



Application for
Agricultural Sustainable Energy Education Network (ASEEN) Program
Teacher Professional Development Summer Workshop

Funded by United States Department of Agriculture (USDA)
and Sam Houston State University

in Partnership with the Vocational Agriculture Teachers Association of Texas
and Houston Community College

We would like to invite you to participate in a unique professional development opportunity offered by the Sam Houston State University Department of Agricultural and Industrial Sciences and the United States Department of Agriculture.

ASEEN is a three years project to promote sustainable energy education in K-12 schools by offering educational summer camps (certification will be available) to teachers and provide sufficient information such as related modules, course documents, online resources etc. The target teachers will be agriculture and science teachers. Educational materials and training will focus on STEM education as related to sustainable energy. The Department of Agricultural and Industrial Sciences will work with experts from business and industry, as well as curriculum experts to develop sustainable energy educational materials and offer training to teachers in rural schools. The intent is to train 60 teachers over a three year period and for the teachers to utilize their knowledge and skills to deliver science, math and technology skills to their students. Educational Materials will be available to teachers through the ASEEN web site.

Benefits:

1. Each participating district will receive \$2000 - \$2500 of supplies and equipment.
2. Each participating teacher will receive \$1250 for attending the training and completing a fall and spring activity (participants will be responsible for their travel expenses).

Basic Requirements for Participation

1. AFNR and Science teacher must both participate in the professional development program on the SHSU Campus from June 8 to 12, 2015.
2. Currently work in a 1A, 2A, 3A, 4A school district with a largely rural population.
3. It is preferred that both teachers have between 3 and 15 years of teaching experience in Texas high schools, although others will be considered.
4. The teachers must commit to teaching across curriculum units and information sessions on Agricultural Sustainable Energy, energy safety and conservation and promote STEM education.
5. The teachers must commit to completing a school-wide energy audit with student involvement.

WORKSHOP – June 8-12, 2015

TOPICS	TENTATIVE ACTIVITIES, PROJECTS & TOURS
1. The Role of Energy in Agriculture a. Traditional Energy Use & Energy Efficiency b. Energy, Food Security & Safeguarding Natural Resources c. Energy Transformation	*Presentation & Group Discussion
2. Energy Conservation a. Green Building b. Energy Infrastructure and Best Practices	*Tour – Green Building Resource Center
3. Renewable Energy a. Defining & Rational for Renewable Energy b. Energy Basics - Energy Distribution & Storage	*Presentation
4. Solar Energy a. Introduction, History & Concepts b. Solar PV Applications & Infrastructure Costs c. Pros & Cons of Solar Energy	*Interactive Electronic-Based Laboratory Demonstrations *Sun Tracker Kit and Solar Oven Kit
5. Geothermal Energy a. Introduction, History & Concepts b. Geothermal Applications & Infrastructure Costs c. Pros and Cons of Geothermal Energy	*Geothermal Energy Kit
6. Wind Energy a. Introduction, History & Concepts b. Wind Power Applications & Infrastructure Cost c. Pros and Cons of Wind Energy	*Wind Energy Kit
7. Hydropower Energy a. Introduction, History & Concepts b. Hydropower Applications & Infrastructure Cost c. Pros and Cons of Hydro	*Building Hydropower Models
8. Biofuels – Biomass & Bioenergy a. Introduction, History & Concepts of Biomass and Bioenergy b. Biofuel Applications & Infrastructure Cost c. Pros and Cons of Biofuels	*Tour – Lone Star College Biotechnology Institute
9. Alternative Energy Use in Agriculture & Rural Communities a. Solar b. Geothermal c. Wind d. Hydropower e. Biofuels	*Presentation & Group Discussion
10. Conducting Energy Audits	*Presentation by industry expert

AFNR Teacher Information

First & Last Name	
Position	
Email Address	
Phone	
Address	
City/town	
County	
State	
Zip Code	

Introductory statement [explain why you are interested in participating in this program]

AFNR Teacher Demographics

Which VATAT/FFA Administrative Area will you work during F13 & Sp14? [check box]

- | | | | | |
|-------------------------------|--------------------------------|-------------------------------|--------------------------------|-------------------------------|
| <input type="radio"/> Area I | <input type="radio"/> Area III | <input type="radio"/> Area V | <input type="radio"/> Area VII | <input type="radio"/> Area IX |
| <input type="radio"/> Area II | <input type="radio"/> Area IV | <input type="radio"/> Area VI | <input type="radio"/> Area IIX | <input type="radio"/> Area X |

How many years of Agricultural teaching have you completed? _____ - years

Which of these degrees have you earned?
[check box]

What is your gender?
[check box]

- | | | | |
|--------------------------|---------------------------|---------------------------|------------------------------|
| <input type="radio"/> BA | <input type="radio"/> MS | <input type="radio"/> PhD | <input type="radio"/> Female |
| <input type="radio"/> BS | <input type="radio"/> MEd | <input type="radio"/> EdD | <input type="radio"/> Male |

Which of the following best describes your teacher preparation program? [check box]

- Traditional teacher certification in a field of Agriculture with teacher certification
- Traditional teacher certification program in a non-Agriculture field
 {later certified in Agriculture by testing}
- Alternative certification program
- Other – Explain: _____

What is your ethnicity?

- | | | |
|--|---------------------------------------|--|
| <input type="radio"/> Asian | <input type="radio"/> Hispanic/Latino | <input type="radio"/> Native Hawaiian/
Other Pacific Islander |
| <input type="radio"/> Black/African American | <input type="radio"/> Mixed Ethnicity | <input type="radio"/> Other _ |
| <input type="radio"/> Caucasian | <input type="radio"/> Native American | |

From which university did you complete your Bachelor's Degree? _

From which university did you complete your Master's Degree? _

Or - If you do not have a masters circle: N/A

Science Teacher Information

First & Last Name	
Position	
Email Address	
Phone	
Address	
City/town	
County	
State	
Zip Code	

Introductory statement [explain why you are interested in participating in this program]

Science Teacher Demographics

How many years of Agricultural teaching have you completed? _____ - years

Which of these degrees have you earned?
[check box]

What is your gender?
[check box]

BA

MS

PhD

Female

BS

MEd

EdD

Male

Which of the following best describes your teacher preparation program? [check box]

Traditional teacher certification in a field of Science with teacher certification

Traditional teacher certification program in a non-Science field
{later certified in Science field by testing}

Alternative certification program

Other – Explain:

What is your ethnicity?

Asian

Hispanic/Latino

Native Hawaiian/
Other Pacific Islander

Black/African American

Mixed Ethnicity

Caucasian

Native American

Other _

From which university did you complete your Bachelor's Degree? _

From which university did you complete your Master's Degree?

Or - If you do not have a masters circle: N/A

Please list the fields of Science you are certified to teach:

School District Information		
District Name		
High School Name		
School: Address		
School: City/town		
School: County		
School: State		Zip Code:
Checklist for Required Documents	<i>ALL ANSWERS SHOULD BE YES</i>	
AFNR Teacher Resume is attached.	O - YES	O - NO
AFNR Teacher Information page is completed.	O - YES	O - NO
AFNR Teacher Demographics page is completed.	O - YES	O - NO
Science Teacher Resume is attached.	O - YES	O - NO
Science Teacher Information page is completed.	O - YES	O - NO
Science Teacher Demographics page is completed.	O - YES	O - NO
Participation Statement and Signature Page	O - YES	O - NO

Signature Page

By signing this document you are indicating that both the

AFNR Teacher _____

[print name above]

and the Science Teacher _____

[print name above]

and the School Administrator _____

[print name above]

will complete the following:

- ✓ Participate in the June 8-12, 2015 ASEEN Professional Development Workshop on campus at Sam Houston State University in Huntsville, Texas.
- ✓ Present lessons on alternative energy in agriculture.
- ✓ Complete an energy audit with assistance from students.
- ✓ Manage, maintain and inventory equipment given to the AFNR program.
- ✓ Submit surveys as requested by the ASEEN staff.

Required Signatures

Signature of AFNR Teacher: _____ Date: _____

Signature of Science Teacher: _____ Date: _____

Signature of School Administrator: _____ Date: _____

If you have questions or concerns please contact:

Dr. Doug Ulrich at (936)294-1188 or dullrich@shsu.edu

Submit your application to:

Sam Houston State University
Dept of Agricultural and Industrial Sciences
ASEEN Project
PO Box 2088
Huntsville, Texas 77341

OR

Email to: dullrich@shsu.edu

OR

Fax to: (936)294-1232

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