

Soil Science Curriculum – Teacher Reference Unit

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### ***Need for the Idea***

Soil science is an integral component in the Agricultural Education curriculum. Agricultural instructors are in need of a user-friendly resource, which challenges students academically and provides real life applications. Along with well prepared lesson plans, activities, and assessments, the soil science curriculum must also integrate science. With the development of the standardized testing, it is essential that agricultural education programs teach their students science concepts and allow the students to apply their new knowledge in real life situations.

### ***Methodology***

Before the creation of the teacher reference unit could begin, current soil science curriculum was reviewed. The creation of the curriculum included all the components of a teacher friendly lesson, crosswalks to meet current (State) Department of Education standards, and an Agriscience curriculum with science integration.

Procedures followed in order to complete this project include:

1. **Selection of Topic:** The Soil Science Department wanted to develop a more current soil science curriculum for the (State) agricultural educators.
2. **Selection of Design Team:** The design team consisted of professors from the Soil Water and Environmental Science and Agricultural Education Departments.
3. **Review of Literature:** Available soil science materials were reviewed for their effectiveness within secondary level agricultural education classes.
4. **Creation of Teacher Reference Unit Objectives:** The unit objectives were created based on the content suggested by the design team, the (State) Standards, and the needs of the students.
5. **Development of Teacher Reference Unit (TRU):** Lesson plans were developed for the Soil Science Teacher Reference Unit.
6. **Draft Proposal:** The draft of the soil science teacher reference unit was given to the design team for review.
7. **Review of TRU:** Fellow agricultural educators were given copies of the Soil Science TRU for editing.
8. **Evaluation of TRU Review:** The edits were reviewed; changes were made accordingly.
9. **Approval of TRU:** The design team was given a copy of the revised TRU for approval.
10. **Publishing and Implementation of TRU:** The design team recommended publishing.

### ***Results and Implications***

A Soil Science Teacher Reference Unit was created to guide Agricultural Educators in their soil science instruction. The unit contains 18 lesson plans and a final assessment. Each lesson plan includes Agriscience and science standards, objectives, resources, materials needed, key terms, an interest approach, scripting, content, activities, note sheets, applications, lab activities, and quizzes. The Soil Science Teacher Reference Unit benefits agricultural educators by providing them with lesson plans in a familiar format, addressing Agriscience and science standards, and

contains the latest technological and scientific advances. The curriculum benefits students by providing them with the opportunity to understand science through agricultural applications.

### ***Future Plans***

The Soil Science Teacher Reference Unit will need to be continually reviewed and updated as standards change, advancements in technology occurs, and improvements are revealed.

### ***Costs/Resources Needed***

Costs for the project included CD purchases, printing of CD labels, and CD covers. Resources included eight soil science chapters written by three soil science professors at the University of (State), the (State) Agricultural Teacher's Association's (AATA) lesson plans for formatting, the state soil science career development event materials, and E-moments.

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