

# Sustainability in the Southern High Plains

## Identification

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

**Lesson Title:** Components of the Texas Tech Research Project

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

- Given a description of crops used in the project, list what each crop will provide to the system.
- Given a description of the types of cattle used, list and describe what benefits cattle will contribute to the system.
- Given project results, list the three main benefits that the research project has identified with no errors.

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

- 4-5 neck ties, scarves, or any other fashion accessory. Some accessories should be preferably neutral in color and some wild in color
- Students' posters from previous day
- Markers, crayons, or colored pencils

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

### **Preparation (Interest Approach/Motivator)**

<p>Key Points</p> <ul style="list-style-type: none"><li>– Match each different accessory with the shirt that the instructor is wearing that day.</li><li>– Demonstrate that some accessories match quite well, while others are really off the wall.</li><li>– Why do some accessories go will together while others do not?</li><li>– The shirt and the accessories each have different qualities.</li></ul>	<p>Methods</p> <ul style="list-style-type: none"><li>– Teacher demonstration.</li> <li>– Teacher-led questioning.</li></ul>
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<ul style="list-style-type: none"> <li>- Today we will discuss: <ul style="list-style-type: none"> <li>- Different crops used in the system</li> <li>- The benefits of cattle to the system</li> <li>- Results of the research project</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Review objectives.</li> </ul>
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**Presentation (The Meat)**

<p><b>Key Points</b></p> <ul style="list-style-type: none"> <li>- Begin description of each crop stating the use of each crop, and what each crop will contribute to the project. <ul style="list-style-type: none"> <li>- Cotton</li> <li>- Rye</li> <li>- Sorghum</li> <li>- Bluestem</li> <li>- Wheat</li> </ul> </li> <li>- Describe the cattle used in the system and what they will contribute to the system.</li> <li>- Discuss results of the project, identifying the top three positive outcomes of the project</li> </ul>	<p><b>Methods</b></p> <ul style="list-style-type: none"> <li>- Chalkboard presentation; show example of a table to use in taking notes on each crop description.</li> <li>- Continue table on chalkboard, adding a column for cattle.</li> <li>- Show, using graphs in the student workbook, the positive results of the project.</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>- Using students' posters from last class period, continue to have students work on their posters. Encourage students to develop new projects after being taught the benefits of each crop. Encourage students to continually modify their design.</li> </ul>	<p><b>Methods</b></p> <ul style="list-style-type: none"> <li>- Give back posters and markers.</li> </ul>
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**Evaluation (How do you know they learned it?)**

<p><b>Key Points</b></p> <ul style="list-style-type: none"> <li>- Orally discuss crops that will be used and the qualities of each crop used.</li> <li>- Why are cattle used?</li> <li>- Ask each student if they think their project could actually</li> </ul>	<p><b>Methods</b></p> <ul style="list-style-type: none"> <li>- Oral questioning.</li> </ul>
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– Transition into Phase II of the project, explaining that even though positive results were achieved the project can always improve.	– Summary- lead-in for tomorrow.
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