



Lesson AHS.14

EMBRACING EMERGING TECHNOLOGY IN THE WORKPLACE

Unit. Stage One of Development—Me

Problem Area. What Skills Do I Need for a Lifetime of Leadership, Personal Growth and Career Success?

Precepts. **F4:** Adapt to emerging technologies

O1: Embraces Emerging Technology in the Workplace.

National Standards. NL-ENG.K-12.8 — Students use a variety of technological and information resources to gather and synthesize information and to create and communicate knowledge.



Student Learning Objectives. As a result of this lesson, the student will ...

- 1 Analyze the advantages and disadvantages of emerging technologies in agricultural industries.
- 2 Develop the skills to intelligently research and select the appropriate technology to complete a task.



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Time. Instruction time for this lesson: 50 minutes.



Resources

National FFA Organization's Local Program Resource Guide, 2002–2003.



Tools, Equipment, and Supplies

- ✓ Writing Surface
- ✓ Student Notebook—one per student
- ✓ Overhead Projector
- ✓ AHS.14.TM.A
- ✓ AHS.14.TM.B
- ✓ AHS.14.TM.C
- ✓ AHS.14.Assess—one per student

Key Terms. The following terms are presented in this lesson and appear in bold italics:

- ▶ ***Life-long learner***
- ▶ ***New technology***



Interest Approach



Never has the workplace world been changing so fast. You are privileged in one way and hindered in another with this change. Our lesson today will help us discover some of the new technologies in the agriculture or agribusiness workplace and how we can embrace instead of fear or resist, the changes that are taking place. Let's look at this transparency.

Place transparency AHS.14.TM.A on the overhead.



The Student's Dilemma: "Schools are attempting to educate students today so they will be able to solve future problems that do not even exist today using personal and workplace technologies that have not yet been invented based on scientific knowledge not yet discovered." Pause.



Think about this: You have to learn how to solve problems that haven't occurred yet; you will have to use technologies that haven't been invented, while using scientific knowledge that hasn't even been discovered yet. That is a dilemma for you as a student and for us as a school. What should we help you learn and why?



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SUMMARY OF CONTENT AND TEACHING STRATEGIES

Objective 1. Analyze the advantages and disadvantages of current emerging technologies in agricultural industries.

Pause and go to the writing surface and solicit answers from the class. Use the Brainstorming Process. Answers may vary from: "Why learn anything then." to what they learned in Lesson 13 about the SCANS skills, "How to find, interpret, store, and report information." Students should also get to "Learning How to Learn" and the ability and desire to be a "Life-Long Learner." After you have a list that contains many of the broad skills and competencies as listed in Lesson 13,

you can summarize and discuss them for a short time. Students may recognize that some of their classes may be “suspect” when it comes to what is being taught or learned and what you have on the writing surface. Move on to AHS.14.TM.B.

I. **New technology** is personal and workforce technology that has just been or is in the process of being invented, based on the newest scientific knowledge.



Look at this overhead. “It is common knowledge that the average digital watch on your wrist has more computing power than existed on our entire planet prior to 1960.” Only 40+ years is fast for technology change. Ask your parents or grandparents what it was like in the years of early technology development and about the changes that have taken place. The scary, yet exciting, thing is that change is taking place at a faster rate today, and it will be even faster next year. You have to be ready to accept and use the change in technology, and ready and excited about learning how to use the newly developed technological equipment and scientific knowledge.

Pause. Move on to an “Eyewitness News Moment.” Ask the students to divide into groups of three and use their notebooks to record the news reports on changes in technology in agriculture or agribusiness from a few years ago to now, and what they predict ten years from now.



Separate yourselves into groups of three.



Take out your notebooks and label the top of the page with “Technology Changes in the Workplace.” Then make three columns in your notebook and label the first column “Ten + Years Ago.” Label the second column “Today’s Technology” and the last column “Ten Years from Now.” Break into your groups of three.

Pause.



Think to yourself, without talking, about a technology in the agricultural or agribusiness workplace that is of interest to you and has changed over the last ten years. Then think about what it may be like in ten years.

Eyewitness News Moment.





You will play the role of an interviewer for a news broadcast and interview one member of your group about the technology change. Record the information in the three columns of your notebooks. You will have to report back from your notes. You have five minutes for all three of you to be interviewed. You can begin.

Wander around the class and answer questions. After five minutes, you should bring this activity to a close by placing the three columns on the writing surface. Ask the students to report unique and exciting technology changes that the other students reported. If needed, call on some of the students to complete the exercise. Ask the students to record the responses in their notebooks.



Stop. Who wants to report on your interview information?

Pause and wait for responses and record them on the writing surface. You may want to be prepared to add some information of your own to the chart. After you have recorded the responses from the students, summarize and emphasize the changes that have taken place and the predicted changes for the future.



That is some change that you have predicted. How are we going to handle that kind of change in the workplace? Anyone want to speculate that the changes will be much greater than this in the next ten years? Remember, industry is using technology to develop new technology, and it is happening at an ever-increasing rate. However we look at it, change is moving fast and you have to be prepared to handle it. How can we be sure we will be ready?

Use Transparency AHS.14.TM.A again. Read it again aloud and then make the appropriate emphasis on the students' preparation for the unknown future.

A. The Student's Dilemma

1. "Schools are attempting to educate students today so they will be able to solve future problems that do not even exist today using personal and workplace technologies that have not yet been invented based on scientific knowledge not yet discovered."

Objective 2. Develop the skills to intelligently research and select the appropriate technology to complete a task.

Place AHS.14.TM.C, "Successfully Embracing New Technology," on the overhead. Students will be asked to get the information in their notebooks a little later in the lesson.



For now, just look up here and follow along on the transparency. You will have time later to get this information in your notes.

II. Successfully embracing new technology



Let's see how we can do this.

A. Change is inevitable



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Do any of you believe that the development of new technology is going to stop or even slow down?

Pause.



Therefore, you have to prepare for new and better technology. It is not necessary to embrace all **new technology** just because it is new. You will need to research the advantages and disadvantages of the new technology and determine how it will affect your company.

B. Be a *life-long learner*



You should recognize by now that, with as fast as the world is changing, you must be willing to learn new things every day. If you are unwilling to keep learning after high school, by not attending post-secondary studies, workshops, seminars, and on-the-job learning, you will be left behind.

1. Keep abreast and gain knowledge



New knowledge and technology will come at an increasingly rapid rate. You will be responsible to learn for the rest of your life.

2. Share information with colleagues



In the new workplace, you will be working with teams and will need to share the new knowledge

and technologies. You and your team will make decisions about technology, enhancements, and workplace efficiencies.

C. Keep a positive attitude toward change



Remember that we have all agreed that change is inevitable. We also know that all change in new technology is not necessarily the best for your workplace at the moment. However, you must be able to analyze and determine the appropriateness of change for your organization.

D. Be a leader in matching new technology to workplace needs



Successful workers will be leaders in determining if new technology is a match for the company's needs.



Review/Summary

Review the transparency AHS.14.TM.C. Spend time with students getting this information in their notebooks. More information can be found in Lessons 15 and 16 on the subject of change and handling change. These lessons will help students understand and cope with change.

At this time pass out AHS.14.Assess.



Application

►Extended Classroom Activity:

Review magazines for information relating to new technology in the field of agriculture or agribusiness, including the fields of biotechnology and genomic science. If it fits into your schedule and you have the materials available, the students could do a report on new technologies in bioscience and hand it in for credit.

► FFA Activity:

Students and FFA officers can look at the technology that the chapter owns and the technology that is available in the agricultural education department and make recommendations at an FFA meeting for the implementation of new appropriate technologies.

► SAE Activity:

Have students study the changes in technology in the workplace and ask to become involved in the process of technology research and changes in their SAE workplace.

✓ Evaluation

AHS.14.Assess

Students could be assigned to pick one area of technology change in the workplace and develop a paper on past and predicted changes.

Answers to Assessment:

All answers are subjective and individualized. Content for the answers can be found in the transparencies and below.

What does this statement mean, “Change is inevitable?”

Potential Answers: Change is going on all the time in all aspects of our lives. We grow, hair grows, cars change, technology changes, weather changes, seasons change, and teachers and parents change. Without change there would be no life and no improvements. Without change everything would remain exactly the same. We would be in a state of suspended animation.

How will you become a “life-long learner?”

Potential answers: I will learn how to learn. I will have to learn all the rest of my life. I will go to school, and take employer-offered service and training. I will go to school on my own when I am older I will read as much as I can, and I will do research on the Internet.



What procedure would you use to match emerging technology with workplace needs?

Potential answers: be life-long learner. Keep abreast and gain knowledge. Share information with colleagues. Keep a positive attitude toward change. Be a leader in matching new technology to workplace needs.

Does your agricultural education department make a positive difference in your and others' lives by developing your potential for premier leadership, personal growth, and career success? How?

Anticipated answers will vary: There is no right answer, but the "how" answer is important.



AHS.14.Assess Name: _____

EMBRACING EMERGING TECHNOLOGY IN THE WORKPLACE

► Essay Questions

What does this statement mean, "Change is inevitable?"

How will you become a "life-long learner?"

What procedure would you use to match emerging technology with workplace needs?

Does your agricultural education department make a positive difference in your and others' lives by developing your potential for premier leadership, personal growth, and career success? How?



AHS.14.TM.A

THE STUDENT'S DILEMMA

“Schools are attempting to educate students today so they will be able to solve future problems that do not even exist today using personal and workplace technologies that have not yet been invented based on scientific knowledge not yet discovered.”



AHS.14.TM.B

“It is common knowledge that the average digital watch on your wrist has more computing power than existed on our entire planet prior to 1960.”



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AHS.14.TM.C

**SUCCESSFULLY EMBRACING
NEW TECHNOLOGY**

◆ **Change is inevitable.**

- ◆ **Be a life-long learner.**
- ◆ **Keep abreast and gain knowledge.**
- ◆ **Share information with colleagues.**
- ◆ **Keep a positive attitude toward change.**
- ◆ **Be a leader in matching new technology to workplace needs.**

