



Safety First

Middle School Food and Agricultural Literacy Curriculum

Precepts

- G. Physical Growth
- G2. Respect one's body

National Standards

- CS.06.02.01.a. Use proper safety practices/personal protective equipment.
- CS.07.01.01.a. Implement the health and safety policies and procedures relevant to AFNR careers.
- ESS.04.05.01.b. Describe risks related to hazardous materials and describe health and safety practices to reduce risks from hazardous materials.
- NRS.02.01.01.a. Identify hazards associated with the outdoor environment.
- NL-ENG.K-12.12 -- Applying Language Skills
- NS.5-8.6 Science in Personal and Social Perspectives

Student Learning Objectives

- As a result of this **unit** the students will...
- Create a safe learning environment in the classroom, laboratory and virtual environment.
- As a result of this **lesson** the students will...
- Implement the health and safety policies and procedures relevant to classroom, laboratory, and virtual environment.
- Use appropriate personal protective equipment.

Content Outline

Objective 1. Implement the health and safety policies and procedures relevant to classroom, laboratory, and virtual environment.

I. Safety

- A. Why is safety important?
 - 1. Decrease the risk of potential harm to yourself or others
 - 2. Taking safety precautions regularly may result in good safety habits

Time

Instruction time for this lesson: 45 minutes.

Resources

National FFA Organization. (2003). LifeKnowledge Precepts and Signs of Success.
National FFA Organization. (2009). LifeKnowledge Online. Retrieved July 14, 2009, from <http://agedlearning.org>.
U.S. Department of Labor, Occupational Safety and Health Administration. (2002). OSHA fact sheet. Retrieved July 10, 2009, from U.S. Department of Labor, Occupational Safety and Health Administration web site: http://www.osha.gov/OshDoc/data_General_Facts/ppe-factsheet.pdf

Tools, Equipment and Supplies

Writing surface
Transparencies and projector or LCD projector
MS.IAS.1.1.TM.A – one per teacher
MS.IAS.1.1.TM.B – one per teacher
MS.IAS.1.1.TM.C – one per teacher
3 index cards per student
Assortment of markers (green, yellow, and red are required)
MS.IAS.1.1.ASSESS.A – one per student

Key Terms

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

Personal protective equipment

- B. Different types of learning environments
 - 1. Classroom
 - 2. Agricultural Shop
 - 3. Greenhouse
 - 4. Small Animal Laboratory
 - 5. Biotechnology / Science Laboratory
 - 6. Farm / Livestock Laboratory
 - 7. Computer Laboratory
 - 8. Outdoor Classroom
- C. Safety policies and procedures
 - 1. Different policies and procedures are required for different situations and locations
 - 2. Policies and procedures include wearing the appropriate clothing, using equipment properly, and adhering to the specific rules of each learning environment



Objective 2. Use appropriate **personal protective equipment**.

II. PPE

A. **Personal protective equipment:** items worn to protect an individual from potential harm or hazards in a working environment

1. Examples of PPE
 - a. Safety glasses
 - b. Gloves
 - c. Closed-toed shoes
 - d. Hair ties
 - e. Ear plugs

B. Proper use of PPE

1. Identify hazards
2. Select PPE that will offer protection from hazards

Because classrooms and laboratories will vary greatly among schools, it is important that you adjust the following lesson to meet your needs. For example, if you do not have a greenhouse within your learning facilities, you would obviously not create a list of safety policies and procedures for a greenhouse. It is also important that you have a teacher-generated set of classroom and laboratory procedures before teaching this lesson. Additionally, you will instruct the students to talk with a friend throughout this lesson; this can be predetermined by you. It may be easiest to have students match up with someone sitting close by.

Interest Approach

The interest approach should be delivered with enthusiasm, bordering silly.

I'm glad that you are here today because we have an important topic to talk about – SHOES! Take a look around you and notice the shoes your classmates are wearing.

Pause for five seconds.

There are many different types of shoes represented in this class. What are some examples of different shoes that you see in the room? Who will share first?

Allow students to share their responses. If no students volunteer, prompt different students.

What are other examples of shoes that can be worn but that you do not currently see in the classroom?

Allow students to share their responses. These answers will vary.

Excellent answers. Now, when I say GO, answer this question: Why are there so many different types of footwear available to us? You will work with a partner on this for 30 seconds. What questions are there? GO.

Allow students to talk for 30 seconds.

Who will give the first answer?

Allow students to share their responses. These answers will vary. If students are slow to answer, prompt responses such as a construction worker needs steel-toed boots and a cross country runner needs running shoes.

Very good, so what we have discovered is that different types of footwear are appropriate for various activities. Now here is another question: What could happen if someone was wearing the wrong type of shoes for a certain activity? Who will be the first to answer?

Allow students to share their responses. These answers will vary. If students are slow to answer, prompt responses such as bones could be broken or feet could be hurt (cut, bruised, etc.).

Great! We have pointed out that shoes are important to protect our feet and different situations call for different types of footwear. Our health and safety are always a great concern and for this reason, certain policies and procedures are in place. Additionally, shoes are not the only item that we should be concerned with when it comes to our own health and safety. There are many other items that can be used to protect us. Understanding the different policies and procedures and knowing what types of equipment should be used to protect us in various situations is important when creating a safe learning environment.

**Safety First**

Thank you for participating in the conversation about shoes. As we begin and continue through a discussion on health and safety, we will practice implementing safety policies and procedures in the classroom and other areas where we will learn. These policies and procedures will be used throughout this class to ensure our safety. We should be focused and prepared to discuss and demonstrate these policies and procedures throughout this lesson.

Summary of Content and Teaching Strategies

Objective 1. Implement the health and safety policies and procedures relevant to classroom, laboratory, and virtual environment.

In this lesson, project **MS.IAS.1.1.TM.A** to highlight content outline of Objective 1. Keep the transparency master covered, and uncover as you discuss each component of the outline. Pose the question:

Why is classroom and laboratory safety important?

Pause for 10 seconds.

Who will be first to provide an answer?

Allow students to share their responses. If no students volunteer, prompt different students.

Excellent answers!

If the following two reasons are not given, provide these two reasons for the students.

I. Safety

A. Why is safety important?

1. Decrease the risk of potential harm to yourself or others
2. Taking safety precautions regularly may result in good safety habits

Pose the question:

Here at (say your school name), we have a variety of learning environments. I will provide you with one example – the classroom. We spend a lot of time learning here inside the classroom, but we also learn in other locations. When I say TALK, discuss two different locations where we might learn in this class other than inside the classroom. We will have this discussion with a friend for 30 seconds. What questions are there? TALK.

Allow students to talk for 30 seconds.

Who will give the first location?

Allow students to share their responses. These answers will vary. If students are slow to answer, prompt responses using the environments listed below. Once students have responded, provide locations from the list below that were not mentioned by students. Because these will all be on the transparency, you may need to explain to students that different schools have different learning environments. For example, if you do not have a greenhouse at your school, students might question why greenhouse is listed on the transparency.

B. Different types of learning environments

1. Classroom
2. Agricultural Shop
3. Greenhouse
4. Small Animal Laboratory
5. Biotechnology / Science Laboratory
6. Farm / Livestock Laboratory
7. Computer Laboratory
8. Outdoor Classroom

Awesome job! So, you just proved that we learn in the classroom and in other places as well. The different places where we learn are called learning environments. If you understand what a learning environment is, put a finger on your nose. Observe that all students are doing this. If not, offer further explanation about different learning environments.

Because we learn in different locations, there will be different policies and procedures that will apply to each location. These policies and procedures are important in all learning environments, and some will overlap each other. Policies and procedures include wearing the appropriate clothing or using equipment properly in addition to other things.



Safety First

C. Safety policies and procedures

1. Different policies and procedures are required for different situations and locations
2. Policies and procedures include wearing the appropriate clothing, using equipment properly, and adhering to the specific rules of each learning environment

I appreciate your participation today. Next, we are going to create policies and procedures for each of our learning environments here at (say your school name). We will be working in groups for this activity. To be successful, talking with your classmates as we move around the room will be necessary.

In the next part of instruction, the students will create general policies and procedures for each of the learning environments at your school. Project **MS.IAS.1.1.TM.B** for an example of policies and procedures for a small animal lab; this might help students gain a better understanding of what you are expecting.

Shown here (gesture to **MS.IAS.1.1.TM.B**) is a set of policies and procedures for a small animal lab. We will be creating documents similar to this.

For the next activity, you will need a writing surface (preferably chart paper taped around the room in various spots, but a chalk board or dry erase board would work as well). You will list each of the learning environments that pertain to your school (Greenhouse, Classroom, Agricultural Shop, etc. – one location per sheet of chart paper). Divide the students into the number of groups equal to the number of different learning environments. Assign groups and present each group with a writing utensil.

Each group should select one person to be the writer at each list. When I say LIST, you will write what you think would be good policies and procedures for the learning environment listed. The writer will take ideas from the group members. At some point, I will tell you to stop writing and we will rotate in a clockwise manner. Once every group has rotated, I will again say LIST and you will work on the next list. We will continue in this fashion until each group is at their original station. If you understand these directions, place both hands on your head (demonstrate this action). Observe for comprehension; clarify if necessary. LIST

At the conclusion of each 30 seconds, tell the students to ROTATE and start the next round by saying LIST. Continue until the groups are back to their original station.

Great job, everyone. Now, return to your seats as we prepare to discuss the different policies and procedures for each learning environment. Keep in mind that we may have missed some, but we can always add to each list.

Next, you will review the student-generated policies and procedures with the class. If any of your teacher-generated policies and procedures were not mentioned on the students' list, add them to the list. After the lesson, you should rewrite the policies and procedures and post them in each learning environment. After you have reviewed the lists, continue.

We just discussed various policies and procedures for our classroom and learning environments that are important to our own safety. Policies and procedures might sometimes be referred to as rules. Rules exist in our lives every day, not just in school. We have rules at home. Restaurants have rules. Adults have to follow rules when driving. Rules are everywhere. Answer this question to yourself: Have you ever broken a rule?

Pause a few seconds.

Here is another question: Why are rules put into place?

Pause a few seconds.

When I say POLICY, tell a friend why you think that rules are put into place. You will have 30 seconds to finish this conversation. What questions are there? POLICY

Pause for 30 seconds.

I heard some great conversations about why we have rules. Who will share their answer? Allow various students to share a response.

You all made excellent points. Often rules are in place to help protect us. Each of us has an individual responsibility to follow the rules – especially if no one else is watching. Following rules can often protect you from harm, even if you don't realize it at the time.



Safety First

You did an amazing job creating policies and procedures for our classroom and learning environments. One thing we talked about was wearing the appropriate clothing. Clothing is often used to protect you in different situations. In addition to clothing, there are other items that can be worn to protect you. We refer to these items as (say this slowly and emphasize each letter) PPE.

Objective 2. Use appropriate **personal protective equipment**.

In this lesson, project **MS.IAS.1.1.TM.C** to highlight content outline of Objective 2. Keep the transparency master covered, and uncover as you discuss each component of the outline. Pose the question:

What do you think the letters (say this slowly) PPE stand for? (Pause for 10 seconds while students think) Who will provide an answer?

Allow students to share their responses. These answers will vary. If the correct answer is not given, provide students with the answer below. Utilize the Choral Response e-Moment® and Motion Moment e-Moment to discuss personal protective equipment.

Those were all excellent guesses. Say these words with me and do the same action that I do:

(Patting your chest) personal

(Putting your hands up like a boxer protecting his face) protective

(Placing your arms in an "X" in front of your chest) equipment.

Let's do that again: (making the actions again)
personal protective equipment.

So, what does PPE stand for?

Say it with the students and continue making the motions
Personal protective equipment.

What?

Allow students to respond on their own making the motions
– after they answer alone continue on

Okay, just to make sure that you understand, answer the question one more time. What does PPE stand for?

Allow students to respond with motions

Great! I think you have it. So, you know that PPE stands for (*from this point on, make the motions as you say*) **personal protective equipment**, but what does that actually mean? Think about the three words **personal protective equipment**. (*Pause for 5 seconds*) What is the definition of **personal protective equipment**? Who will give an answer?

Allow students to share their responses. If no students volunteer, prompt different students. After a few responses, provide students with the definition below.

II. PPE

- A. **Personal protective equipment:** items worn to protect an individual from potential harm or hazards in a working environment

Now, think about that definition for a few seconds. (*Pause for five seconds*) Using that definition, what are some examples of items that could be used as PPE? (*Pause for five seconds*)

Who has an answer?

Allow students to share their responses. If no students volunteer, prompt responses by giving a few examples from the list below. After all students have volunteered answers, provide additional examples from the following list.

1. Examples of PPE
 - a. Safety glasses
 - b. Gloves
 - c. Closed-toed shoes
 - d. Hair ties
 - e. Ear plugs

Those are all perfect examples of different items that are used as **personal protective equipment**. It is good to know the different types of PPE but it is even more important to know how to properly use PPE. In order to do this, hazards must first be identified. After identifying hazards, you can



then select the PPE that will help protect you from the hazards. Think about the different learning environments we have here at (say your school name). (Pause for five seconds) What are some possible hazards in these locations? (Pause for 10 seconds) Who will provide an answer?

Allow students to share their responses. If no students volunteer, prompt responses by giving a few examples of your own, such as dropping a hammer in the agricultural mechanics lab or getting scratched by an animal in the small animal lab. Then, pose the question:

Great! Now, let's consider the hazards that were just listed. (Pause for five seconds) What are some examples of **personal protective equipment** that could be used to protect from the hazards? (Pause for five seconds) Who will share an answer?

Allow students to share their responses. If no students volunteer, prompt responses by giving a few examples of your own, such as wearing closed-toed shoes in the agricultural mechanics lab or gloves in the small animal lab.

B. Proper use of PPE

1. Identify hazards
2. Select PPE that will offer protection from hazards

Those are excellent answers. Being aware of hazards and knowing how to protect ourselves from hazards will definitely decrease the risk of injury in the learning environment.

Review/Summary

Prior to the review, each student should be given three blank index cards. The student should color one green, one yellow, and one red with the markers provided. You will ask questions and students will hold up a green card if they are confident that they know the correct answer, a yellow card if they have an idea of what the answer might be, or a red card if they have no idea and are certain they would miss the question on a test. After visually assessing the responses, you will select students to answer the question. It is important to not only call on students who hold up a green card to answer. If you call on a student holding a yellow card, you could phrase it by saying, "insert student name, what do you think might be an appropriate response?" If you call on a student holding a red card, you could phrase it by saying, "insert student name, what information would help you answer this question?" It is important to call on students regardless of the color card they are holding up because it increases their accountability if they know that they could be called on at any time. After you call upon a student, or students, to answer, you will then provide the correct answer if it was not given or elaborate on the response if necessary.

Today we talked about health and safety policies and procedures in the agriculture learning environment and how to appropriately use personal protective equipment. Now, we are going to have a short review of these topics. I will be asking questions related to today's lesson. For this review, you will need your green, yellow, and red index cards. When I finish asking a question, you will hold up the green card if you are confident that that you know the correct answer, a yellow card if you have an idea of what the answer might be, or a red card if you have no idea of the answer and are certain you would miss the question on a test. What color will you hold up if you know the answer? Students should respond with "green." What color will you hold up if you have an idea of what the answer might be? Students should respond with "yellow." If you are certain that you do not know the answer, what color will you hold up? Students should respond with "red." Excellent. Once all cards are held up, I will then call on someone to help answer the question. What questions are there? Now we will begin.

This is the first question. If someone wants to decrease the risk of potential harm from hazards in the learning or working environment, what could this person do?



Lesson Number: MS.IAS.1.1

Middle School Food and Agricultural Literacy Curriculum

Safety First

The correct response needs to include that someone should follow policies and procedures and wear the appropriate PPE

Excellent! Next question: What do the letters PPE represent?

The correct response is personal protective equipment.

Fantastic! Now, what does personal protective equipment do?

The correct response is that it protects an individual from potential harm or hazards in the working environment.

Great job! How effective is PPE in protecting someone from potential harm?

The correct response is that PPE has limits of protection – it can decrease the risk of potential harm and possibly lessen the harm, but it can not fully prevent harm.

Finally, what are some examples of PPE?

There are many correct responses to this question. Correct responses might include gloves, glasses, shoes, aprons, hair ties, etc. As the teacher, determine correct and incorrect answers.

Fantastic! Today, we have identified many different locations where we will learn other than in the classroom. Also, we created a list of safety policies and procedures for each of these learning environments. We discussed personal protective equipment and some of you demonstrated how to properly wear different types of PPE. Additionally, we identified why types of PPE would be needed in various situations. Safety policies and procedures in the learning and working environment are very important for your health and safety. Knowing how to use different types of PPE is equally important. As we progress throughout this class, be mindful of the safety policies and procedures that we developed today so that we can all have a safe and successful experience.

Application

Extended classroom activity:

Students can write a short fiction story about a potential situation in the agriculture class where safety policies and procedures were not followed, outlining what procedure was not followed and what the consequences of not following the procedure were. Select various students to share their story with the class.

FFA activity:

Invite a guest speaker (such as the school nurse or a local industry professional) to discuss the importance of having safety policies and procedures in the work place at the FFA chapter meeting.

SAE activity:

As an exploratory SAE, students can interview an agricultural industry professional, such as a greenhouse worker or a veterinarian, about safety policies and procedures and PPE used in their respective line of work.

Evaluation

MS.IAS.1.1.ASSESS.A.

Answers to Evaluation

1. b
2. a
3. d
4. c
5. b



Safety

Why is safety important?

- Decrease the risk of potential harm to yourself or others
- Taking safety precautions regularly may result in good safety habits

Different types of learning environments

- Classroom
- Agricultural Shop
- Greenhouse
- Small Animal Laboratory
- Biotechnology / Science Laboratory
- Farm / Livestock Laboratory
- Computer Laboratory
- Outdoor Classroom

Safety policies and procedures

- Different policies and procedures are required for different situations and locations
- Policies and procedures include wearing the appropriate clothing, using equipment properly, and adhering to the specific rules of each learning environment



Small Animal Lab Policies and Procedures

- Always wear closed-toed shoes when working in the small animal laboratory.
- Hands should be washed before and after touching any animal in the laboratory to prevent the spread of disease.
- Use caution when removing animals from cages – wear work gloves if the animal is known for biting (rats, snakes, etc.)
- When brushing, clipping, or bathing animals, a grooming smock should be worn to repel fur.
- Always have at least one additional person in the small animal lab with you at all times – never work alone.
- Double check the latches on cages before leaving the small animal lab.
- All pet food containers will have the lids fastened tightly.
- The grooming cabinet should be kept neat and clean at all times.
- At the end of the day, the lights in the small animal lab need to be switched off.



PPE

Personal protective equipment: items worn to protect an individual from potential harm or hazards in a working environment

- **Examples of PPE**
- **Safety glasses**
- **Gloves**
- **Closed-toed shoes**
- **Hair ties**
- **Ear plugs**

Proper use of PPE

- **Identify hazards**
- **Select PPE that will offer protection from hazards**



Name _____

Directions: Reach each statement and decide whether it is true or false.

1. ____ **PPE will always protect an individual from harm.**
 - a. True
 - b. False
2. ____ **Safety policies and procedures are important in all learning environments.**
 - a. True
 - b. False

Directions: Read each question and circle the response that best answers the question.

3. ____ **Related to safety policies and procedures in the learning environment, what do the letters PPE represent?**
 - a. Protective personal equipment
 - b. Personal performance equipment
 - c. Performance protective equipment
 - d. Personal protective equipment
4. ____ **What should someone do in order to decrease the potential for harm in a working environment?**
 - a. Follow all policies and procedures
 - b. Wear the appropriate PPE for specific tasks
 - c. Both a. and b.
 - d. Neither a. nor b.
5. ____ **Which of the following would NOT be an example of PPE?**
 - a. Gloves
 - b. Pencil
 - c. Glasses
 - d. Shoes