



We Are All in This Together!

Middle School Food and Agricultural Literacy Curriculum

Precepts

- B. Relationships
- B5. Participate effectively as a team member

National Standards

- AS.06.01.02.a. Explain the implications of animal welfare and animal rights for animal agriculture.
- NRS.01.01.02.b. Describe the interdependence of organisms within an ecosystem.
- NL-ENG.K-12.4 – Communication Skills
- NL-ENG.K-12.12 – Applying Language Skills
- NS.9-12. – Life Science

Student Learning Objectives

- As a result of this **unit** the students will...
- Describe responsible animal welfare and care practices.
- As a result of this **lesson** the students will ...
- Describe the interdependence that can exist between humans and animals.
- Identify five examples of the students' own interdependence with animals.

Content Outline

- I. **Define *interdependence* – mutually dependent; depending on each other**
- II. **Examples of *interdependence* that can exist between humans and animals**
 - A. Domestic animals dependent upon humans
 - 1. Provide shelter
 - 2. Provide food and water
 - 3. Provide security and safety
 - 4. Provide medical attention
 - 5. Respect ecosystems and nature
 - 6. Engage in sound environmental practices

Time

Instruction time for this lesson: 45minutes.

Resources

interdependence. (n.d.). Dictionary.com unabridged (v 1.1). Retrieved August 06, 2009, from Dictionary.com website: <http://dictionary.reference.com/browse/interdependence>
National FFA Organization. (2003). LifeKnowledge Precepts and Signs of Success.
National FFA Organization. (2009). LifeKnowledge Online. Retrieved August 6, 2009, from <http://agedlearning.org>

Tools, Equipment, and Supplies

Overhead projector/transparencies
Sherlock Holmes-type clothes and props: trench coat, hat, and magnifying glass
Notebook paper
MS.AS.5.2.AS.A – AS.D – one set for each group
MS.AS.5.2.TM.A – one per teacher
Scratch paper
Writing surface to record student answers
MS.AS.5.2.ASSESS.A – one per student

Key Terms

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

Interdependence

- B. Human lives enhanced by animals
 - 1. Provide food
 - 2. Provide fiber and clothing
 - 3. Provide numerous byproducts
 - 4. Medical advancements
 - 5. Provide transportation/work (cowboys/mounted police/bomb and drug dogs)
 - 6. Assistance with health issues (sight dogs)

Interest Approach

The setting for the class is one of investigation. Begin by tapping into the knowledge that students may have of investigative T.V. shows, movies, and books; then challenge them to solve their own mystery. Dress as an old-time investigator like Sherlock Holmes. A trench coat, hat, and maybe a magnifying glass could be used to set the stage.

Welcome young investigators, do you know who I am? I am known as Sherlock Holmes the great solver of mysteries. I solve crimes and can solve any case that comes my way.



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Using your investigative mind, think about all the books, movies, and T.V. shows that you may have read or seen that deal with solving crimes or mysteries. What are examples that you know about?

Allow students to share their examples.

Have students attempt to solve the mystery of the stolen mascot. The students must be in groups of four (or more) to accomplish this task. There are four scenarios described on **MS.AS.5.2.AS.A**, **MS.AS.5.2.AS.B**, **MS.AS.5.2.AS.C**, and **MS.AS.5.2.D**. They are all very similar but not exactly the same. Each one has an extra fact in it that is needed to solve the mystery.

It is essential that each group of students has all four sheets. Pass them out so that the students do not realize that there is a difference in the sheets. Do not reveal this to them. The way the students figure out the mystery is by putting all of their sheets together. The process of solving the mystery demonstrates that interdependence is necessary to be successful.

The scenarios contain a lot of extra information that is unnecessary in solving the mystery. Suspect D is the one who stole the mascot. This is based upon the following facts:

Suspect B saw the wildcat in the fourth quarter.

Suspect A, C, and E all left before the game was over, thus it could not be them.

Suspect B says he/she only had an empty backpack when leaving, thus it could not be him/her.

Suspect D was at the game until the end and does not mention what he/she had with him/her.

Therefore, Suspect D is the only one who could have stolen the wildcat.

As you have just heard there are numerous books, movies, and T.V. shows dealing with mysteries. When you hear, *ELEMENTARY MY DEAR WATSON*, you will use your investigative mind to solve a mystery. The mystery is called "The Stolen Mascot."

You will receive a copy of clues to use to solve the mystery. All the suspects on the sheet are telling the truth and the guilty person is one of the suspects on the sheet. When you have your theory and supporting evidence of who stole the mascot, raise your hand. At that point, the great Sherlock Holmes will listen to your case and see if you measure up to the investigative standards I am looking for in young investigators. You will have eight minutes to solve the case.

What questions can I clue you in about?

Most mysteries are solved in teams. It is time to assemble your investigative team.

Divide into groups of four (or more) and distribute **MS.AS.5.2.AS.A. – AS.D** to each group.

Is your team of talented detectives focused and ready for the challenge?

Make sure all students are ready.

ELEMENTARY MY DEAR WATSON.

Give students about eight minutes to solve the mystery. You may have to give some hints if groups appear to be struggling. Upon completion, process the activity with the students.

The lesson from the activity is that we depend upon each other every day to accomplish many things. Transition these thoughts into how we also depend upon more than just people to survive and be successful. We can also have an interdependent relationship with many species of animals.

Congratulations investigators, you have all done a good job. What did it take to solve the mystery?

Allow students to answer and listen for answers such as teamwork, cooperation, and depending upon each other to be successful.

To solve the mystery you had to count on your teammates to share their information. What would have happened if your teammates did not share the clues from their mystery sheets?

Allow students to answer and listen for answers such as frustration, confusion, and the potential for accusing the wrong suspect.

Your team's success depended upon everyone sharing their clues and demonstrating teamwork. We depend upon a lot of people every day. We also depend on other things every day.

Beyond people, what are things we depend upon every day?

Allow students to answer and listen for answers that relate to animals.



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We depend upon many things each day like oxygen, water, shelter, and animals. Keep your investigative minds going as today we uncover some of the mysteries behind the **interdependence** that can exist between humans and animals.

Summary of Content and Teaching Strategies

Objective 1. Describe the **interdependence** that can exist between humans and animals.

Discuss with students and have them record the definition of interdependence in relation to humans and animals. Use **MS.AS.5.2.AS.E** to provide the definition.

What does interdependence mean?

Allow students to give suggestions.

It is important that we all understand what interdependence means. Please take out some notebook paper and begin taking notes. Write down this definition for interdependence

Utilize **MS.AS.5.2.TM.A** and allow students to record.

When you solved the mystery in your team at the beginning of class you were **interdependent** with your teammates. You depended upon them and they depended upon you to provide the clues needed to solve the mystery. This is similar to how domestic animals depend upon us and our lives are enhanced by animals. There can be **interdependence** between humans and animals.

Objective 2. Identify five examples of the students' own **interdependence** with animals.

Have scratch paper available to the students. Utilize a Me-You-Us e-Moment® to have students brainstorm ways they can be interdependent with animals. Listed below are some examples that may need to be shared with the students to get them started. Have scratch paper setting out or pass out scratch paper to students.

I. Domestic animals dependent upon humans

- A. Provide shelter
- B. Provide food and water
- C. Provide security and safety
- D. Provide medical attention
- E. Respect ecosystems and nature
- F. Engage in sound environmental practices

II. Humans lives enhanced by animals

- A. Provide food
- B. Provide fiber and clothing
- C. Provide numerous byproducts
- D. Medical advancements
- E. Provide transportation/work (cowboys/mounted police/bomb and drug dogs)
- F. Assistance with health issues (sight dogs)

When I say BRAINSTORM, you will have three minutes to think of all the examples you can of **interdependence** that can exist between humans and animals. You will write your answers on the scratch paper provided. What questions are there?

You may want to provide an example if deemed necessary.

BRAINSTORM.

When the three minutes are complete have students work with a partner to further develop their ideas.

The time ends now. Please set your writing utensil down. Looks like we have some very good ideas. Our goal is to make that list of examples even bigger. Take the next two minutes and share our examples with our neighbors. Add to the list of examples as our neighbors share their thoughts and vice versa. Begin sharing.

When the two minutes are complete have students share some of their examples with the entire group. Record their ideas on a writing surface for all to see.

Let's thank our partners for sharing their examples.

Allow students to thank each other.



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Let's put all of our ideas together to make an even larger list. When I point to each team share an example, and I will record the examples on the board for everyone to see.

Point to teams and develop a large list on the writing surface. Add the examples provided in the lesson to the ideas given by the students if necessary.

We have a tremendous list of examples of **interdependence** that can exist between humans and animals. Looking at this list and the ones each team has written down, think of five examples that relate to you – five examples that are ways you are **interdependent** with animals.

Under the definition of **interdependence** in your notes, list those five examples of how we as individuals are **interdependent** with animals. What questions do you have? List those specific examples.

Circulate around the room to answer questions and help students to record their five examples.

Review/Summary

Use a Hieroglyphics e-Moment to review the content from the lesson. Have students draw an icon to represent interdependence and an icon for each of the five examples they recorded of their own interdependence with animals. Students will have six icons when they are done. Have students include an arrow with each icon to demonstrate which direction the dependence is going.

We now all have five examples in our notebooks of how we are interdependent with animals. Let's draw a picture or icon that would be a clue to help us remember these examples in the future. We will do the first one together. By the definition of interdependence draw two arrows to represent the word

Use **MS.AS.5.2.TM.A** as an example and allow students to draw the arrows.

When you hear the word DRAW, the task is to take the next three minutes and design an icon to represent the five examples of interdependence you have in your notes. Make sure that below the icon an arrow is placed indicating which direction the interdependence is going. When completed, there will be five icons and each will have an arrow

Use **MS.AS.5.2.TM.A** as an example.

What questions are there? DRAW.

Circulate around the room to help students if they have questions. Once all students have their icons drawn have them share these with their neighbor.

There are some really good ideas out there. Let's take 30 seconds each to share our icons with a neighbor. Do that now.

After 30 seconds, stop the discussion and begin the next 30-second block.

Thank you for using your investigative brain throughout the class. You now have six clues or icons that will help you in remembering that there are many ways that we can be dependent upon animals and domestic animals are dependent upon us.



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Application

Extended classroom activity:

Have students develop a set of flashcards. One side of the flashcard gives an example of interdependence between humans and animals. The task of the person drawing the card is to describe if that is humans dependent upon animals or vice versa. The other side of the card would have an arrow showing which way the dependence is going.

FFA activity:

Have students work in pairs to develop a three-minute speech that describes interdependence between humans and animals. One student would present the dependence of domestic animals upon humans and the other would present the dependence of enhanced living of humans upon animals.

SAE activity:

Have students research an animal-related career and describe the interdependence between humans and animals through the eyes of someone working within the career.

Evaluation

MS.AS.5.2.ASSESS.A.

Answers to Evaluation

1. **Interdependence** – mutually dependent; depending on each other
2. Answers may vary but will be based upon the examples determined in class.
3. Answers may vary but will be based upon the examples determined in class.
4. Answers may vary but will be based upon the examples determined in class.
5. Answers may vary but will be based upon the examples determined in class.
6. Answers may vary but will be based upon the examples determined in class.



Use the following clues to solve the mystery of who stole the school mascot.

It was a typical Wednesday morning when all the students from Westside Middle School arrived at school. As they walked through the main entrance, they noticed their prized mascot, the wildcat, was missing from the pedestal where he sat to greet everyone as they entered the school. Students were shocked to find out that the mascot had been stolen the night before either during or after the big basketball rivalry with Eastside Middle School. The principal was already on the phone interviewing five of the Eastside Middle School students who were the suspects. This is what the suspects said:

- Suspect A:** I was at the ballgame last night. I didn't see the wildcat, but really didn't look when I entered the building. In the first half, I sat in the student section. At halftime I was really hungry and went to get some food but your concession stand had run out of hot dogs and nachos, so I didn't get anything until almost 9:30 pm when I got home.
- Suspect B:** I was at the ballgame last night. I sat with a friend on the north side of the gym. I remember going out in the hallway in the fourth quarter to go to the restroom. The wildcat was on his pedestal. I watched the end of the game, then my mom picked me up out in front of the school. I had my backpack with me but didn't have any books because I did not have any homework. When we got home, mom watched the 10:00 pm news and I went to bed.
- Suspect C:** I was at the ballgame last night. I saw the wildcat when I walked in the door. I sat on the south side of the gym in the first half. At halftime I went to the concession stand to buy a soda. I left later. I rode with Suspect A in his brother's new car. It's red with a sunroof and a cool stereo. We had to stop and get gas so I went into the gas station and bought a candy bar. I finally made it home about 9:45 pm.
- Suspect D:** I was at the ballgame last night and sat in the front row on the south side. During the second half, I moved to the north end with three other friends. Later in the evening the friends and I had an ice cream cone at the place that is two blocks from the school. My sister picked me up from the ice cream place and I was home at 10:30 pm.
- Suspect E:** I was at the ballgame last night and sat on the west side. When I left I had my gym bag and my algebra book. We are doing really hard equations that I don't understand very well. My mom picked me up from the parking lot that is behind the school. We went through a drive-through on the way home and I ordered a cheeseburger without pickles. They left the pickles on the cheeseburger so I waited until I got home to scrape them off and eat the cheeseburger. I was really hungry by then because it was almost 10:15 pm.



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- Suspect B:** I was at the ballgame last night. I sat with a friend on the north side of the gym. I remember going out in the hallway in the fourth quarter to go to the restroom that is way down the hall. I watched the end of the game, then my mom picked me up out in front of the school. I had an empty backpack with me because I did not have any homework. When we got home, mom watched the 10:00 pm news and I went to bed.
- Suspect C:** I was at the ballgame last night. I saw the wildcat when I walked in the door. I sat on the south side of the gym in the first half. At halftime I went to the concession stand to buy a soda. I left later during the second half. I rode with Suspect A in his brother's new car. It's red with a sunroof and a cool stereo. We had to stop and get gas so I went into the gas station and bought a candy bar. I finally made it home about 9:45 pm.
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- Suspect C:** I was at the ballgame last night. I saw the wildcat when I walked in the door. I sat on the south side of the gym in the first half. At halftime I went to the concession stand to buy a soda. I left later. I rode with Suspect A in his brother's new car. It's red with a sunroof and a cool stereo. We had to stop and get gas so I went into the gas station and bought a candy bar. I finally made it home about 9:45 pm.
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- Suspect E:** I was at the ballgame last night and sat on the west side. When I left I had my gym bag and my algebra book. We are doing really hard equations that I don't understand very well. My mom picked me up from the parking lot that is behind the school. We went through a drive-through on the way home and I ordered a cheeseburger without pickles. They left the pickles on the cheeseburger so I waited until I got home to scrape them off and eat the cheeseburger. I was really hungry by then because it was almost 10:15 pm.



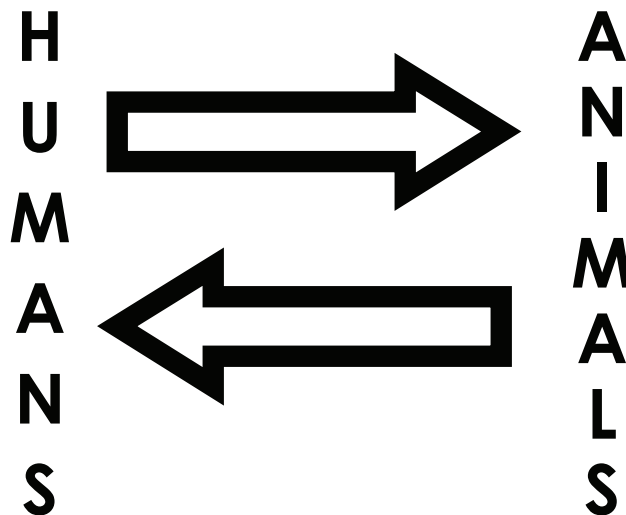
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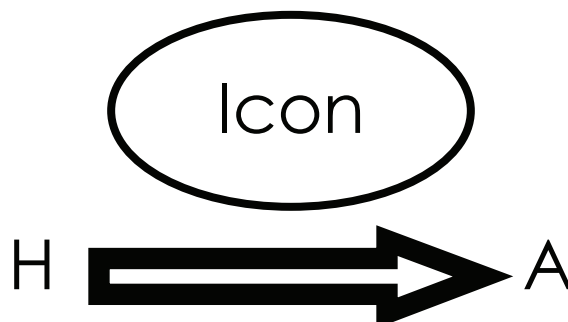
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- Suspect E: I was at the ballgame last night and sat on the west side. When I left at the end of the third quarter I had my gym bag and my algebra book. We are doing really hard equations that I don't understand very well. My mom picked me up from the parking lot that is behind the school. We went through a drive-through on the way home and I ordered a cheeseburger without pickles. They left the pickles on the cheeseburger so I waited until I got home to scrape them off and eat the cheeseburger. I was really hungry by then because it was almost 10:15 pm.

Interdependence — mutually dependent;
depending on each other

Icon for Interdependence



Include an Arrow with Your Icons





Name: _____

Directions: Define the following term.

1. Interdependence –

Directions: List five examples of interdependence between humans and animals. Make sure to label the direction that the dependence is going.

2.	_____	_____
3.	_____	_____
4.	_____	_____
5.	_____	_____
6.	_____	_____