Preparing K-12 Students for Sustainability Education
Discussion Leaders

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KACEE is a non-profit association that promotes and provides effective, non-biased, science-based conservation and environmental education in Kansas.

The KACEE education committee is assessing the needs of secondary school educators preparing students for sustainability and green jobs programs.
2011 EE Conference Dialogue

- EE not on the same playing field
  - Does not receive same level of support as “hard sciences” in secondary schools
  - Lack of standards for sustainability

- Need to define career pathways

- Need for focused professional development
Sustainability-Focused Programs on the Rise

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of New Programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>146</td>
</tr>
<tr>
<td>2009</td>
<td>113</td>
</tr>
<tr>
<td>2008</td>
<td>66</td>
</tr>
<tr>
<td>2007</td>
<td>27</td>
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</tbody>
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**Poll Question:**
Does your institution have a green jobs or other sustainability-focused academic program (or plans to develop one)?

Source: AASHE, 2010 Campus Sustainability Review
Discussion

- What types of green jobs or sustainability programs are offered or are being developed at your institution?
- What is the demand for these types of programs at your institution?
- What types of programs are students looking for?
Green Jobs Training

Figure 6
Training Providers Used to Prepare Current Employees with Green Skills and Knowledge*

- On-the-Job Training: 58.6%
- In-House Training Unit: 50.3%
- Vendor Training: 41.8%
- Other: 18.8%
- Community/Technical College: 12.0%
- University: 10.3%
- Apprenticeship Programs: 7.5%
- Hire Only Workers Who are Already Trained: 3.1%

* Percentages are calculated as a proportion of employers who do have training needs related to green knowledge and skills.

Source: Kansas Department of Labor, 2009 Kansas Green Jobs Report
Green Jobs Training

Agriculture, Food, and Natural Resources
- Animal Systems
- Agribusiness Systems
- Biotechnology in Agriculture
- Environmental Service Systems
- Food Products and Processing Systems
- Natural Resources Systems
- Plant Systems
- Power, Structural, and Technical Systems

Arts, Communication, and Information
- Audio/Video Techniques
- Journalism and Broadcasting
- Performing Arts
- Printing Techniques
- Telecommunications Techniques
- Visual Arts

Arts, AV Technology, and Communications
- Information Technology
- Information Support and Services
- Web and Digital Communications
- Network Systems
- Programming and Software Development

Architecture and Construction
- Construction
- Design and Pre-construction
- Maintenance and Operations

Business Management and Administration
- Administrative Services
- Business Information Management
- Human Resources Management
- General Management
- Operations Management

Finance
- Banking Services
- Business Finance
- Securities and Investments
- Insurance
- Accounting

Foundation Knowledge and Skills

Academic and Technical Skills
- Employability
- Ethics
- Systems
- Teamwork
- Career Development
- Problem Solving
- Critical Thinking
- Information Technology
- Application
- Legal Responsibilities
- Communication
- Safety, Health, and Environment

Government and Public Administration
- Revenue and Taxation
- Foreign Service
- Governance
- National Security
- Planning

Health Science
- Biotechnology Research and Development
- Diagnostic Services
- Supportive Services
- Health Informatics
- Therapeutic Services

Human Resources and Services
- Administration and Administrative Support
- Professional Support Services
- Teaching/Training

Human Services
- Consumer Services
- Counseling and Mental Health Services
- Early Childhood Development

Law, Public Safety, and Security
- Correction Services
- Emergency and Fire Management Services
Poll Question

What core areas do your green jobs programs focus on?
A) Green Building
B) Energy Efficiency
C) Renewable Energy
D) Resource Conservation/Management
E) Sustainable Agriculture
F) Pollution Prevention
G) Sustainability Leadership/Management
H) Transportation
I) Other
Discussion

- What skill sets are needed for students entering green job programs?
- What career guidance is available for these students?
- What pathways exist for students to continue on to 4-year programs?
- What partnerships exist to support such programs?
Skills for Incoming Students

Profiles of the...

21st Century Learner

Ten Unifying Themes
1. Creativity and Innovation
2. Critical Thinking and Problem Solving
3. Communicating and Collaborating
4. Information, Communication, Technology (ICT), and Media Literacy
5. Flexibility and Adaptability
6. Initiative and Self-Direction
7. Social and Cross-Cultural Skills
8. Productivity and Accountability
9. Leadership and Responsibility
10. Employment and Career Development

21st Century Learning Environment

Five Unifying Themes
1. Relationships
2. Relevance
3. Rigor
4. Results
5. Responsive Culture
Discussion

- What is the basic foundational knowledge and skill sets expected from students coming into your programs?
- How would you describe the learning environment compared to other programs?
- How do they compare to 21st Century Learning Skills/Learning Environment?
Educational Partnerships

- What types of outreach are you doing to secondary schools?
- What opportunities do you see for additional outreach/partnership with secondary schools?
- What do you want HS teachers to know about your programs and what do you want to know from them?
Statewide Partnerships

- Is there a role for educational organizations to help facilitate partnerships at a regional level

Examples may include

- Providing focused professional development for educators
- Facilitating dialogue between high school and higher ed educators and administrators
- Providing opportunities to exchange ideas through conferences
Questions?