

The students will engage in a classroom discussion pertaining to the environmental audit. Final touches will be put on the environmental audit and they will then be delivered to local CFO's.

Section Three: Deliver the Goods

ALT 2: Bio-Security Plan

Summary

The students will utilize the information learned throughout the unit to deliver to the local CFO's a bio-security plan that can be utilized by such producers to ensure that all bio-security issues are addressed in the day to day operations of the CFO.

Competencies

1. The students will be able to with 95% accuracy deliver various types of business presentations.
2. The students will be able to with 95% accuracy project a professional business image.
3. The students will be able to with 95% accuracy analyze effectiveness of presentations.
4. The students will be able to with 95% accuracy enhance presentation delivery using various types of technology.

Time

Three hours of instructional time should be devoted to this activity.

Materials

Internet Connection

Computer Lab

U.S. Poultry & Egg Association Practical Bio-Security Recourses CD

Ohio Department of Agriculture Website

Instructions

1. Students will utilize the Internet to finalize the bio-security plan that will later be passed on to local CFO's
2. Students will deliver the bio-security plan that they have developed to local CFO's and will offer explanations as well.

Evaluation/Assessment of Student's Competency

40-50	30-40	20-30	0-20	Total Score
The student has been actively engaged in the activity and as a result has mastered at least 90% of the competencies outlined for the activity.	The student has been engaged in the activity most of the time and as a result has mastered at least 75% of the competencies outlined for the activity.	The student has not been engaged in the activity and as a result has mastered only 50-60% of the competencies outlined for the activity.	The student has not been engaged in the activity and as a result has mastered less than 50% of the competencies outlined for the activity.	
The student has successfully incorporated all of the necessary components into a plan. The plan is comprehensive in nature.	The student has successfully incorporated at least 75% of the necessary components into a plan. The plan is comprehensive in nature.	The student has successfully incorporated between 50 and 60% of the necessary components into a plan.	The student has successfully incorporated less than half of the necessary components into a plan. The plan is not comprehensive in nature.	

Closure

The students will engage in a classroom discussion pertaining to the information they gathered by researching current bio-security plans in place on area CFO's. These discussions will encompass what they learned while researching bio-security plans. The student will utilize the information gained about bio-security plans and the livestock permitting process to develop an actual bio-security plan that can be utilized by local CFO's.

Internet References

5. U.S. Poultry & Egg Association Practical Bio-Security Resources CD
6. <http://www.ianrpubs.unl.edu/epublic/pages/publicationD.jsp?publicationId=434>
7. http://www.oznet.ksu.edu/news/sty/2003/biosecurity_plan051503.htm
8. http://www.ext.vt.edu/news/periodicals/livestock/aps-02_03/aps-078.html

Section Three: Deliver the Goods

ALT 3: Site Evaluation

Summary

The students will create a “Site Evaluation Handbook” that will outline the entire process that one must go through to determine whether or not a site is acceptable.

Competencies

1. The students will be able to with 95% accuracy communicate using telecommunication tools.
2. The students will be able to with 95% accuracy manage information using computer applications.

Time

Five hours of instructional time should be devoted to this activity.

Materials

Internet Connection

Computer Lab

Instructions

1. Students will complete a “Site Evaluation Handbook” containing all of the steps to the process that should be followed when trying to determine if a site is a good one for a CFO.

Evaluation/Assessment of Student’s Competency

40-50	30-40	20-30	0-20	Total Score
The student has been actively engaged in the activity and as a result has mastered at least 90% of the competencies outlined for the activity.	The student has been engaged in the activity most of the time and as a result has mastered at least 75% of the competencies outlined for the activity.	The student has not been engaged in the activity and as a result has mastered only 50-60% of the competencies outlined for the activity.	The student has not been engaged in the activity and as a result has mastered less than 50% of the competencies outlined for the activity.	

The student has successfully incorporated all of the necessary components into a plan. The plan is comprehensive in nature.	The student has successfully incorporated at least 75% of the necessary components into a plan. The plan is comprehensive in nature.	The student has successfully incorporated between 50 and 60% of the necessary components into a plan.	The student has successfully incorporated less than half of the necessary components into a plan. The plan is not comprehensive in nature.	
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Closure

2. The students will complete this final step of the process. Upon its completion the students will have learned a great deal about agriculture and its potential for impact on the local environment. The students have seen the process that a potential CFO goes through from start to finish and as a result of that now have a greater understanding of CFO's.

Transfer or Culminating Activity or Project

The students will be given a Darke County Soil Survey book with an area identified as a possible place for a large layer operation to be built. They will need use all of the knowledge they gained from the above activities to determine if this sight is acceptable. The students will complete an environmental audit as well as create a bio-security plan for the enterprise. The class will also travel to the site and do an on-site evaluation using all of the necessary equipment. The final result of this project will be the group's decision as to whether or not the site is an acceptable location.