



The Impact of Good Practices

Middle School Food and Agricultural Literacy Curriculum

Precepts

- C. Vision
 - C1. Contemplate the future

National Standards

- AS.06.02.01.b. Discuss consumer concerns with animal production practices relative to human health.
- AS.08.01.01.a. Evaluate the effects of animal agriculture on the environment.
- NL-ENG.K-12.4 – Communication Skills
- NL-ENG.K-12.12 – Applying Language Skills
- NS.5-8.3 – Life Science
- NS.5-8.6 – Science in Personal and Social Perspectives

Student Learning Objectives

- As a result of this **unit** the students will...
 - Identify environmental impacts related to animal production.
- As a result of this **lesson** the students will ...
 - Identify how animal production stewardship has a positive impact on the environment.

Content Outline

- I. **Stewardship – the careful and responsible management of something entrusted to one's care**
- II. **Animal production stewardship has a positive impact on the environment through:**
 - A. Proper **grazing** practices (to feed on growing grass and pasturage, as do cattle, sheep, etc.)
 - 1. Reduces the need for mechanical practices (mowing) and weed management (spraying)
 - 2. Best interest of producers to take care of land to ensure longevity of their operations
 - 3. Rangelands are in the best condition they have been in during the past century

Time

Instruction time for this lesson: 45 minutes.

Resources

entrusted. (n.d.). The American Heritage® dictionary of the English language (4th ed.). Retrieved August 27, 2009, from Dictionary.com website: <http://dictionary.reference.com/browse/entrusted> — grazing. (n.d.). Dictionary.com Unabridged (v 1.1). Retrieved August 27, 2009, from Dictionary.com website: <http://dictionary.reference.com/browse/grazing> — Herren, R. (2000). The science of animal agriculture (2nd ed.). Albany, NY: Delmar Thompson Learning, Inc. — National FFA Organization. (2003). LifeKnowledge Precepts and Signs of Success. — National FFA Organization. (2009). LifeKnowledge Online. Retrieved August 27, 2009, from <http://agedlearning.org> — stewardship. (2009). In Merriam-Webster Online Dictionary. Retrieved August 27, 2009, from <http://www.merriam-webster.com/dictionary/stewardship>

Tools, Equipment, and Supplies

Overhead projector/transparencies
Wrapped package with a globe or model of the earth inside (or a picture of a globe or earth that can be found on MS.AS.6.2.TM.A)
Notebooks, or notebook paper – one per student
Writing utensils
MS.AS.6.2.AS.A—one per student
MS.AS.6.2.TM.A – one per teacher
MS.AS.6.2.TM.B – one per teacher
MS.AS.6.2.TM.C – one per class, posted around classroom prior to beginning of class
MS.AS.6.2.TM.D – one per class, posted around classroom prior to beginning of class
MS.AS.6.2.TM.E – one per class, posted around classroom prior to beginning of class
MS.AS.6.2.ASSESS.A – one per student

Key Terms

The following terms are presented in this lesson and appear in **bold italics**:

Grazing

Stewardship

- B. Animal waste used as fertilizer
 - 1. Reduces the need for commercially produced fertilizers
 - 2. Natural high-quality fertilizer
 - 3. Once the decomposition has taken place there is no harm to the environment



Lesson Number: MS.AS.6.2

Middle School Food and Agricultural Literacy Curriculum

The Impact of Good Practices

C. Animal waste used as a fuel source

1. Methane gas produced by animals can be collected and used as a fuel source
2. Reduces the need for commercially produced fuels
3. When the biogas is used it potentially produces less contaminants in the air

Interest Approach

Before students arrive place **MS.AS.6.2.TM.C**, **MS.AS.6.2.TM.D**, and **MS.AS.6.2.TM.E** around the room to be used later in the lesson for a Go Get It e-Moment®. This activity allows students to move around the room and locate necessary items or information for the lesson.

When students enter have a wrapped package sitting in the front of the room. Inside the package is a globe or a model of the earth. If neither of these is available, a picture of the earth can be placed in the package and can be found on **MS.AS.6.2.TM.A**. Begin by having the students visualize what they think is in the package. Describe to them that the item inside is something that we have been entrusted with and is very important. Do not unwrap the package. Tell the students they will have to be patient and will find out at the end of the class session what is in the package.

Welcome to an anticipation filled class today. You may have noticed the wrapped package (point to the package at the front of the room) when you entered. Today is a special day.

We will receive a gift: a gift that has been entrusted to us. In your mind, visualize what you think is in the package.

Pause to allow students to visualize.

What do you think is in the package?

Allow students to guess.

It is something we all value and is important in our future.

Allow students to guess and then gently unwrap the package because you will re-wrap it at the end of class.

The earth is something we have all been entrusted with. As we think about the future it is our responsibility to be **stewards** of the environment and to make sure our actions demonstrate **stewardship**.

Keep that image in the back of your mind as we work today to understand **stewardship** and how it can relate to animal production and the environment.

Summary of Content and Teaching Strategies

Objective 1. Identify how animal production **stewardship** has a positive impact on the environment.

Distribute **MS.AS.6.2.AS.A** and begin by having students create a list of items on that they have been entrusted with over the years. Use the list to transition into the definition of stewardship which can be found on **MS.AS.6.2.TM.B**.

We have all had trust placed in us over the years. It might have been when we babysat, had to make dinner, or a promise of what time we would go to bed. On the activity sheet there is a place at the top to brainstorm and write down all the times we have been entrusted with something.

Entrusted means that we were given responsibility to take care of something or do something.

Let's take three minutes and write down all the examples of some things of which we can be entrusted. What questions do you have?

Answer any questions that may be asked.

Your brainstorming starts now.

Circulate around the room to answer questions as they may arise. Announce the remaining time for the students at two minutes and one minute. Upon completion have students share examples of times they were entrusted with something.

Set your writing utensil down. It appears we have been entrusted many times over the years with many different responsibilities. Share some examples with the class of times you were entrusted.

Allow students to share examples.

Thank you for sharing. A term that we are going to use for the rest of class is **stewardship**. In the notebooks you were going to take notes in today,



Lesson Number: MS.AS.6.2

Middle School Food and Agricultural Literacy Curriculum

The Impact of Good Practices

title a page "**Stewardship** and the Environment."
Record the following definition for **stewardship** in your notebook (use **MS.AS.6.2.TM.B**).

Use a Go Get It e-Moment to have students record in their notebooks three examples of how animal production stewardship can have a positive impact on the environment. The examples and a description can be found on **MS.AS.6.2.TM.C**, **MS.AS.6.2.TM.D**, and **MS.AS.6.2.TM.E**.

When you hear CAPTURE, record the information you see by moving around the room. The three sheets around the room each have an example of how animal production **stewardship** can have a positive impact on the environment. You will have eight minutes to neatly write this information in your notebooks. What questions are there? CAPTURE.

Call out the remaining time for the students to keep them on task. As students finish have them return to their seats and review the information they have just recorded. Answer any questions that students might have as they work around the room.

As the students record their information, address any questions they may have. Then have them look at **MS.AS.6.2.AS.A**. At the bottom of the activity sheet have students think about the future and write down three ways they can demonstrate being a steward to the environment. You may need to share an example if necessary like "recycle all plastic products" or "will plant a tree each year on my birthday."

As you have just seen there are ways being a **steward** in animal production can have a positive impact on the environment. Think about the future: What do you hope the environment will look like?

Pause to allow students to think.

On your activity sheet there is a place at the bottom for you to write three ways you can demonstrate being a **steward** to the environment. By being stewards we help to ensure a promising future. Take the next two minutes and write down three examples of how you will demonstrate **stewardship** in the future. What questions are there? (Share examples if necessary.) Begin contemplating your future actions.

Circulate around the room and help students if needed. Once they have their examples written, have the students share with a neighbor to build a sense of potential accountability.

Writing these examples is a start, but when we share them with others they are taken to a different level. Now someone else has heard them and can help us stay accountable for our actions. In the next two minutes, share with a neighbor your examples of how you will be a **steward** in the future. Then allow the neighbor to share their examples. Begin sharing.

Benchmark the time at 45 seconds left and 15 seconds left.

Thank your neighbor for sharing their examples.

Allow students to thank each other.

Now tell your neighbor that you will hold them accountable for those examples and you wish them the best in demonstrating stewardship.

Allow students to do so.

Review/Summary

Engage the students in a Bob the Weather Guy e-Moment to review the content from the class session. Have students work with their teammate from before to assemble a 45-second "weather report" that defines stewardship, what stewardship looks like now in animal production, and what they predict will happen in the future based on animal producers being good stewards.

When I say ACTION, you will develop a weather report based on the information you learned in class about stewardship in animal production. When you think about a weather report it contains what the weather has been, what it is right now, and predicts what it will do in the future. Your weather report should include a definition for **stewardship**, what **stewardship** looks like now in animal production, and a prediction for what the future looks like based on animal producers being good **stewards**.

You will have eight minutes to prepare a 45-second weather report with your partner from before. Remember, the three essential parts to the weather report are a definition of **stewardship**, what **stewardship** looks like now, and a prediction for the future based on good **stewardship**. What questions are there?

Answer any questions that may be asked.

ACTION.



Lesson Number: MS.AS.6.2

Middle School Food and Agricultural Literacy Curriculum

The Impact of Good Practices

Allow students to share their weather reports with the entire class or in small groups. Close by having students guess what is in the package. Then unwrap the package to show everyone a globe or model earth. Conclude by discussing with the students that the earth is something we have been entrusted with and it is our responsibility to demonstrate stewardship toward the earth.

Thank you for sharing your weather reports based on your new knowledge of stewardship and the positive impacts animal production can have on the environment. Give yourselves a round of applause.

Lead applause.

Thank you for your participation during the class session.

Point to the unwrapped package, and then begin re-wrapping it.

The earth is something we have all been entrusted with. As we think about the future it is our responsibility to be **stewards** of the environment and to make sure our actions demonstrate **stewardship**. This can be done through proper animal production that has positive impacts on the environment, or as simple as picking up an extra piece of trash each day. This preserves the gift for the future.

We not only thought about the future today, but you wrote down three ways you will demonstrate stewardship in the future. It is important that we all work toward the goal of being good **stewards** of the environment to ensure a promising future.

Application

Extended classroom activity:

Have students search for pictures (or take pictures) of positive and negative impacts animal production can have on the environment. Students should describe the proper or improper **stewardship** that can be seen in the pictures.

FFA activity:

Have students set up a public meeting to discuss animal production **stewardship**. Invite a guest speaker who is an expert in the positive impacts animal production can have on the environment. Advertise the event and have students help with the discussion.

SAE activity:

Have students interview an animal producer that is active in environmental **stewardship**. Questions the students might ask would include what practices are currently being done by the producer, where did the producer learn these practices, and how does the producer keep informed of sound environmental **stewardship**.

Evaluation

MS.AS.6.2.ASSESS.A.

Answers to Evaluation

1. The careful and responsible management of something entrusted to one's care.
2. B
3. A
4. B
5. C
6. A
7. C





Times You Have Been Entrusted

(Entrusted means that you were given responsibility to take care of something or do something.)

Demonstrating Stewardship in the Future

1. _____
2. _____
3. _____



Stewardship and the Environment

Stewardship – the careful and responsible management of something entrusted to one's care



Animal Production Stewardship has a positive impact on the environment through:

Proper Grazing Practices – to feed on growing grass and pasturage, as do cattle, sheep, etc.)

- 1. Reduces the need for mechanical practices (mowing) and weed management (spraying)**
- 2. Best interest of producers to take care of land to ensure longevity of their operations**
- 3. Rangelands are in the best condition they have been in during the past century**



Animal Production Stewardship has a positive impact on the environment through:

Animal Waste Used as Fertilizer

- 1. Reduces the need for commercially produced fertilizers**
- 2. Natural high quality fertilizer**
- 3. Once the decomposition has taken place there is no harm to the environment**



Animal Production Stewardship has a positive impact on the environment through:

Animal Waste Used as a Fuel Source

- 1. Methane gas produced by animals can be collected and used as a fuel source**
- 2. Reduces the need for commercially produced fuels**
- 3. When the biogas is used it potentially produces less contaminants in the air**



Name: _____

Directions: Define the following term.

1. Stewardship –

Directions: Write the correct letter in the blank provided to match the animal production stewardship practice with the positive impact on the environment.

A. Proper Grazing	B. Animal Waste as Fertilizer	C. Animal Waste as Fuel
------------------------------------	--	--

_____ 2. Once the decomposition has taken place there is no harm to the environment

_____ 3. Reduces the need for mechanical practices (mowing)

_____ 4. Reduces the need for commercially produced fertilizers

_____ 5. Reduces the need for commercially produced fuels

_____ 6. Reduces the need for weed management (spraying)

_____ 7. When the biogas is used it potentially produces fewer contaminants in the air