

MANAGING ENGAGEMENT & MEASURING IMPACT

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Research Impact in Society

&

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COMMON QUESTIONS

What is Engagement?

What counts as Scholarship?

How do I manage Engagement?

How do I measure impact?

Engagement & Scholarship

Table 2

CHARACTERISTICS OF THE SCHOLARSHIP OF ENGAGEMENT

- **Reciprocal relationship with communities** (organizations, governmental agencies, schools, business/industry)
- **High level of disciplinary expertise**
- **Innovative**
- **Capable of being replicated and elaborated**
- **Documented results**
- **Professionally and/or peer-reviewed**
- **Impactful**

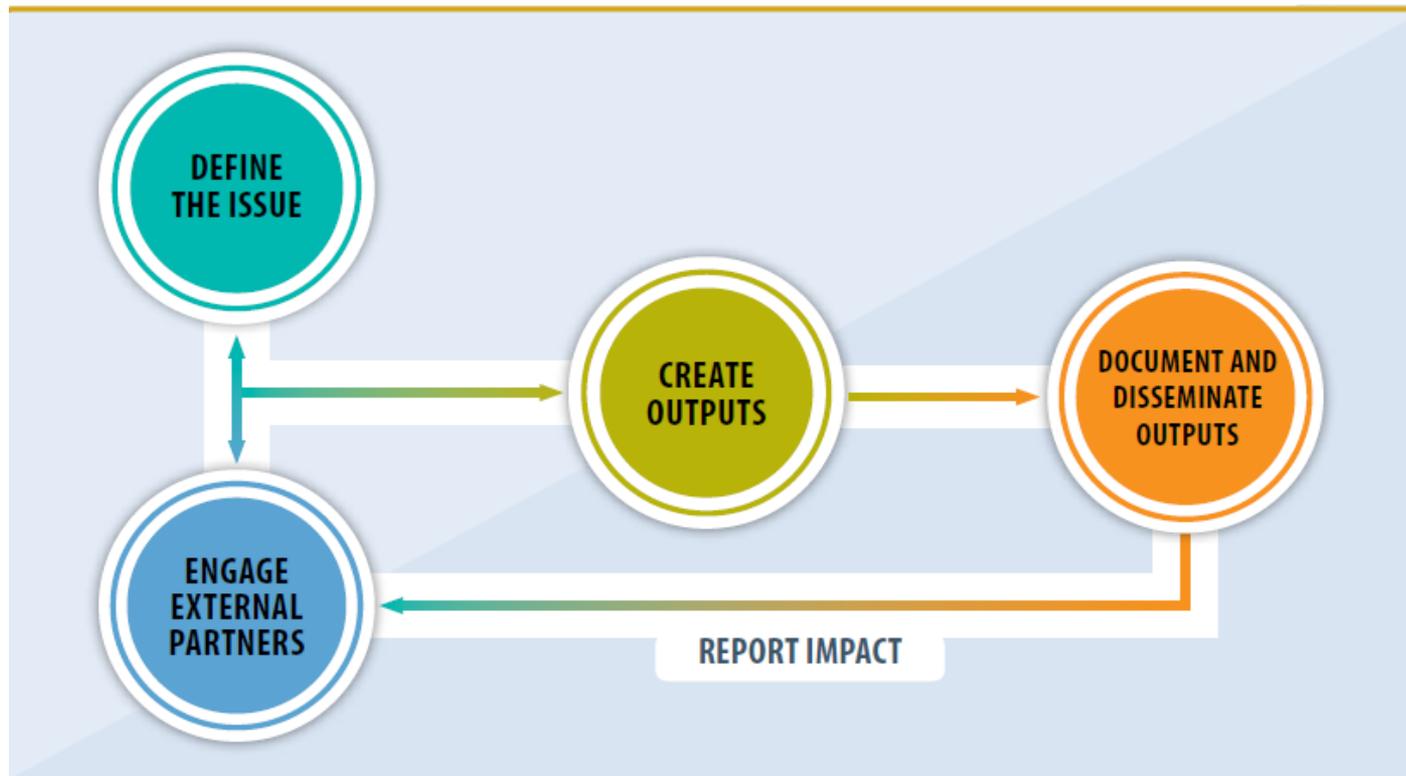
Table 3

EXAMPLES OF THE SCHOLARSHIP OF ENGAGEMENT

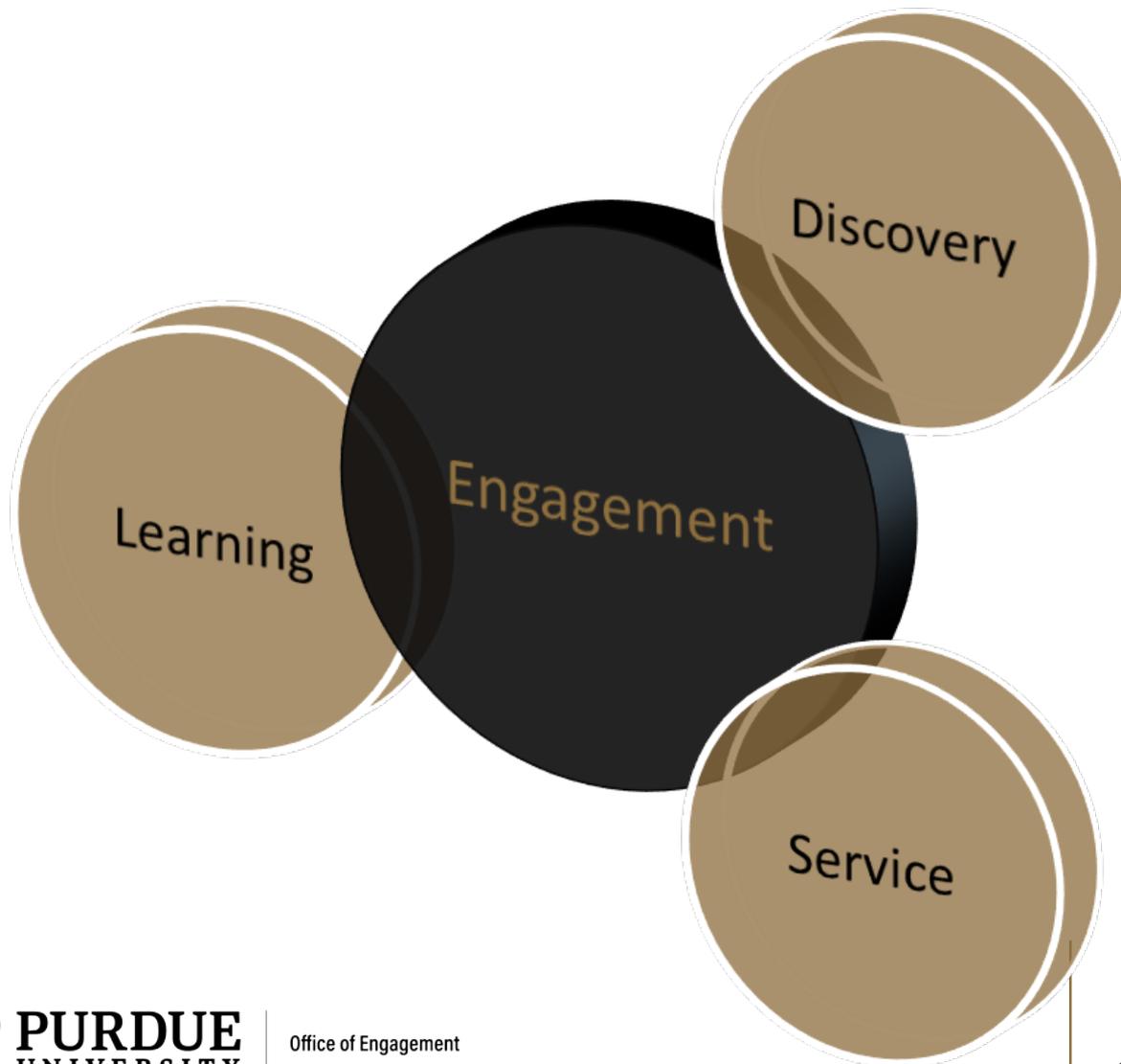
- **Laws/public policy**
- **Video archives, documentaries, films**
- **Delivery of products/services** (e.g., training materials, courses, workshops)
- **Professionally and/or peer-reviewed publications**

Managing Engagement

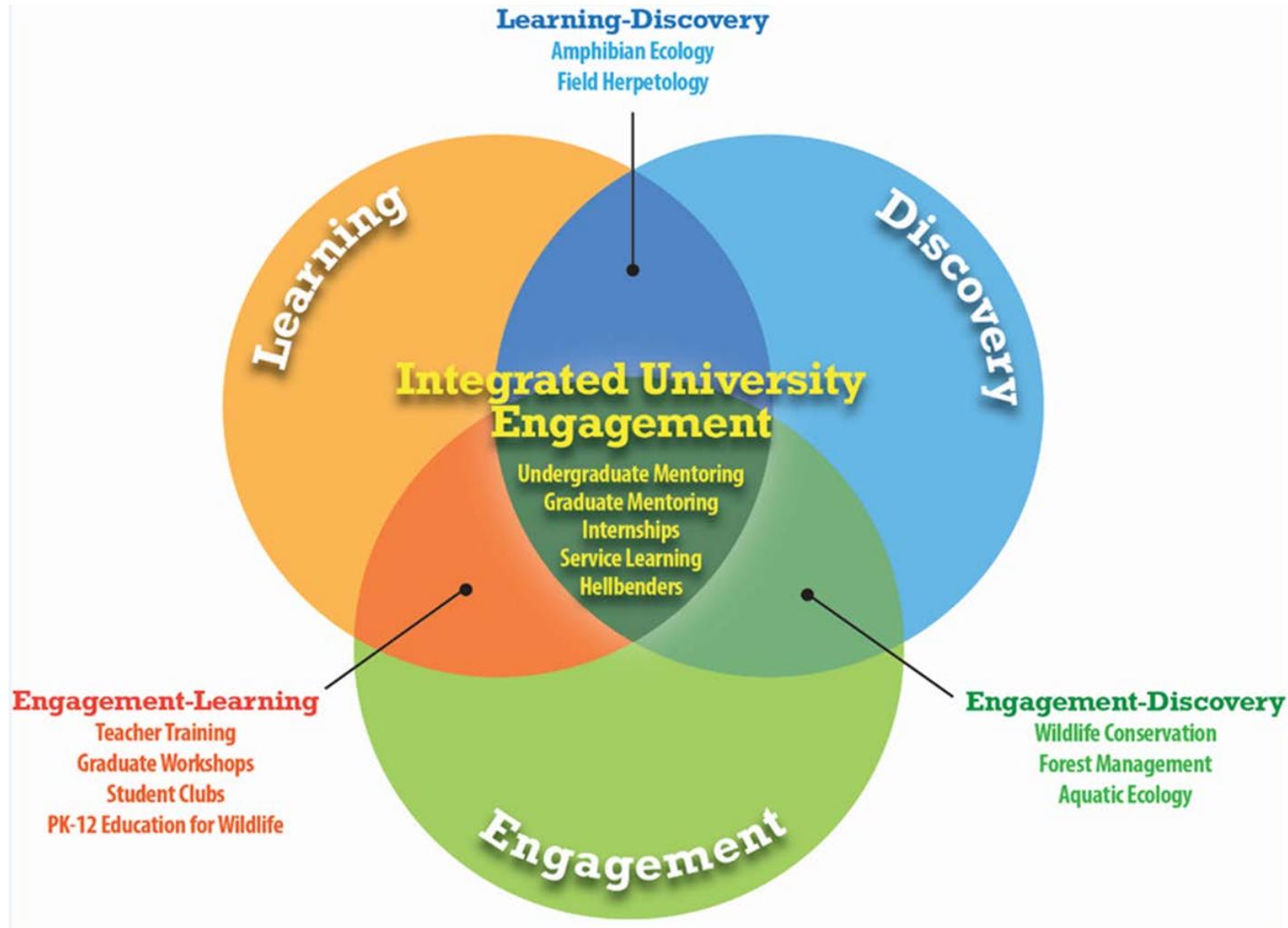
- Parallels research or teaching approach



Scholarly Integration



Scholarship with Impact



Food Waste Problem

- ❑ 30-40%, or 133 billion lb. wasted in the U.S.
- ❑ Wasting 90 billion pounds: consumers are the largest contributors



FOOD WASTE IN SCHOOLS

- ❑ U.S. schools spend > \$1 billion on wasted food annually-26% of their food budget
- ❑ Largest component of school waste



INTEGRATING EXTENSION/TEACHING/RESEARCH

□ Addressing a need

- Limited K-12 curriculum
- Effectiveness and benefits of food waste education
- FNR Undergrads



TEACHING AND EXTENSION

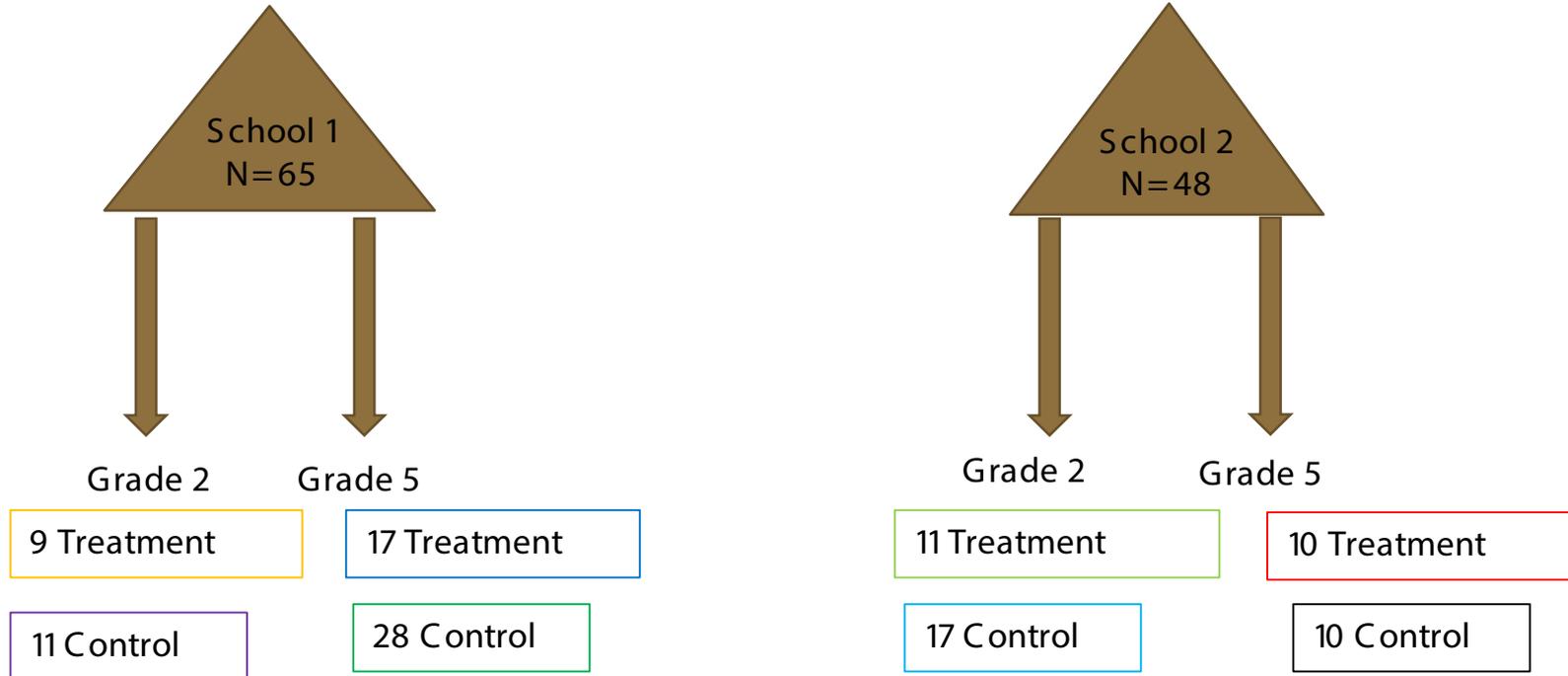


PURDUE EXTENSION

The
NATURE OF
TEACHING

EXTENSION & RESEARCH

- 2nd and 5th grade students and teachers in two Indiana schools



FINISHED WITH EXTENSION

☐ Formal Classes/ professional development

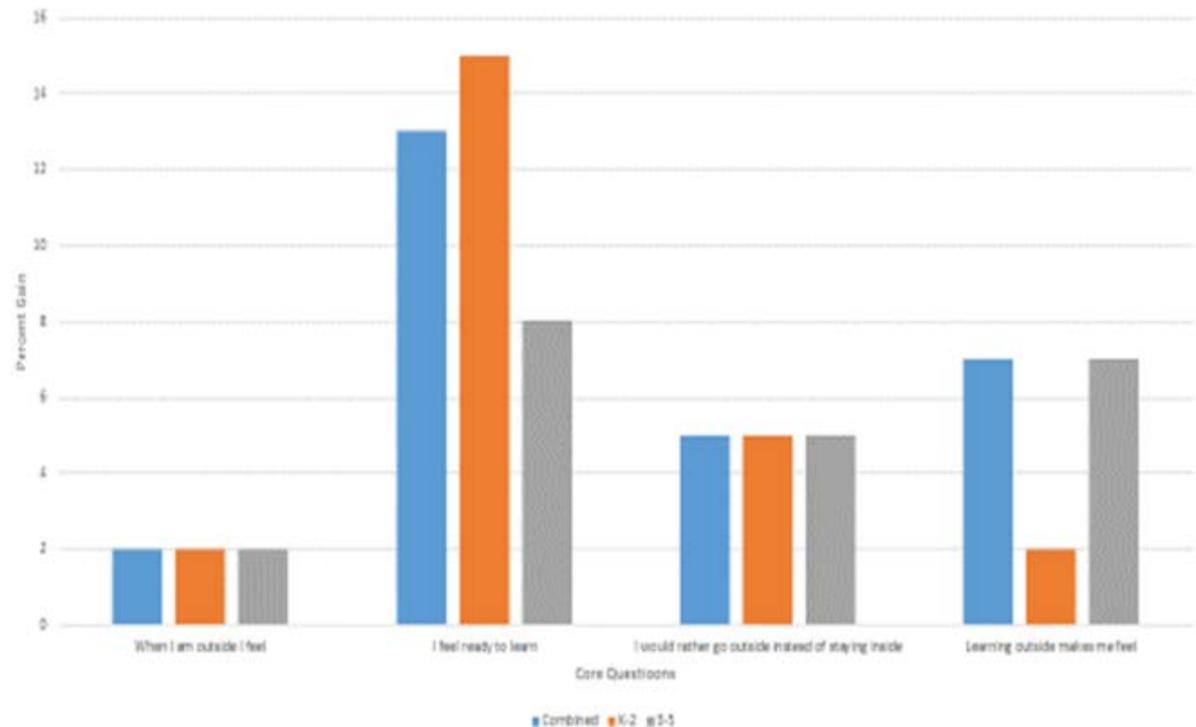
- Nature of Teaching Food Waste
- Nature of Teaching Wildlife
- Nature of Teaching Health and Wellness



SCHOLARSHIP WITH IMPACT

- Impact Metrics:
- Publications
- (#, downloads, citations, etc.)
- Workshops
- (knowledge, implementation, change, etc.)

Percent Gain in Positive Attitudes



EVALUATION QUESTIONS

EXPERTISE

How is the work viewed within the scholar's field?

INNOVATION

How does the work build upon the knowledge, research, or practice in the field?*

How does the work respond to an identified need?*

Did the work result in the development of new information, methods or approaches?*

REPLICATED

Was the methodology clear and sound?

Are results valid and reliable?

Were limitations discussed?

DOCUMENTING

How has the work been shared with colleagues?*

How has the work added to the body of knowledge?*

Where is the work accessible?*

REVIEWED

How has the scholar's work been shared: published articles, academic presentations, exhibition of work, creative performances?*

How has the scholar's work resulted in the receiving of an award, honor by peers?*

How has the scholar's work resulted in testimonials, letters of recommendation, or adaptations that affirm the value of this work?*

IMPACTFUL

What actions did the intended audience take as a result of this work?*

What measurable impacts occurred as a result of the effort (e.g., knowledge gained, information shared, behavior changed)?*

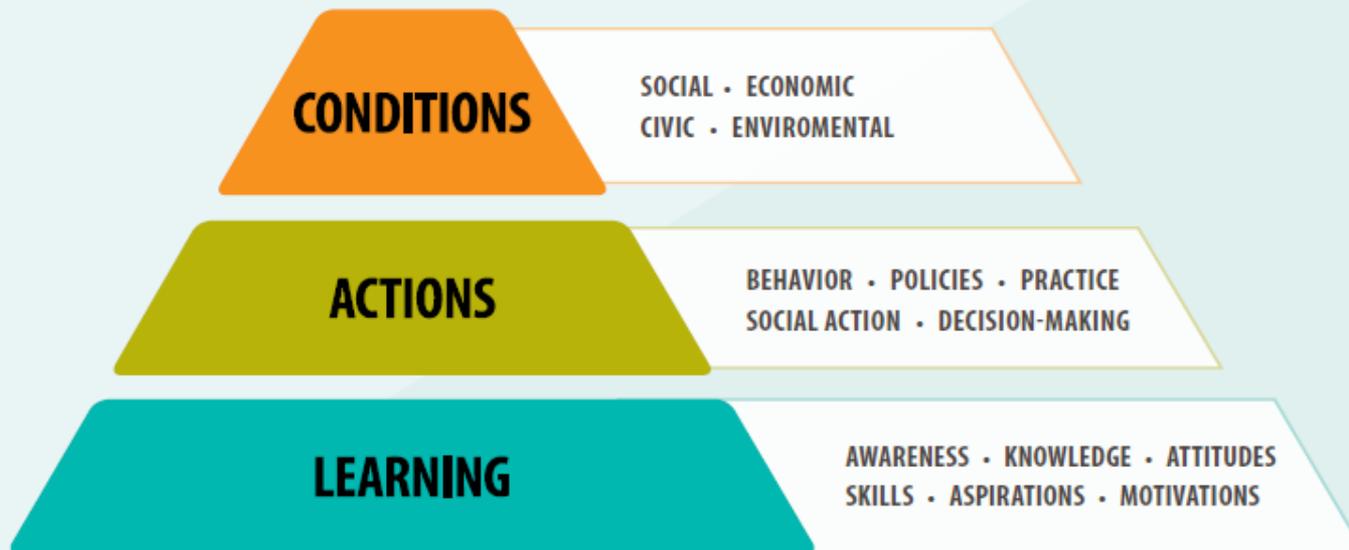
How were the developed materials or processes subsequently used by others?*

ASSESSING SCHOLARLY WORK

Impact

Figure 6

Programmatic impact is represented by a collection of scholarly outputs that increases learning, then results in actions and ultimately changes in conditions.



CREATE SCHOLARLY OUTPUTS

Peer-reviewed Extension Publications (*post-tenure; total downloads 41,886)

1. *Busse, B., and R.N. Williams. 2017. The Edible Issue. *In review*.
2. *Pedigo, L., M. Hunt, K. Zuber, and R.N. Williams. 2016. Health Benefits of Connecting with Nature. FNR- 539W
3. Williams, R.N., and R. Chapman. 2009. Animal Diversity and Tracking. FNR-417-W (2,150 downloads)
4. Williams, R.N., and R. Chapman. 2009. Food Webs. FNR-418-W (3,715 downloads)
5. Chapman, R., and R.N. Williams. 2009. Natural History of Indiana Mammals. FNR 413 (36,001 downloads)
6. Williams, R.N., and R. Chapman. 2009. Becoming a Tooth Sleuth. FNR-408

Websites

The Nature of Teaching. 2010-2016 Totals: 18,175 visits, 35,766 page views.

Exhibits for Small (10,000) Audiences

1. Tooth Sleuth, Imagination Station 2014
2. Tooth Sleuth, Children's Museum of Illinois 2013
3. Tooth Sleuth, Clay County Science Day 2013
4. Tooth Sleuth, Oak Park Conservatory 2013
5. Tooth Sleuth, Explorium of Lexington 2013
6. Tooth Sleuth, Hannah Lindahl Children's Museum 2013

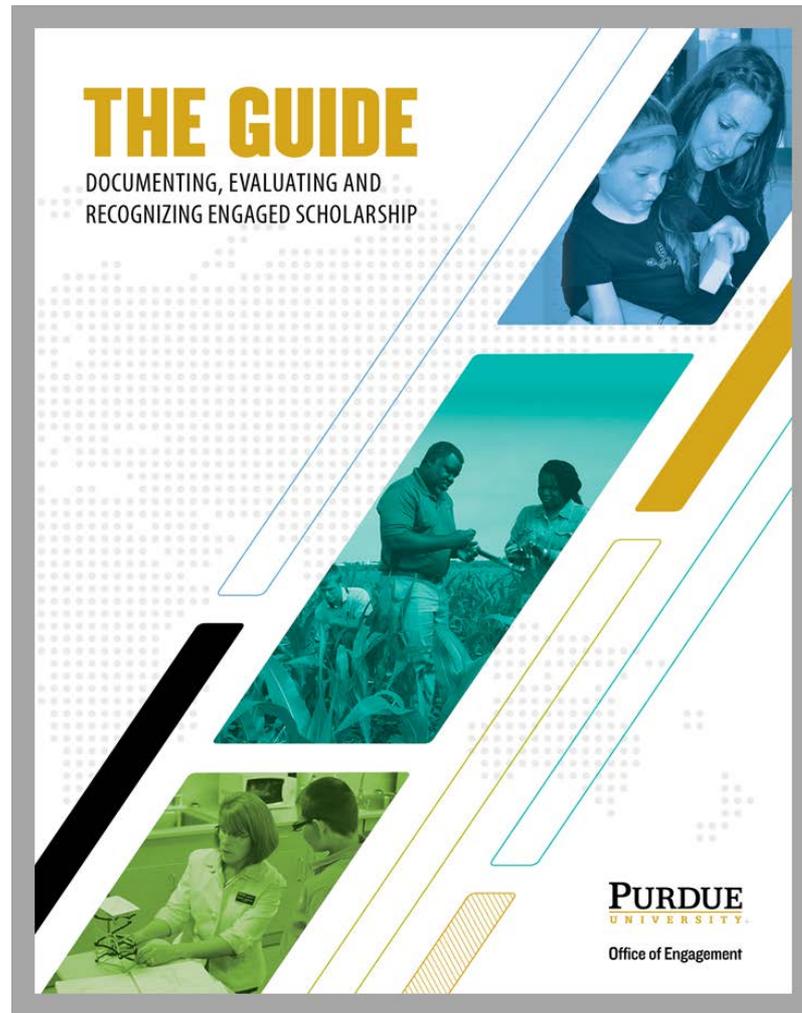
Workshops and Programs

1. 2017 Nature of Teaching: Maine Wildlife Curricula. Augusta, Maine. (n=10)
2. 2016 Nature of Teaching: Maine Wildlife Augusta, Maine. (n=8)
3. 2016 Nature of Health and Wellness. West Lafayette, IN. (n=17)
4. 2016 Nature of Health and Wellness. Kokomo IN. (n=14)
5. 2016 Nature of Health and Wellness. SIPAC. (n=16)
6. 2016 Nature of Health and Wellness. Davis PAC. (n=18)
7. 2015 Salazar, K., and R.N. Williams. Building State-wide environmental Education programs. EEAI annual conference. Chesterton, IN
8. 2015 Bringing natural resources to K-8. Tippecanoe School Corporation Elementary Science Committee. Lafayette, IN (n=25)
9. 2011-2014 It's a Gene Thing. Purdue zipTrip. Participants: (n=35,500)
10. 2014 Junior Master Naturalist, Herpetology Workshop. Clinton County Soil and Water Conservation District. (n=20)
11. 2014 Mind Boggling Event, Tippecanoe County Parks Dept. Lafayette, IN. (n=30)
12. 2014 Conservation Field Day, Snake Ecology. Tippecanoe County Parks and Water, Lafayette, IN. (n=300)
13. 2013 The Nature of Service Learning. Lafayette, Indiana (n=75)
14. 2013 Forest Education. Martell Forest, West Lafayette, IN. (n=60)
15. 2013 Animal Diversity. Tippecanoe Co. Mayflower Mill (n=120)
16. 2013 Wildlife Tracking Workshop. Annual Conference for Indiana Master Naturalists. West Lafayette, IN

IMPACT

- A total of 56 students have taken this service learning course and all have participated in developing and delivering Extension programs. **Fifty-one percent of the student's have produced a numbered, peer-reviewed Extension publication.** Those publications are lesson plans and used in the Nature of Teaching teacher workshops (that have trained hundreds of teachers). The 17 publications students co-authored have been **downloaded 325,268 times.**
- Dr. Williams along with county Extension educators hosted a series of teacher workshops to a total of **242 K-12 teachers.** Participants represented 47 counties, 37 school districts, and **130 schools.** Teacher workshops surveys revealed knowledge gain from 30-65% among six core aspects of the curriculum. A four month post-workshop survey indicated that **roughly 80% of participants incorporated one or more aspects of our curriculum into their classrooms.** Teachers were asked to evaluate the impact of the curriculum on their students. **Evaluation data was received on 847 students grades K-5.** Student pre/post assessment data revealed a positive change in attitude across four core questions. Student evaluations found **a 14% increase in readiness to learn;** students came back into the classroom more eager to learn than if they were not allowed to go outside.

Resource



THANK YOU