

# Sustainability in the Southern High Plains

## Identification

**Unit Topic:** Sustainable Agriculture in the Southern High Plains

**Lesson Title:** Describing Innovation and Diffusion Systems

## Objectives (TSWBAT– The student will be able to...)

- Given a brief description of innovation and diffusion and given an innovation diffusion case study, define an innovation, diffusion, and adoption.
- Given definitions of innovations, diffusion, and adoption and reference to the Texas Tech research project, identify the innovation, the target diffusion population, and what adoption means in reference to the Texas Tech research project.
- Given the five levels in the innovation-decision process, give a brief definition of each that applies to West Texas.
- Given the five levels in the innovation-decision process, list where information would be gathered in each level and determine at which times in a time line information would be gathered at each stage.
- Draw a time line, placing the five levels of the innovation-decision process in correct order, given descriptions of the innovation-decision process.

## Teaching Materials and Resources (What do you need to bring?)

- Students' integrated crop/livestock system poster from previous class periods
- Empty box (small)
- Calculator

## Teaching Procedures– Preparation, Presentation, Application, Evaluation

### Preparation (Interest Approach/Motivator)

Key Points	Methods
<ul style="list-style-type: none"><li>– Bring in the empty box and put in it a simple calculator.</li><li>– Put the box in the center of the room and do not let students look inside the box, just let them wonder about what's in the box.</li></ul>	<ul style="list-style-type: none"><li>– Teacher-led activity.</li><li>– Preferably bring a small box.</li></ul>

– Tell them that in the box is a new supercomputer that serves as a GPS tracking device, a computer with wireless Internet, a fax machine, phone, digital camera, and a laser jet printer.

– Now ask if anyone wants one.

– Ask what they need to know about the product if they are going to get one. What do they need to know before they spend money on this project?

– They need to have some knowledge about this product, so tell them that it costs \$1,000, has 256 MB of RAM, 30 GB hard-drive, a Cannon digital camera, and an HP Laser Jet printer.

– Now that they have some information, ask what attitudes were formed about the new product.

– Explain that attitudes can dictate whether or not to buy a product.

– What if some were leery of buying the product. Would it take some persuasion?

– What could I say to make the product more attractive? What would persuade you to buy this new innovation? Lead into the lesson by explaining that this supercomputer is just like other new inventions.

– Today we will discuss

– Innovations, diffusion, and adoption

– Innovations, diffusion, and adoption as it applies to the Texas Tech research project

– Really try to sell them on how great and wonderful this new invention is.

– Anticipated responses:

-How much does it cost?

-Can we see it?

-We need to see if it works.

-How do you fit it all in a little space?

-What kind of computer does it have?

-Does it work?

– Try to answer all of the questions that they ask about the product; if you don't know some answers then just tell them you don't understand how that part works.

– Ask several students about their initial attitudes of the product.

– Teacher lecture: use a personal example.

– Teacher-led questioning.

– Write responses on board.

– Review objectives.

- The five levels of the innovation-decision process
- Information needed in the five levels of the process.

**Presentation (The Content)**

<p><b>Key Points</b></p> <ul style="list-style-type: none"> <li>- Begin by giving a description of an innovation, diffusion, and adoption.</li> <li>- Read through the diffusion example in the student workbook with the students identifying the following in the reading: <ul style="list-style-type: none"> <li>- The innovation</li> <li>- The target population the innovation is aimed at</li> <li>- The person marketing the innovation</li> <li>- Key people in the diffusion process</li> </ul> </li> <li>- Ask students to think back to the Texas Tech research project and have them identify the following: <ul style="list-style-type: none"> <li>- The innovation</li> <li>- The target population the innovation is aimed at</li> <li>- The person marketing the innovation</li> <li>- Key people in the diffusion process</li> </ul> </li> <li>- Give the five levels of the innovation-decision process and begin a class discussion about why each step is important and crucial in the adoption process.</li> <li>- Then ask the students to tell where information would be gathered in each level, and what time in the adoption process that information needed to be gathered.</li> <li>- On the chalkboard, draw a horizontal line and ask students to come up and place on the line where each level of the innovation-decision process would occur in the decision process.</li> </ul>	<p><b>Methods</b></p> <ul style="list-style-type: none"> <li>- Teacher lecture, examples are found in the teacher manual, feel free to use personal examples.</li> <li>- Ask different students to read different parts of the example found in the student workbook. Write responses on the board.</li> <li>- Teacher-led questioning. Write responses on board. Ask for any questions or discussion.</li> <li>- Give each level, a short description, then ask for discussion on each level.</li> <li>- Teacher questioning.</li> <li>- Student participation.</li> </ul>
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**Application (What will they do with what you taught?)**

<p><b>Key Points</b></p> <ul style="list-style-type: none"> <li>- Ask students to assume the role of the person marketing their idea of an integrated crop/livestock system.</li> </ul>	<p><b>Methods</b></p> <ul style="list-style-type: none"> <li>- Give each student back their poster board.</li> </ul>
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<ul style="list-style-type: none"> <li>– Have them list on the back of their poster boards what they would do to try to get West Texas farmers to adopt their new idea.</li> </ul>	<ul style="list-style-type: none"> <li>– Concentrate on the five levels of the process.</li> </ul>
<ul style="list-style-type: none"> <li>– Have them concentrate on the five levels of the innovation-decision process that they just learned in marketing their idea.</li> </ul>	<ul style="list-style-type: none"> <li>– Open discussion and ask some students their ideas on marketing their idea.</li> </ul>

**Evaluation (How do you know they learned it?)**

<p><b>Key Points</b></p> <ul style="list-style-type: none"> <li>– What is a diffusion process?</li> <li>– What is an innovation?</li> <li>– What is adoption?</li> <li>– What was the innovation, population, and person marketing the Texas Tech research project?</li> <li>– What are the five levels in the innovation-decision process in order?</li> <li>– Lead into how adopters of an innovation fall into certain categories. Tell how knowing these categories can help in getting people to adopt your new idea. Certain people have certain characteristics that place them into different adopter categories.</li> </ul>	<p><b>Methods</b></p> <ul style="list-style-type: none"> <li>– Teacher-led oral questioning.</li> <li>– Summary, lead-in for tomorrow.</li> </ul>
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