Outline

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Leadership Team

Administration and Teacher Counselors

- **Administration**
  - Maureen McCann, Director
  - Pankaj Sharma, Managing Director
  - Tolulope Omotoso, Special Project Assistant
  - Jill Wable, Administrative Assistant
  - Peggy Favorite, Project Coordinator
  - Kathy Walters, Senior Conference Coordinator

- **Teacher Counselors**
  - Gerald (Jerry) Krockover, in-charge for Teacher Project
  - Sally Bane, in-charge for student projects
  - DaNel Hogan, US-Department of Energy
  - Nancy Franke, St. Peter's Lutheran School
Leadership Team

Advisory Board

- Jim Sublett, Duke Energy
- Kevin Johnston, Duke Energy
- DaNel Hogan, US Department of Energy
- Nancy Franke, St. Peter's Lutheran School

- Maureen McCann, Purdue
- Pankaj Sharma, Purdue
- Gerald (Jerry) Krockover, Purdue
- Sally Bane, Purdue
Decreasing Biodiversity Due to Land Use Change

Ecosystem Services

Leadership Team

Student Counselors

1. Anthony Covarrubias, Undergraduate Civil Engineering
2. Anthony Wurl, Undergraduate, Nuclear Engineering
3. Anuradha Bhat, Graduate, Chemical Engineering
4. Ashlee Esson, Undergraduate, Electrical Engineering
5. Christine McKee, Undergraduate, Mechanical Engineering
6. Evelyn Zaleski, Undergraduate, Agricultural and Biological Engineering
7. John Schultz, Graduate, Communication
8. Joseph Avellano, Undergraduate, Aeronautics Engineering
9. Lowell Knight, Senior, West Lafayette High School
10. Martha Burris, Undergraduate, Organizational Leadership
11. Meher Taleyarkhan, Undergraduate, Mechanical Engineering Technology
12. Toba Omotilewa, Graduate, Civil Engineering
13. Vivien Lai, Undergraduate, Biological Sciences
Objectives

- To inspire teachers to communicate the importance of Science, Technology, Engineering and Mathematics (STEM) and energy scholarship in their class rooms, and to provide them with resources and incentives.

- To inspire students to enter the STEM pipeline and to consider energy-related fields in their educational and professional career goals.

- Tours
- Lectures
- Hands on
- Projects
- Quiz
Inspiration: Talks Lectures
Industry Leaders

- Jim Rogers
  CEO of Duke Energy
- Craig Marchino
  Duke Energy
- James Suciu
  General Electric
- Bob Shannon
  Siemens
- Steve Katsaros
  Nokero International Inc.
- Nick Mathioudakis
  Faegre Baker Daniels
- Teddy Deahl
  Bowen Engineering
- Ed Begley
  Actor and Environmental Activist
Inspiration: Talks/Lectures

Purdue Professors

- Agrawal, Rakesh
  Chemical Engineering
- Boltasseva, Alexandra
  Electrical Engineering
- Boudouris, Bryan
  Chemical Engineering
- Carpita, Nicholas
  Botany and Plant Pathology
- Chen, Jun
  Mechanical Engineering
- Jenkins, Jere
  Nuclear Engineering
- Tyner, Wallace
  Agriculture Engineering
Inspiration: Tours

Purdue Nuclear Reactor

Benton County Wind Farm

Purdue
Discovery Park
Inspiration: Hands on Activities

Wind Blade Challenge

Solar Power Challenge

Siemens Energy Experiment Kit
Workshop for Resources

Sponsored by Shell Energy and National Energy Education Development Project

• Conducted by DaNeI Hogan, US Department of Energy

• Workshop will have a variety of hands on activities and projects that teachers can incorporate into their lesson plans and students can learn from.

• Additional resources will be provided to both the students and teachers that desire them.
Groups and Projects

Biomass
- Biocatalysis (Plant Biomass for Biofuels)

Nanoparticles (Thin Film Solar Cells)

Solar
- Dream House (Solar Energy Activity)

Biodiesel

Energy Policy Debate

Solar/Wind Electricity

6/15/2013 The Energy Academy
1. (Yellow/Nanoparticles) *The Science of Thin Film Cu$_2$ZnSn(S,Se)$_4$ (CZTS) Solar Cells: Synthesis, Fabrication, and Characterization*

2. (Yellow/Dream House) *Adopting Photovoltaics for Your House and Energy Audit*

3. (Green/Biodiesel) *The Development of Biodiesel as an Alternative Fuel for Diesel Engines*

4. (Green/Biocatalysis) *Plant Biomass to Biofuel*

5. (Blue/Electricity) *Wind/Solar Energy: Electrical Concepts*

• You will be given one more assessment at the end of the Energy Academy.
• Filling out assessment and questions are optional
• Please fill out the forms with seriousness and consideration.
• Your opinions matter and will be used to improve the camp in the future
Teacher’s Project
Jerry Krockover, In-charge Teacher Projects

Expectations

• To participate in problem based learning (PBL) experiences.
• To prepare PBL energy experiences for implementation in your teaching situation.
• To utilize the nine components of PBL development.
• To work in teams of four and, use an investigation planning guide.
• To make a 10 minute creative and innovative team presentation on the
• PBL that will be implemented into your teaching situation on Friday, June 21, 2013, between 3:00-4:30 PM.
• To share your success stories for PBL energy implementation during the 2013-14 school year
Expectations

• To learn more about a specific topic in energy science and technology through research, hands-on activities, and data analysis.

• To engage with members of the Purdue community who are conducting research at the forefront of energy science and policy.

• To work as a member of a small team of fellow students and teachers to delve deeply into the project topic.

• To use teamwork to divide jobs so that the project tasks are completed in a timely and efficient manner.

• To make a team presentation on your project topic that integrates the work done both as a team (e.g. experiments/hands-on activities) and by individual team members.
Rules

Tolu Osomoto

General

• All participants must comply with all applicable federal, state, and local laws and all University statutes and regulations while on campus
• All participants must remain groups at all times and participate in all scheduled activities
• Visits to rooms of opposite sex colleagues are not permitted
• Zero tolerance to use of drugs, consumption of alcohol, smoking, possession of firearms and weapons in the residence halls

Tours

• Do not touch anything during the tours without permission
• Clothing exposing body parts to danger should be avoided
• Comfortable closed toe shoes should be worn during facility hours

Hands on and Projects

• Follow instructions
• Respect time and resources
• Use lab coats and safety glasses and closed toe shoes
• Do not touch any item that you do not know and not is a part of experiment
Computer Policies
• Your guest log in and password will enable you to access the Purdue network
• Food items are not allowed in the computer labs
• Use the computers responsibly in accordance to Purdue policy
• Computer lab sessions should be used strictly for project purposes. (i.e. no Facebook, etc…)

Electronic Devices
• The use of any kind of electronic devices while a person is giving a lecture is prohibited.
• These may include cell phones, ipods, etc…
• Photographs and videos may be taken at any other time only when it is appropriate.

Dormitory Rules
• Students are not allowed to visit rooms of members of the opposite sex.
• If at any time there is a need to go into the section containing members of the opposite sex, the student must be escorted by a counselor
Our Sponsors

- Duke Energy
- Nokero
- Kid Wind Project
- Discovery Park
- GE
- Bowen
- Faegre Baker Daniels
- Need
- Purdue Extension
- Local Faces
- Herrick Laboratories
- Ivy Tech Community College
- Siemens

6/15/2013
Any Questions?