Supporting Faculty and Staff Engagement with PK-12 Audiences through a Workshop Series
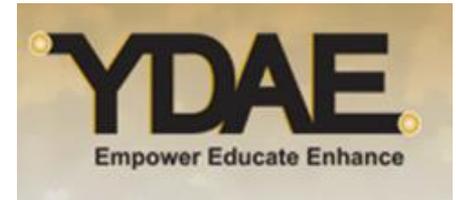
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Introduction

- University faculty, staff, and graduate students are more likely to engage with PK-12 audiences
  - Build capacity through professional development
  - Increase pedagogical knowledge & skills

- Four PK-12 Engagement Workshops in Purdue University's College of Agriculture

Purpose

- Help address the needs from the COA K-12 engagement survey

- Build a sense of community

- Facilitate sharing and networking

Overview

- Hosted by PK-12 Council and Office of Academic Programs

- Topics covered included:
  - Aligning lessons with learning standards
  - Fine-tuning lesson plans
  - Assessing impacts of engagement activities
  - Creating posters to share engagement outcomes

- 23 individuals from nine of the 11 academic departments in the College participated

Workshop Participants

Visiting Scholars 2
Graduate Students 6
Staff 9
Faculty 6

Workshop 1
Aligning Activities with Learning Standards

- Topics covered:
  - Finding and using learning standards
  - Organizing content and aligning activities with standards
  - Using the backward design process

- Workshop evaluation results indicated that the workshop provided participants with a better understanding of:
  - How to align PK-12 lessons with learning standards
  - A better understanding of how to use backward design to organize content
  - Ways to improve their PK-12 activities

Workshop 2
Fine-Tuning Your Activities

- Participants worked together to:
  - Identify the common components of a lesson plan
  - Evaluate example lesson plans
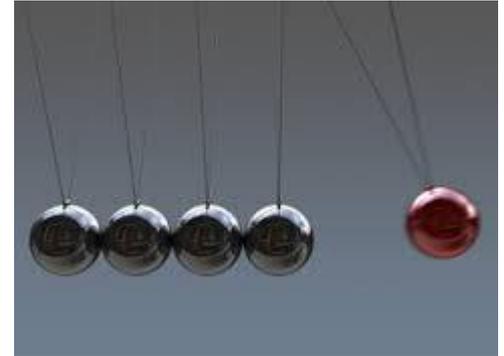 - Modify a single activity to be used appropriately across various grade levels

- Workshop evaluation results indicated that the workshop provided participants with a better understanding of:
  - The necessary components of a lesson plan
  - How to adjust activities to be appropriate for different grade levels

Workshop 3
Assessing the Impact of PK-12 Engagement Activities

- Topics covered:
    - Impact
        - -Short, medium, & long term
        - -Descriptive, relationships, & causal
        - -Quantitative & qualitative
    - Outcomes and how they are measured
    - Common Assessment

- Workshop evaluation results indicated that the workshop provided participants with a better understanding of:
    - How to assess the impact of engagement activities

Workshop 4
Creating Posters to Share PK-12 Engagement Outcomes

- Topics covered:
  - Types of Posters
  - Campus and Professional Venues for Sharing Posters
  - B.O.A.S.T.ing Better Posters
    - -**B**illboard Design
    - -**O**ptically Pleasing
    - -**A**udience Interaction
    - -**S**ay it with Fewer Words
    - -**T**hirty Second Sound Bites

- Workshop evaluation results indicated that the workshop provided participants with a better understanding of:
  - How to create posters to share outcomes of activities

Next Steps

- Future workshops, especially on the topic of assessing impact

- 2015-16 academic year workshop series:
  - Youth Assessment Strategies for Informal Learning Contexts
  - Building Assessment into Learning Activities
  - Evaluating a Questionnaire
  - Assessing Interest

Resources

Aligning Activities With Learning Standards and Fine-Tuning Your Activities

- Learner Centered Teaching
http://www.ydae.purdue.edu/lct/hbcu/online_course.html
- Standards for Technological Literacy
http://www.iteaconnect.org/TAA/PDFs/xstnd.pdf
- Next Generation Science Standards
http://www.nextgenscience.org/next-generation-science-standards
- Common Core Math Standards
http://www.corestandards.org/Math/
- Bloom's Taxonomy Wheel
http://think.stedwards.edu/cte/sites/webdev1.stedwards.edu.cte/files/docs/BloomPolygon.pdf
- Curriculum Development
http://www.4-h.org/resource-library/curriculum/development/develop/

Creating Posters to Share PK-12 Engagement Outcomes

- Effective Poster Design
http://www.soe.uoguelph.ca/webfiles/agalvez/poster/
- Designing Effective Posters and Presentations
http://libweb.lib.buffalo.edu/guide/guide.asp?ID=155
- Creating Effective Poster Presentations
http://www.ncsu.edu/project/posters/
- Designing Posters Tutorial
http://www.hsl.unc.edu/services/tutorials/poster_design/Elements_pages/elements_content.htm
- Designing Effective Posters
http://go.hrw.com/resources/go_ss/teacher99/toolkit/TOOLKT07.pdf

Assessing the Impact of PK-12 Engagement Activities

- NSF Framework for Evaluating Impacts of Informal Science Education Projects
http://informalscience.org/documents/Eval_Framework.pdf
- NSF User-Friendly Handbook for Project Evaluation
http://www.nsf.gov/pubs/2002/nsf02057/start.htm
- Example: *Using fluid power workshops to increase STEM interest in K-12 students*
http://www.asee.org/public/conferences/32/papers/10577/view
- Intrinsic Motivation Inventory
http://www.selfdeterminationtheory.org/intrinsic-motivation-inventory/
- Florida 4H Dashboard
http://florida4h.org/about1/impact/4-H_Facts_and_Impacts.pdf
- UAF Resources for Writing Impact Statements
http://www.uaf.edu/ces/info/reporting/impactstatements/
- Purdue Agricultural Science and Education Impact
https://ag.purdue.edu/Pages/NIP-impactprimer.aspx#Whatmakes
- Evaluation Instruments
https://www.cyfernetsearch.org/evaluate
- Assessment Tools for Informal Science Learning
http://www.pearweb.org/atis
- The Youth Experience Survey (YES) 2.0
http://www.tgmag.ca/yap/resources/YES_2-0_e.pdf

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