

Celebrate 150

IANR All Hands Meeting

January 30, 2019





Transforming Graduate Education

- Engagement
 - Monthly discussions with graduate chairs
 - Roundtables with graduate students
- New credentials
 - Certificates
 - Specializations
 - Digital badges
- Exploring innovative models:
 - Recruitment
 - Professional development (FFAR Program)
 - Internships
 - Funding
 - Partnerships

Broaden Career
Pathway
Exploration
through
Partnerships

Mentoring
and
Professional
Development

Vision: Every graduate student is
inspired and empowered to
make a difference in a complex
and diverse world.

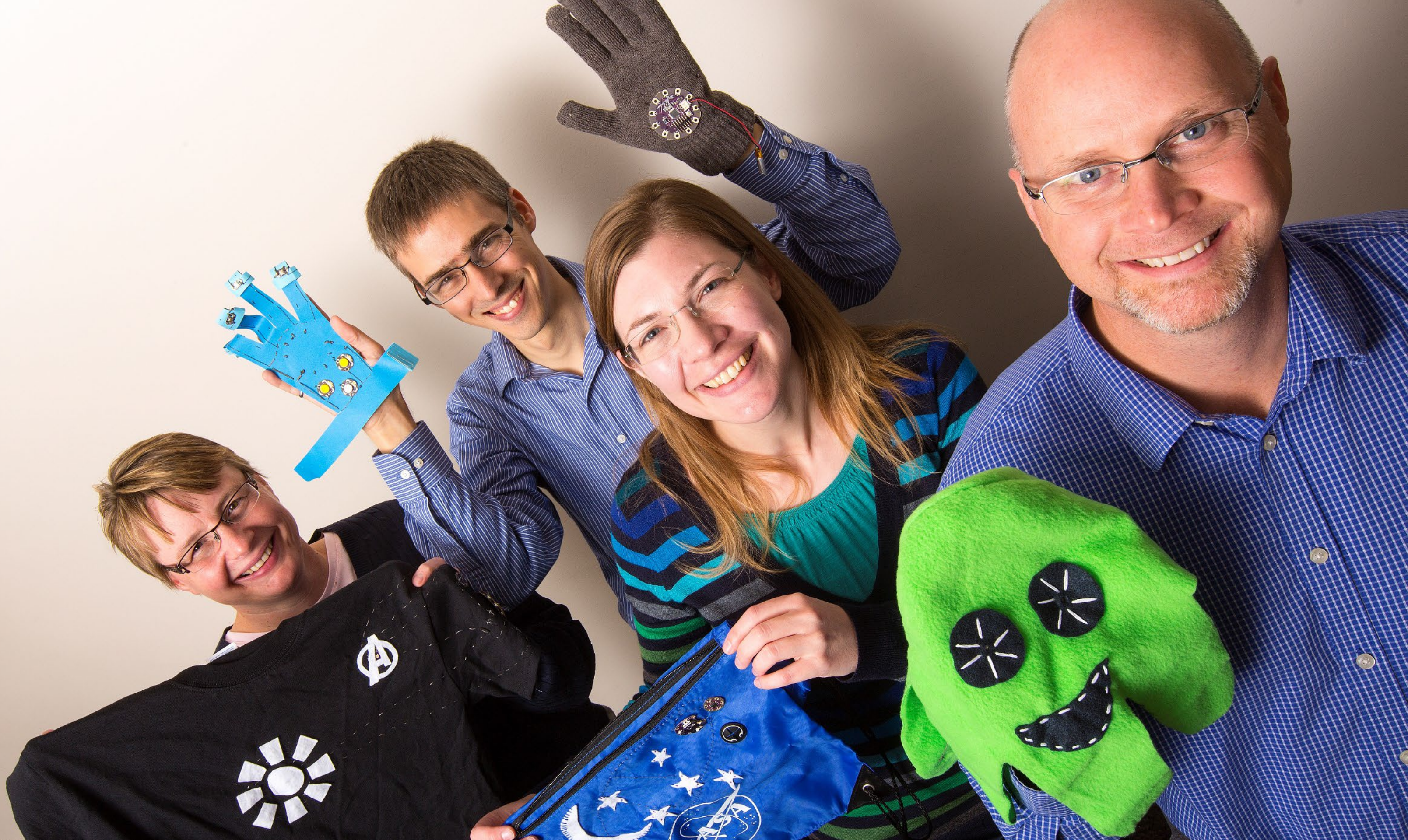
Integration Across
Learning
Experiences

Shared mission of IANR's
faculty and staff (ARD,
Extension, CASNR, CEHS, and
IANR Global Engagement).

Holistic Approach
Connecting Student
Interests to Diverse
Career Pathways

Learning and
Experiences
Transcend the
Campus
Footprint

Individualized
Educational
Experience
Co-created by
the Learner









Republic of Rwanda
RICA
RWANDA INSTITUTE FOR
CONSERVATION AGRICULTURE
THE
BUI
FOU

CONSERVATION AGRICULTURE
RICA
is partnering with the
University of Nebraska-Lincoln
(UNL) to establish the Rwanda Institute
for Conservation Agriculture (RICA), an undergraduate
program in conservation agriculture, set to
begin in 2023.
RICA will engage in innovative learning
opportunities, emphasizing Conservation Agriculture
principles, oral and written communication,
and entrepreneurship.
RICA graduates will gain hands-on experience
in various farming system scales, from small
holder/semi-mechanized farms, while
supporting farmers and entrepreneurs
in their agricultural enterprises.
RICA's

RWANDA INSTITUTE FOR CONSERVATION AGRICULTURE
CURRICULUM
Nebraska
Lincoln
CURRICULUM DESIGN
RICHARD
Designed by top academic, research and agricultural
experts from the University of Nebraska-Lincoln, RICA's
curriculum is a 3-year program leading to a Bachelor of
Science in Conservation Agriculture.
INNOVATIVE LEARNING OPPORTUNITIES
RICHARD
Students at RICA will engage in experiential and
collaborative learning opportunities, emphasizing
Conservation Agriculture and Climate-Smart Agriculture.
They will develop the knowledge and experience
necessary for a wide range of careers in agriculture.
AGRICULTURAL LEADERSHIP
RICHARD
RICA graduates will be well-equipped to address
and lead in agriculture, either as leaders for
their agricultural enterprises, or as
entrepreneurs and agricultural managers in
government and private sectors.

RICA
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CONSERVATION AGRICULTURE

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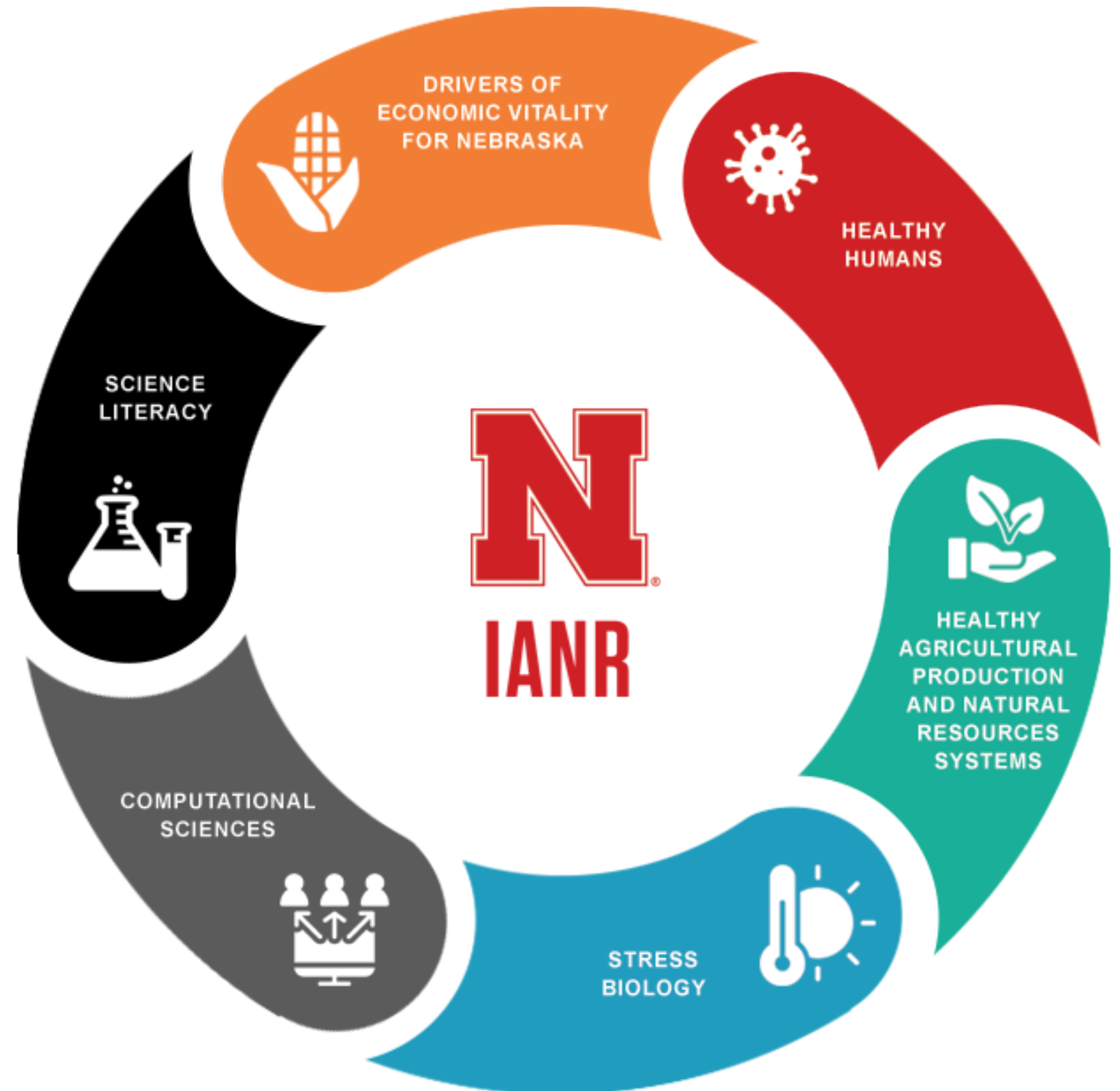
RICA
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RICA
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CONSERVATION AGRICULTURE

Re-engaging

IANR's Six Communities

[January 11 Chancellor's visit with
the communities](#)





SCIENCE LITERACY



January 30, 2019

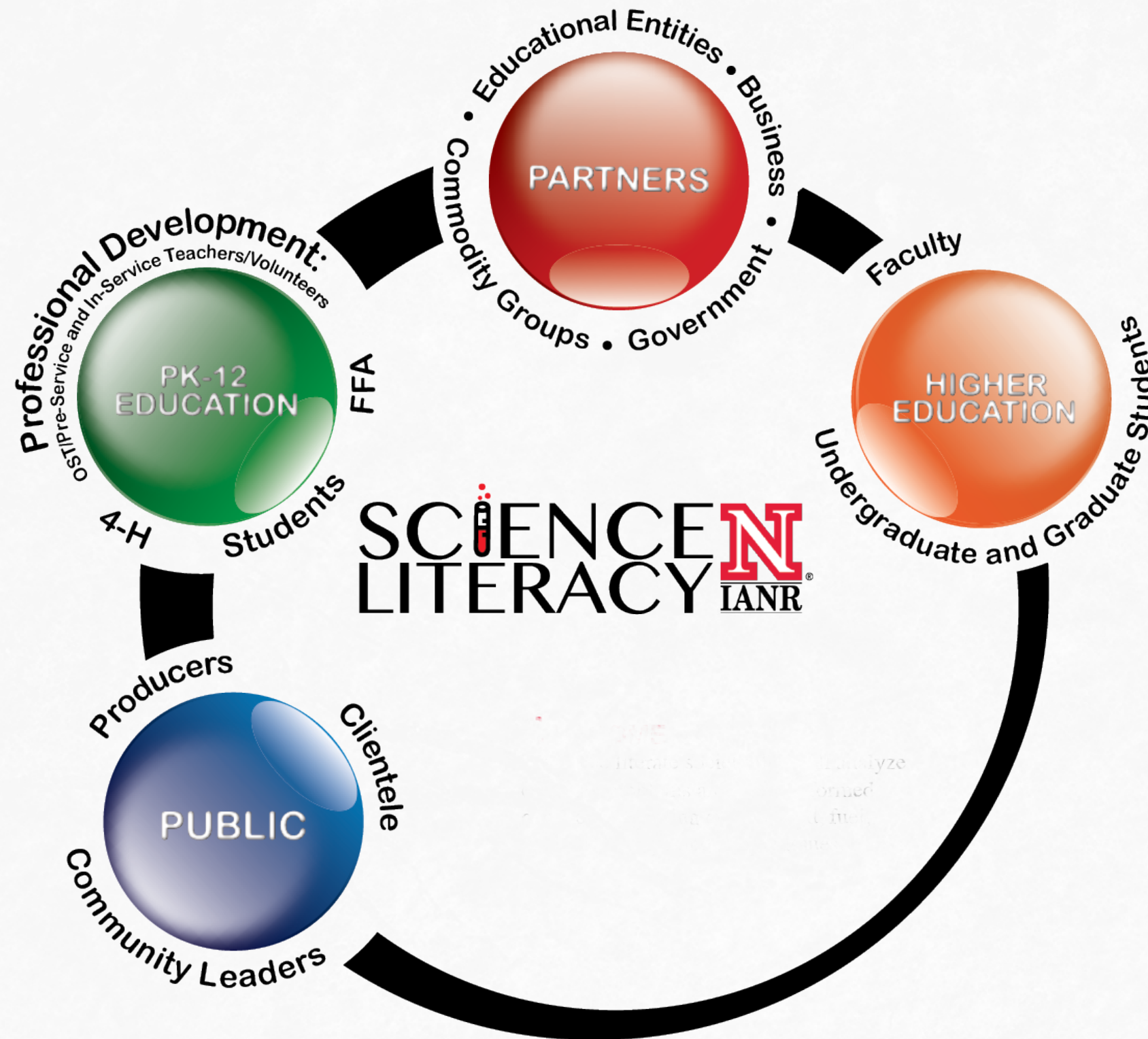
IN OUR GRIT, OUR GLORY™



Produce future STEM professionals

**Equip and empower the
general public**





Outcome

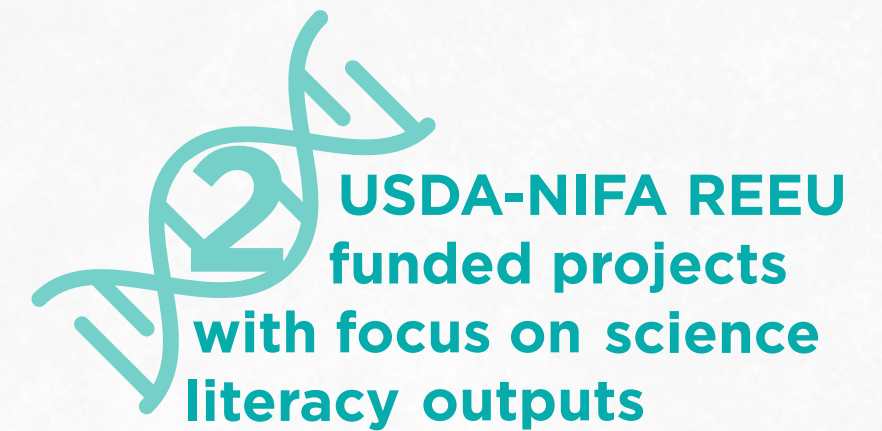
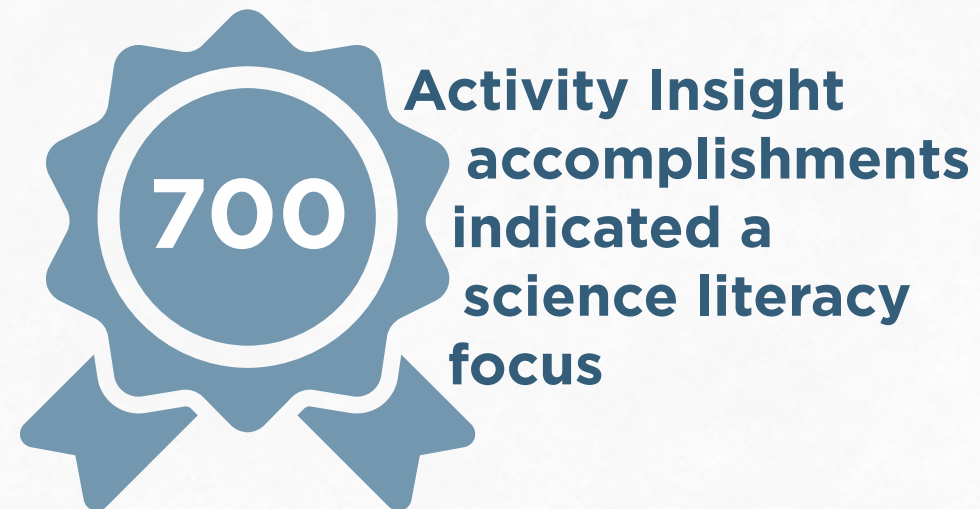
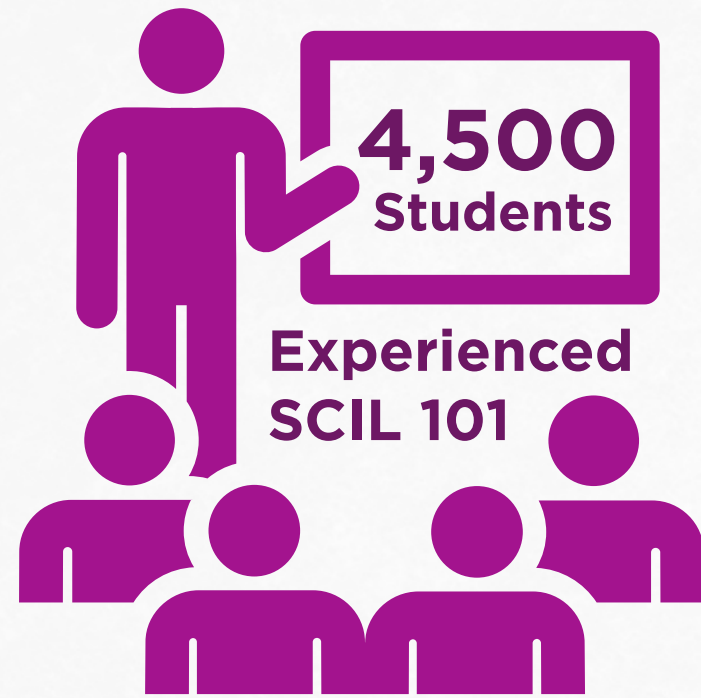
A scientifically literate society capable of making effective decisions grounded in STEM-informed analyses of complex, real-world challenges associated with food, fuel, water, landscape, and societal issues.



Leadership Structure



Science Literacy Impacts since 2013



Nebraska's counties have Extension staff that have identified Science Literacy as a primary focus and are connecting to schools and other youth programs.

***Science Literacy (SCIL 101):
Science and Decision-making for a
Complex World***

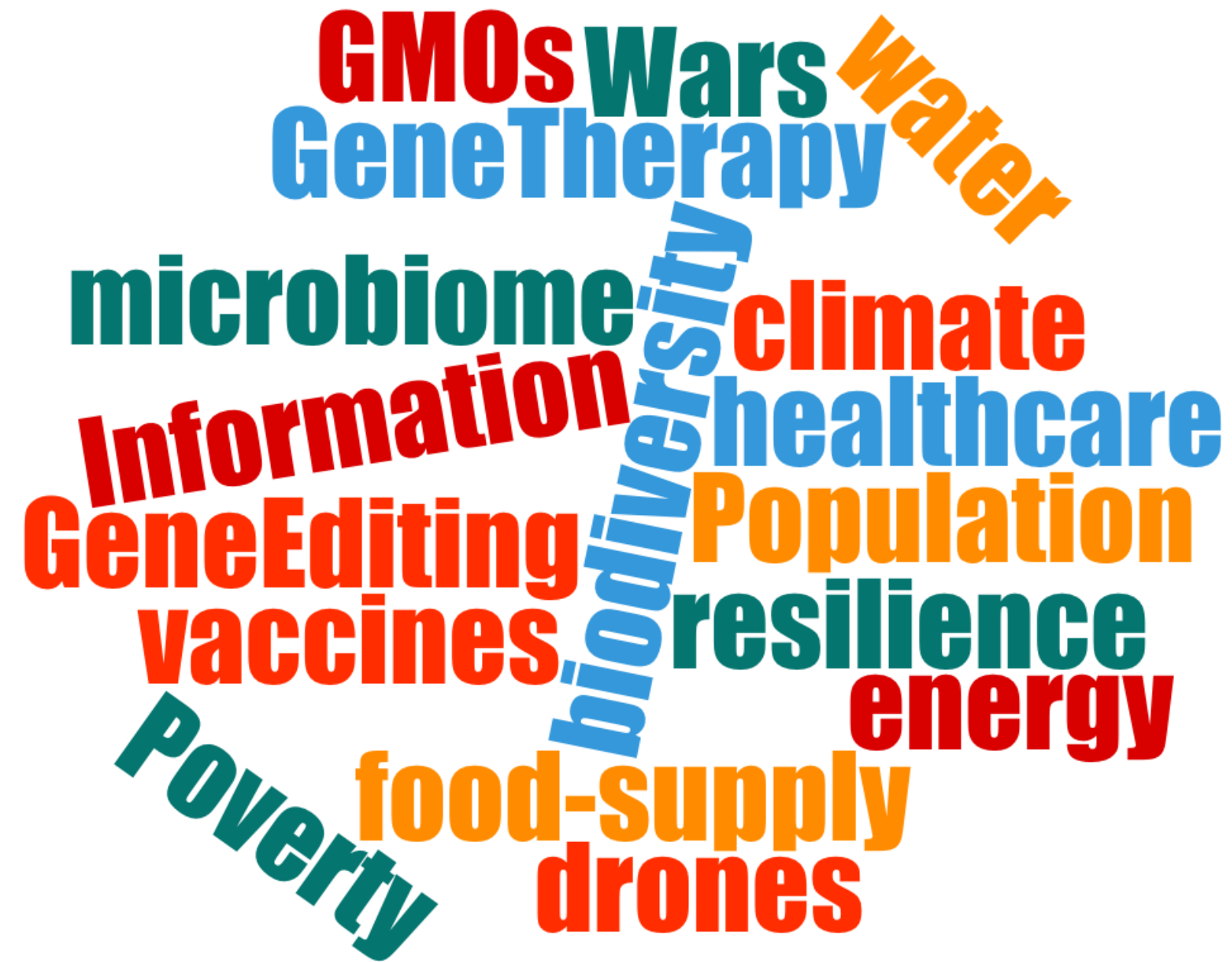
***A classroom model to promote students'
science literacy***



Jenny Dauer, Assistant Prof, SNR

IN OUR GRIT, OUR GLORY™

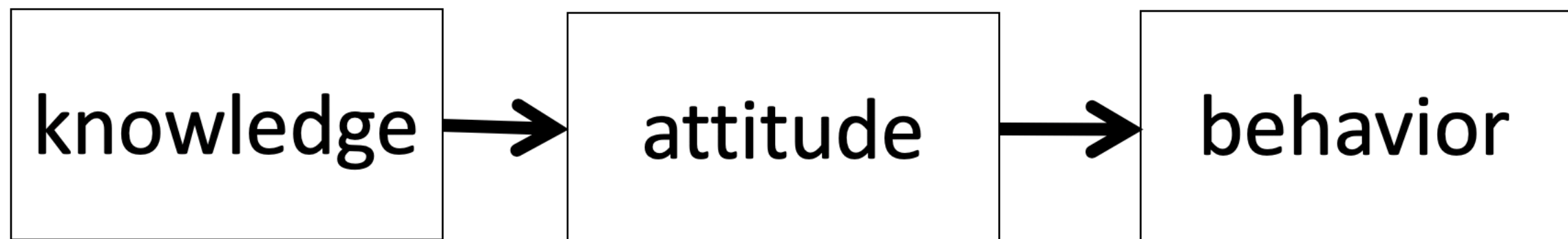
We need to prepare scientifically literate students to make good decisions related to these issues:



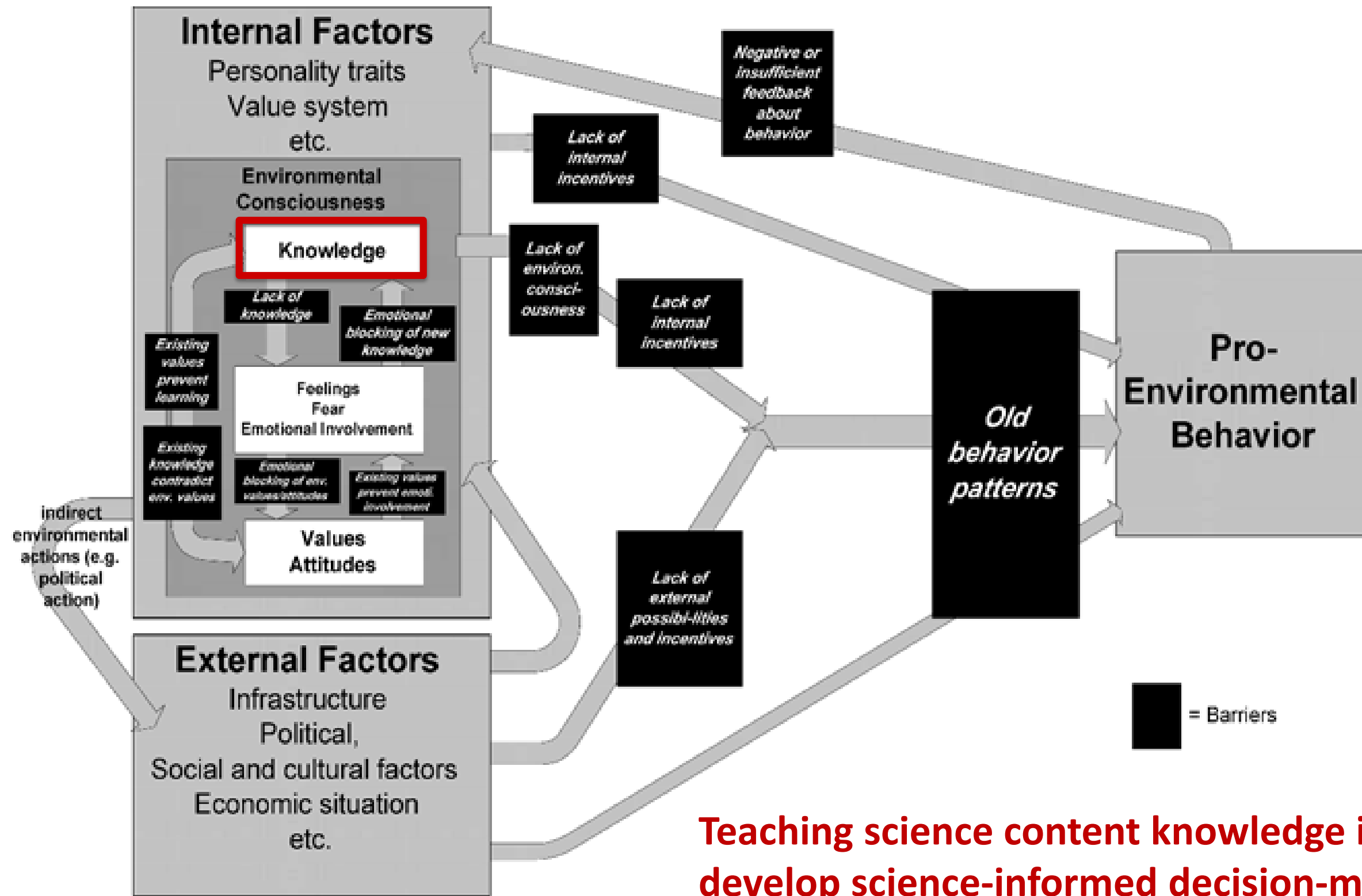
What does “science education to improve student decision-making” look like?



Teach student science content knowledge and they will make better personal and civic decisions



Current decision-making models



Kollmus & Agyeman, 2002

Teaching science content knowledge isn't enough to develop science-informed decision-making skills.

National Academy of Sciences, Engineering & Medicine, 2016





Introductory core course required by all majors in CASNR
~600 students per year

60% STEM majors, 40% non-STEM

Most common majors:

Animal Science 14%

Agribusiness 10%

Agronomy 8%

Fisheries & Wildlife 8%

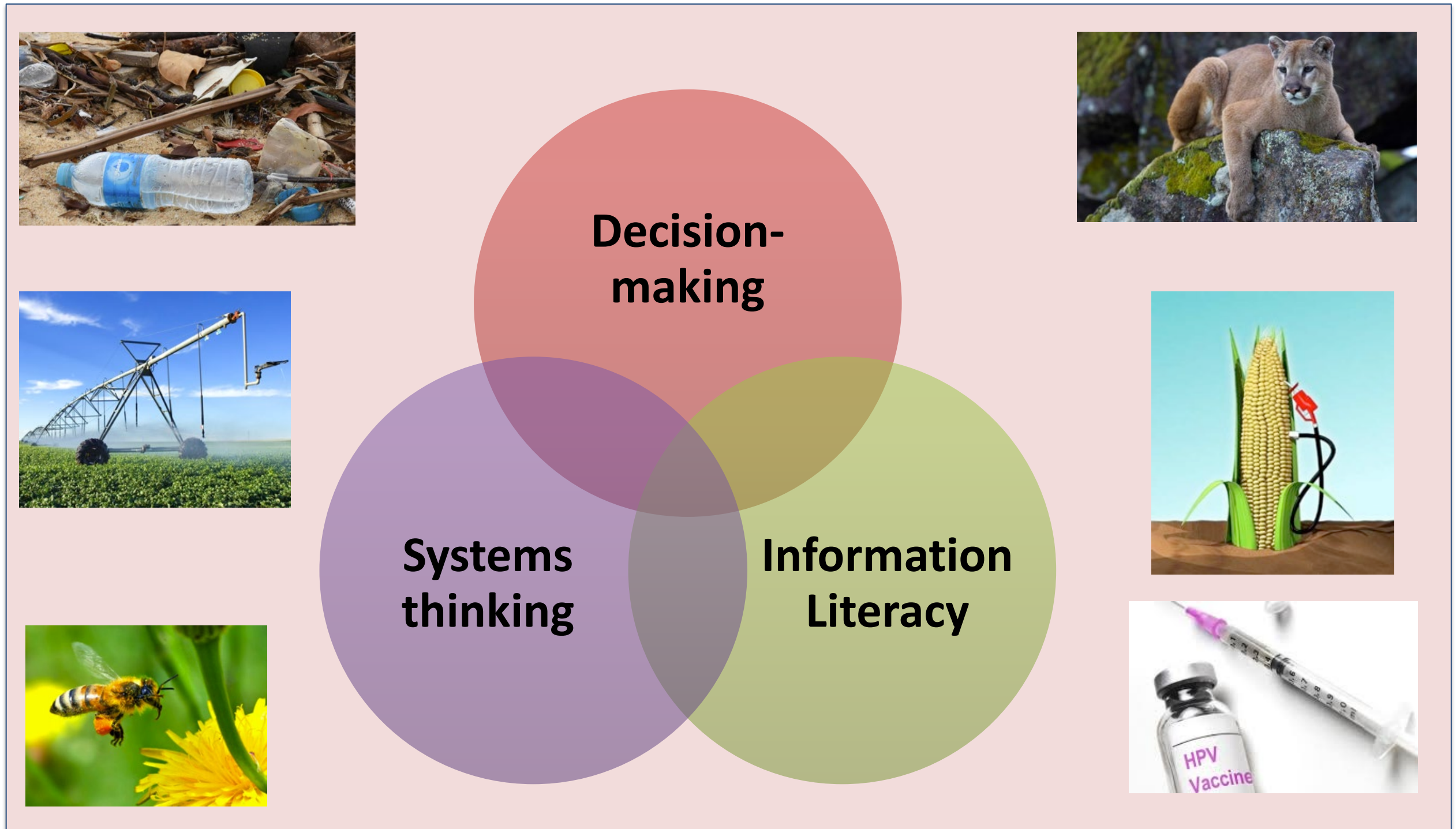
Ag Economics 6%

Forensic Science 6%

(the remaining 48% comprises 28 other majors)



Science and decision-making for a complex world



Supporting students' decision-making



GMOs Wars Water
Gene Therapy
microbiome climate
Information healthcare
Gene Editing Population
vaccines resilience
Poverty food-supply energy
drones
biodiversity

Fast thinking has its place & importance, but when it's really important that we don't make a mistake – slow thinking is better.

N

A quality decision depends on the quality of the process by which it is made and displays:

learning goals for students & target of student learning research

1. The ability of the decision-maker to interpret and apply scientific information to a decision.
2. The final choice reflecting priorities that result from evaluation of tradeoffs.



IUSE: 1711683

Structured decision-making framework

1. Define the Problem

2. List Possible **Options**

3. **Criteria:** How are you going to choose between the options?

Explain important considerations and what is *valued* in an outcome.

4. Information

	Option #1	Option #2	Option #3
Criteria #1			
Criteria #2			
Criteria #3			

5. Tradeoffs Analysis

6. **Choice (“Decision”):** Which option did you choose?

7. Review



We have found learning gains in terms of:

- writing arguments that are supported by scientific evidence
- socioscientific reasoning
- civic attitudes and skills
- library self-efficacy
- scientific habits of mind
- Identifying valid arguments
- Evaluating validity of sources



What students say...

“This course really developed my thinking skills about issues that concerns more than one side who are affected by the issue.”

“I was relating scientific information to problems, and learning how to use it effectively, which is really useful.”



Thanks to



Since Fall 2014

Instructors:

Dennis Ferraro
Liz VanWormer
Brandi Sigmon
Amanda Sorensen
Louise Lynch
Christian Elowsky
Cory Forbes
Tom Powers

Learning Assistants:

45 grad students
28 undergrads
6 post-docs/faculty

Research team:

Amanda Sorensen
Citlally Jimenez
Ashley Alred

Undergrads:

Alese Sanders
Blaine Meyer
Jena Wilson
Madeline Eischen



NSF IUSE:
1711683



**COLLEGE OF AGRICULTURAL SCIENCES
AND NATURAL RESOURCES**

**SCHOOL OF
NATURAL
RESOURCES**

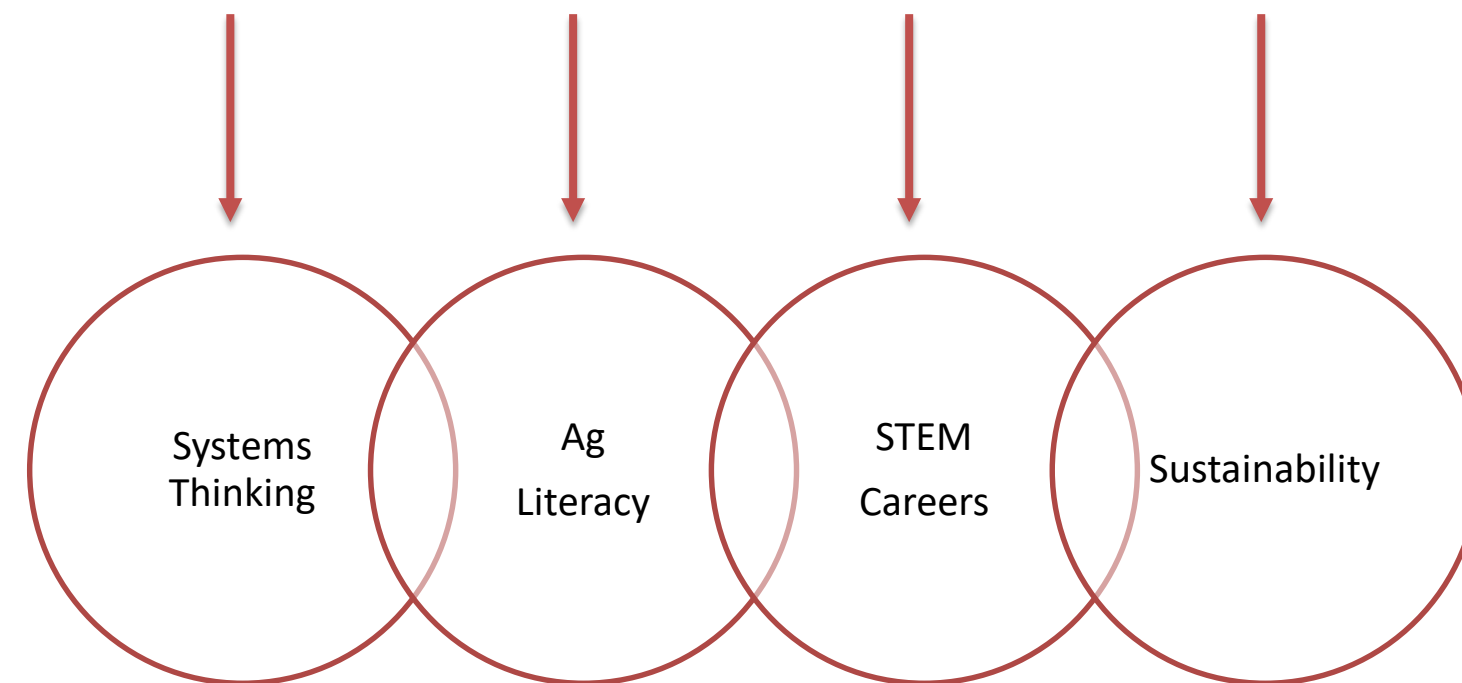
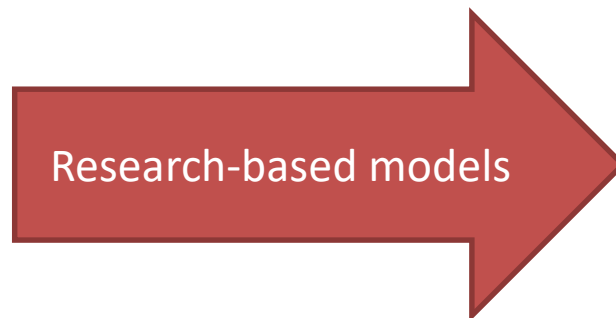
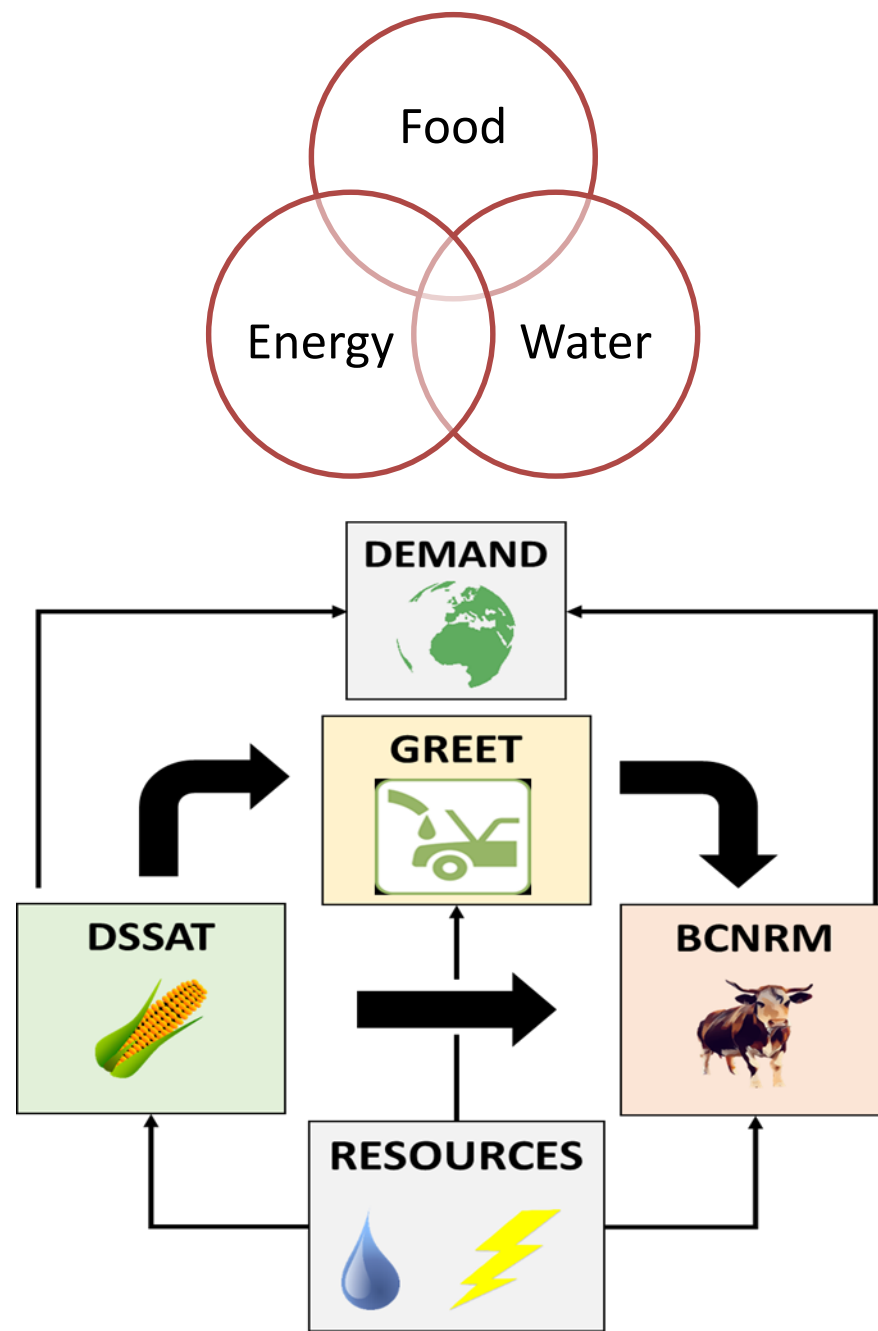
*Immersive Educational Game Simulations to
Enhance Understanding of Corn-Water-
Ethanol-Beef System Nexus*



IN OUR GRIT, OUR GLORY™



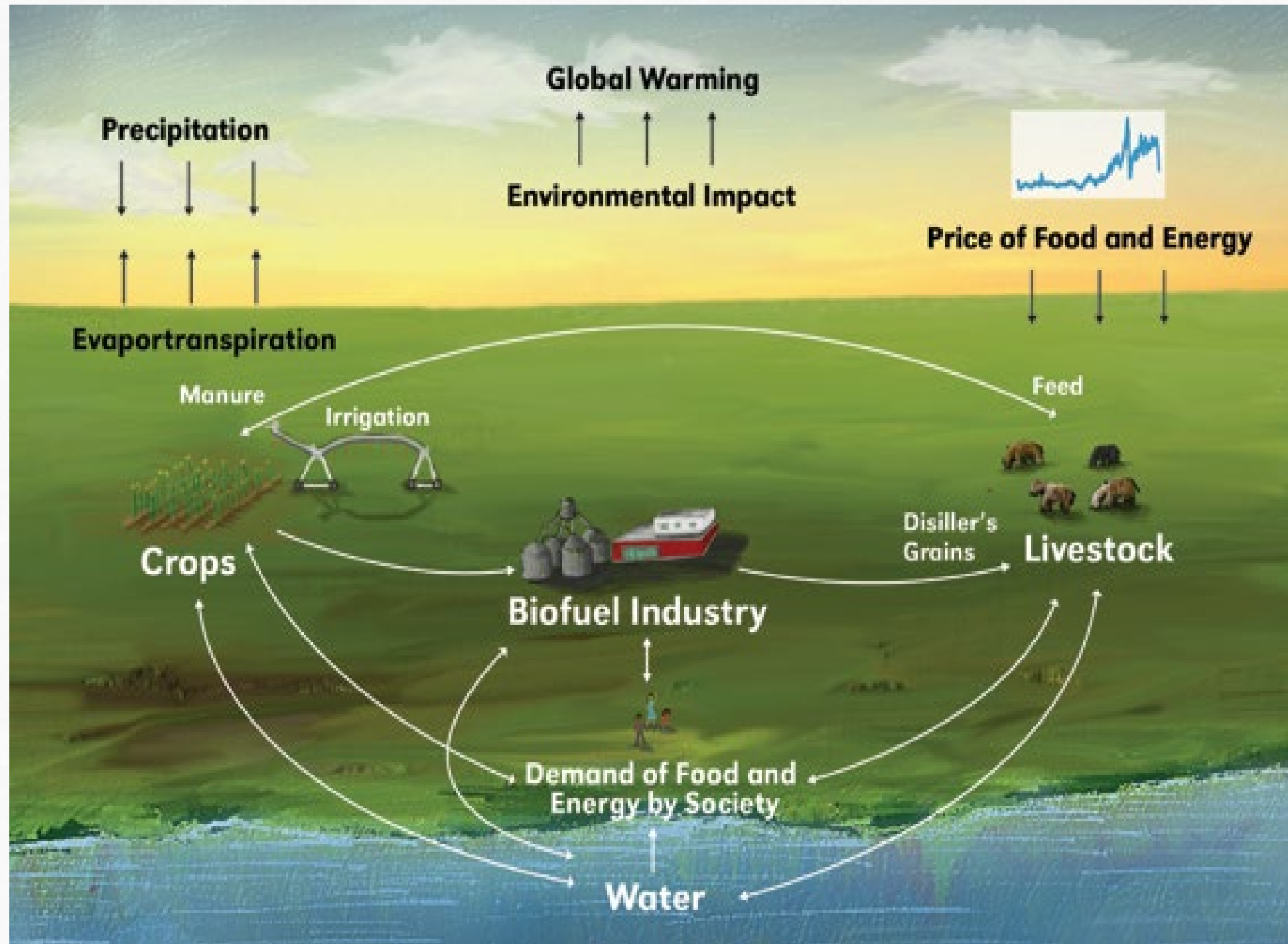
Project Goals



Weather: Mike Hayes, Clinton Rowe, Rezaul Mahmood

Sustainability: Richard Koelsch

Economics: David Rosenbaum, Eric Thompson, Cory Walters



Education:
Jenny Keshwani
Ashu Guru
Changsoo Song
Brandy VanDewalle

Beef
Luis Tedeshi (TAMU),
Galen Ericson

Graphics:
Colleen Syron

Crop Modeling:
Haishun Yang

Water:
Suat Irmak

Integrated Modeling:
Deepak Keshwani,
Jeyam Subbiah



Student Involvement

Graduate Students

Ryan Anderson (BSE)

Nathan Rice (BSE)

Luke Monhollon (BSE)

Raikes Senior Design (CS)

J.P. Fowler

Tanner Morino

Brodin Collins

Austin Baade

Randy Widener

Nick Jay

Hakim Noralahyadi

Undergraduate Students and Part-time Workers

Jake Eiserman (GRPH)

Conner Lunn (BSE)

Dipal Bhandari (CS)

Ben Buckwalter (HS)

Capri Keller (CIVE)

Alli Hauger (BSE)

Zecheng Li (CS)

Tomo Bessho (CS)



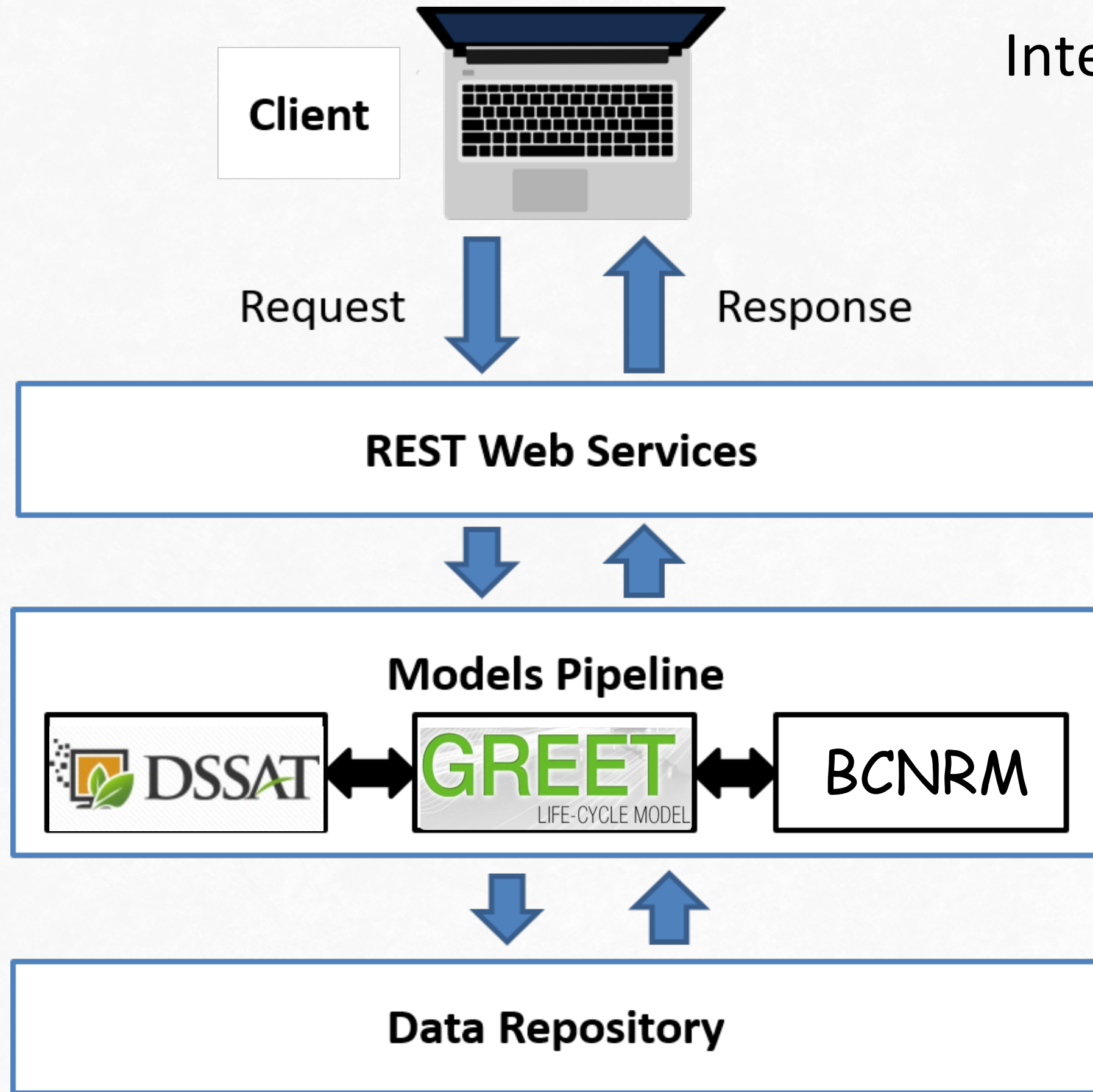
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STEAM





Integrated Model



[VIDEO](#)





PRESERVATION

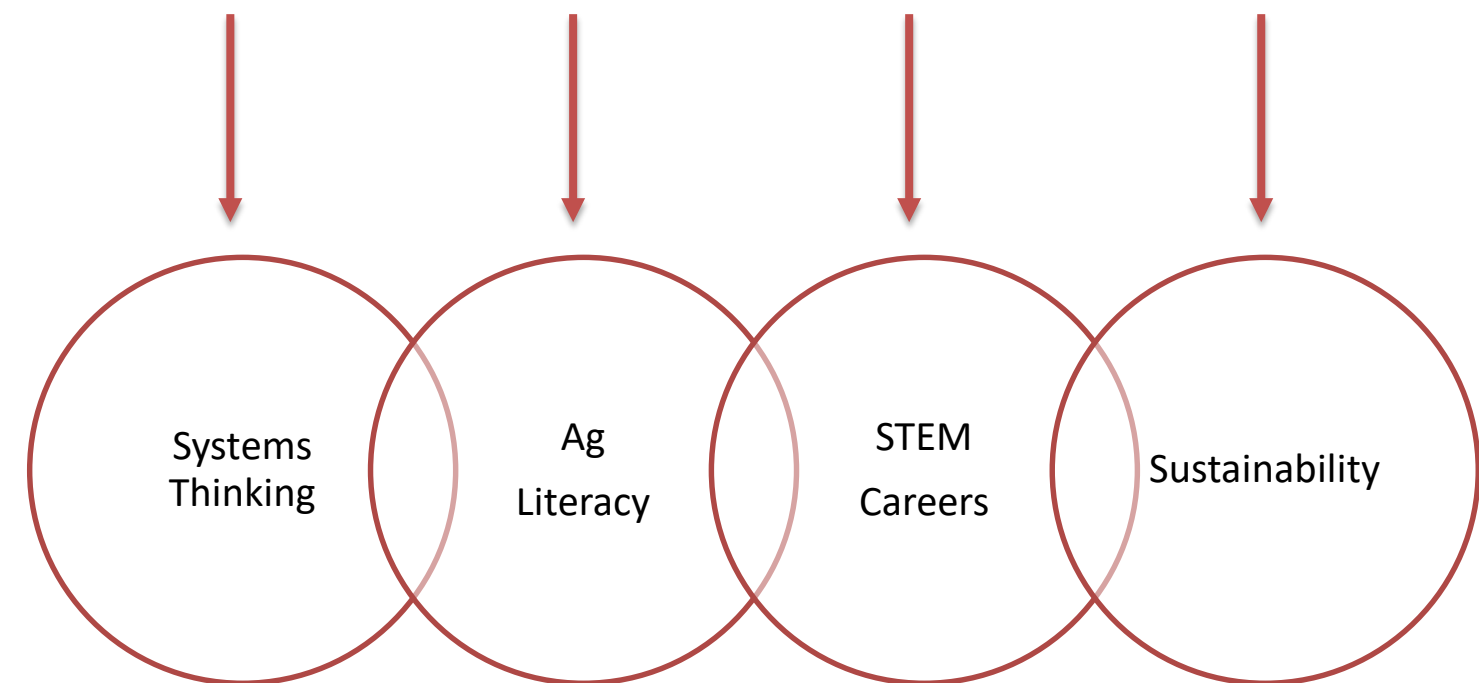
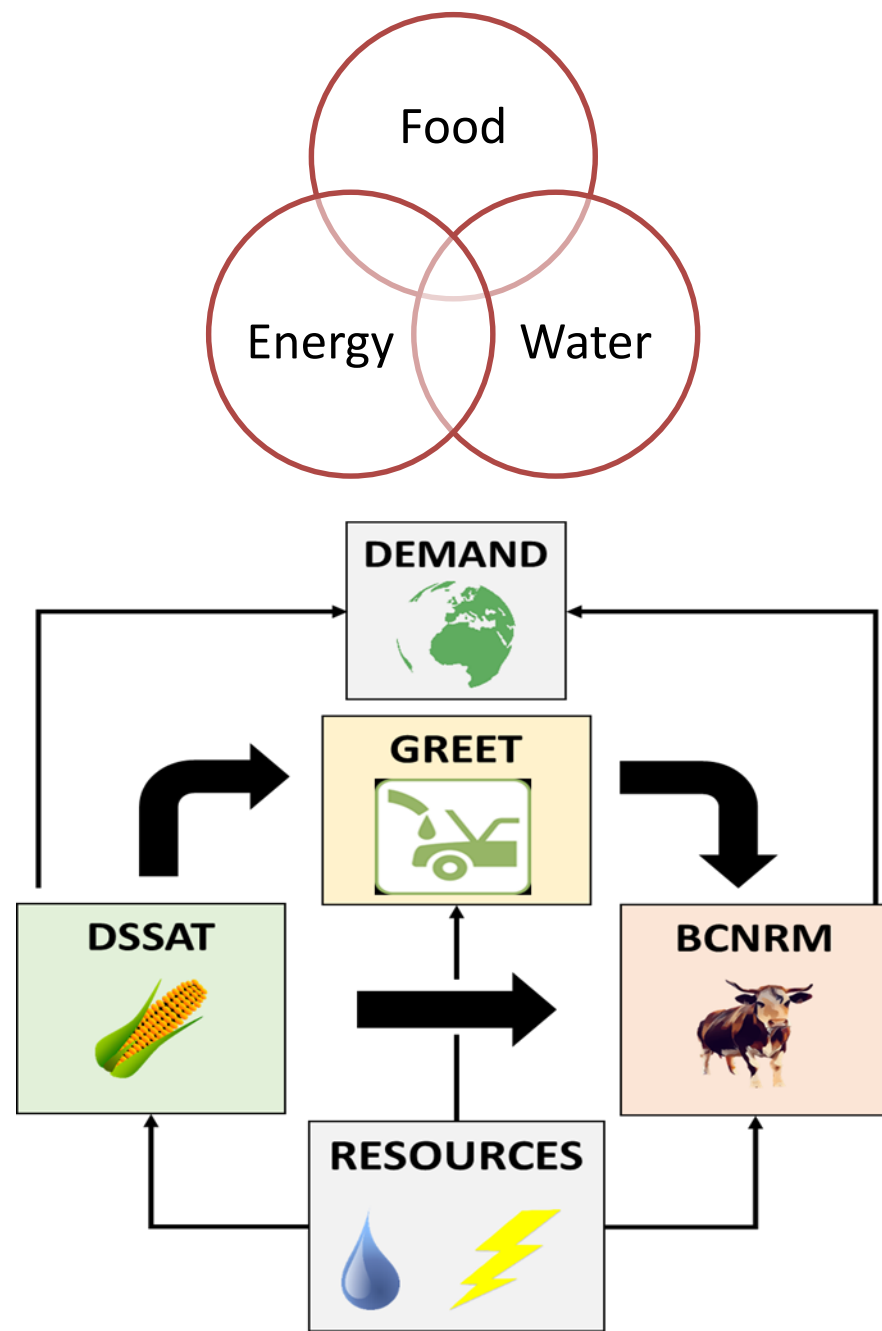


Define and identify **corn-water-ethanol-beef system** elements
Extrapolate impact of individual element on **system interactions**
Relate game theory to **agricultural sustainability**
Predict and analyze how **decision making** occurs as a group versus as an individual





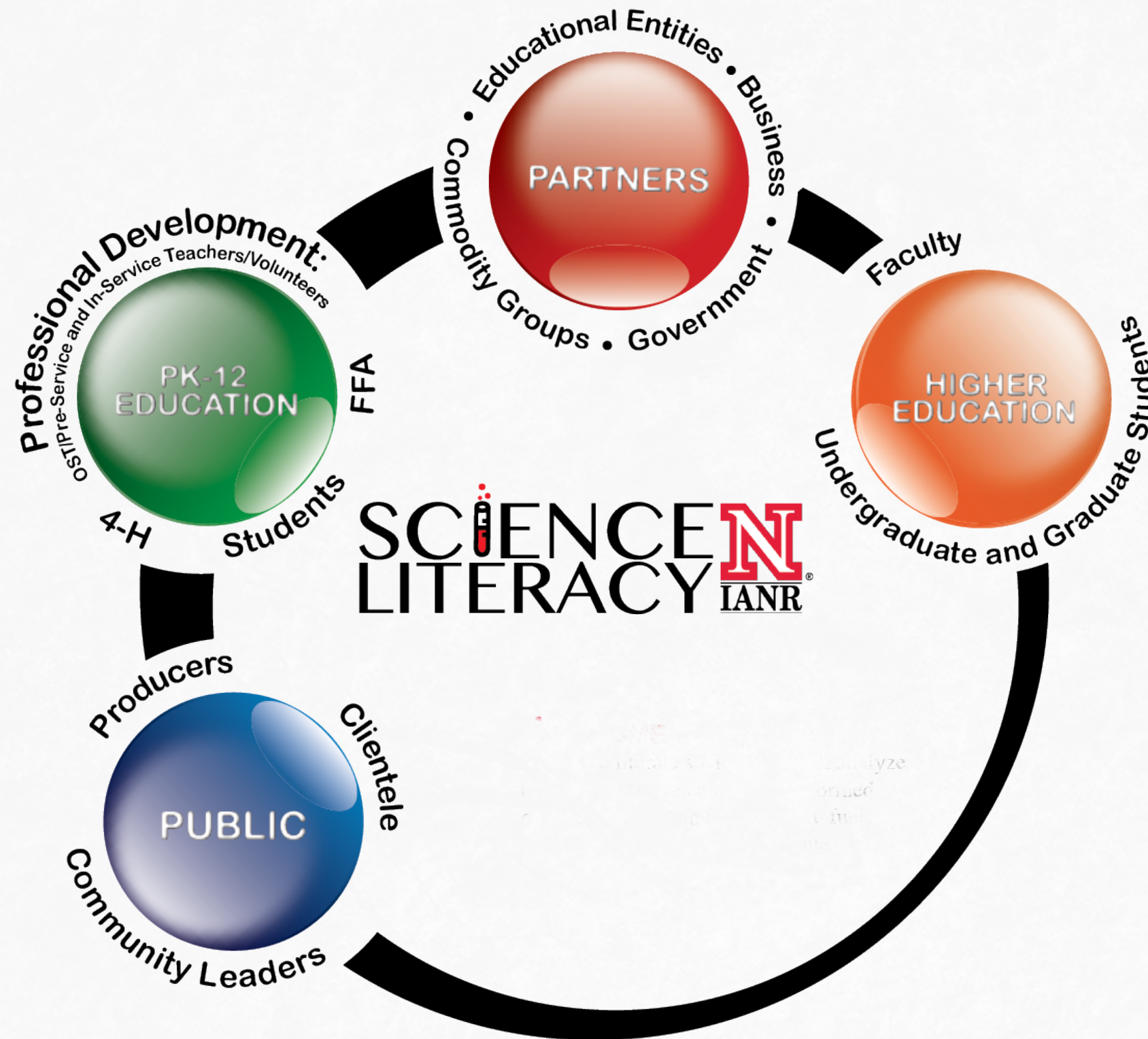
Project Goals





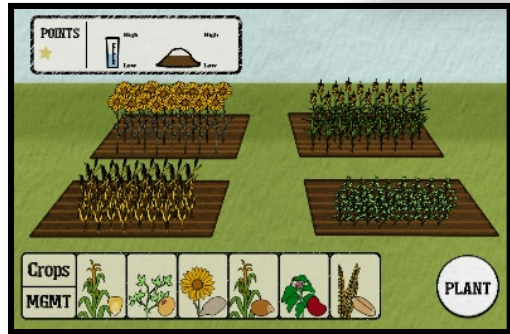
SUMMARY & FUTURE PLANS

REPORT



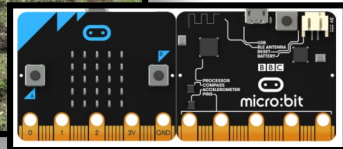
Outcome

A scientifically literate society capable of making effective decisions grounded in STEM-informed analyses of complex, real-world challenges associated with food, fuel, water, landscape, and societal issues.

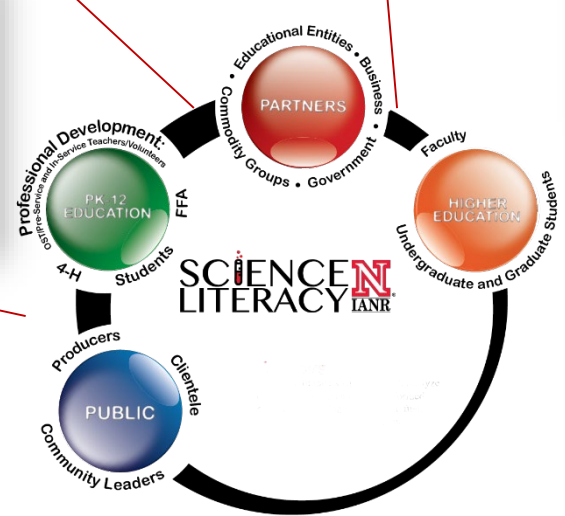
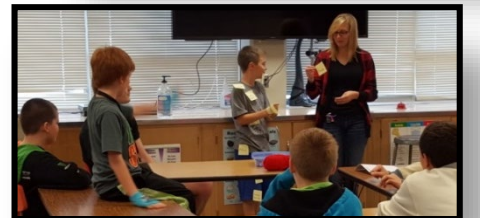
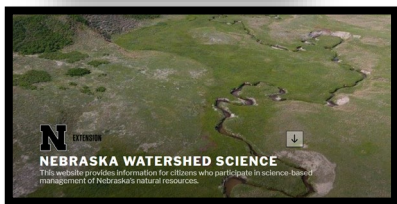


Growing Fields: Your Future in Food

A Career-Focused Initiative of Raising Nebraska



CULTIVATE ACCESS





All Nebraska students have at least one Science Literacy experience

Expand collaborations and partnerships




SCIENCE LITERACY WGOITG- Nebraska Home Graph Archive

WHAT'S GOING ON IN THIS GRAPH?

NEBRASKA EDITION

"The scientist and the citizen alike must make evaluative judgments about the validity of science-related media reports and their implications for people's own lives and society."
- A Framework for K-12 Science Education, p. 71



A driving goal of the Science Literacy Initiative at the University of Nebraska-Lincoln is to effectively prepare PK-12 students for successful careers and a lifetime of science-informed decisions. These goals will require students to develop critical thinking and

Every relevant discovery packaged for consumption by appropriate audiences



Science Literacy Community Meeting
Thursday, February 7th
Arbor Room, East Campus Union



**Together, we will build the momentum
needed to make a difference in the lives of
Nebraskans and citizens worldwide.**



Welcome New Faculty

Since Sept. 2018
All Hands Meeting



**Jose
Andrade**



**Melissa
Bartels**



**Tami
Brown-Brandl**



**Terence
Centner**



**Ann
Dobesh**



**Elizabeth
Fraser**



**DaVonti'
Haynes**



**Katja
Koehler-Cole**



**Katherine
Kreuser**



**Louise
Lynch**



**Cole
Meador**



**Molly
Reil**



**Matthew
Smart**



**Alex
Vecchio**



**Yanbin
Yin**



**Welcome
New Staff**

**Hired Since Sept. 2018
All Hands Meeting**



December 10, 2018

Heng-Moss named Agricultural Sciences and Natural Resources dean



Craig Chandler | University Communication

Tiffany Heng-Moss teaches an entomology class in 2012. Heng-Moss has been named permanent dean of the College of Agricultural Sciences and Natural Resources.

SHARE



Tiffany Heng-Moss, who has served as interim dean of the University of Nebraska–Lincoln’s College of Agricultural Sciences and Natural Resources since July 2017, has been named permanent dean of the college.

Mike Boehm, Harlan Vice Chancellor for the Institute of Agriculture and Natural Resources, made the announcement Dec.

RELATED LINKS:

- [Faculty profile: Tiffanfy Heng-Moss](#)
- [College of Agricultural Sciences and Natural Resources](#)
- [Institute of Agriculture and Natural Resources](#)

TAGS:

IANR New Roles

Tiffany Heng-Moss
Dean
College of Agricultural
Sciences and Natural
Resources

IANR
New Leaders



John Ruberson
Entomology



Cindy Zluticky
Metro District



Jessie Brophy
External Engagement
and Special Events

N | 150

Can you imagine?



N150 Core Aspirations

- Nebraska students co-create their experience.
- Our research and creativity transforms lives and learning.
- Every person and every interaction matter.
- Engagement builds communities.



Celebrate Nebraska 150

Charter Week, Feb. 11-15

Glow Big Red, Feb. 14

<https://n150.unl.edu/>



Chancellor's Strategic Planning Task Force on Budget Model

- Implement a 'hybrid' Responsibility-Centered Management (RCM) budgeting process – as recommended by the [April 13, 2017 Budget Task Force Report](#)
- Refine business/HR functions to enhance success of core academic missions



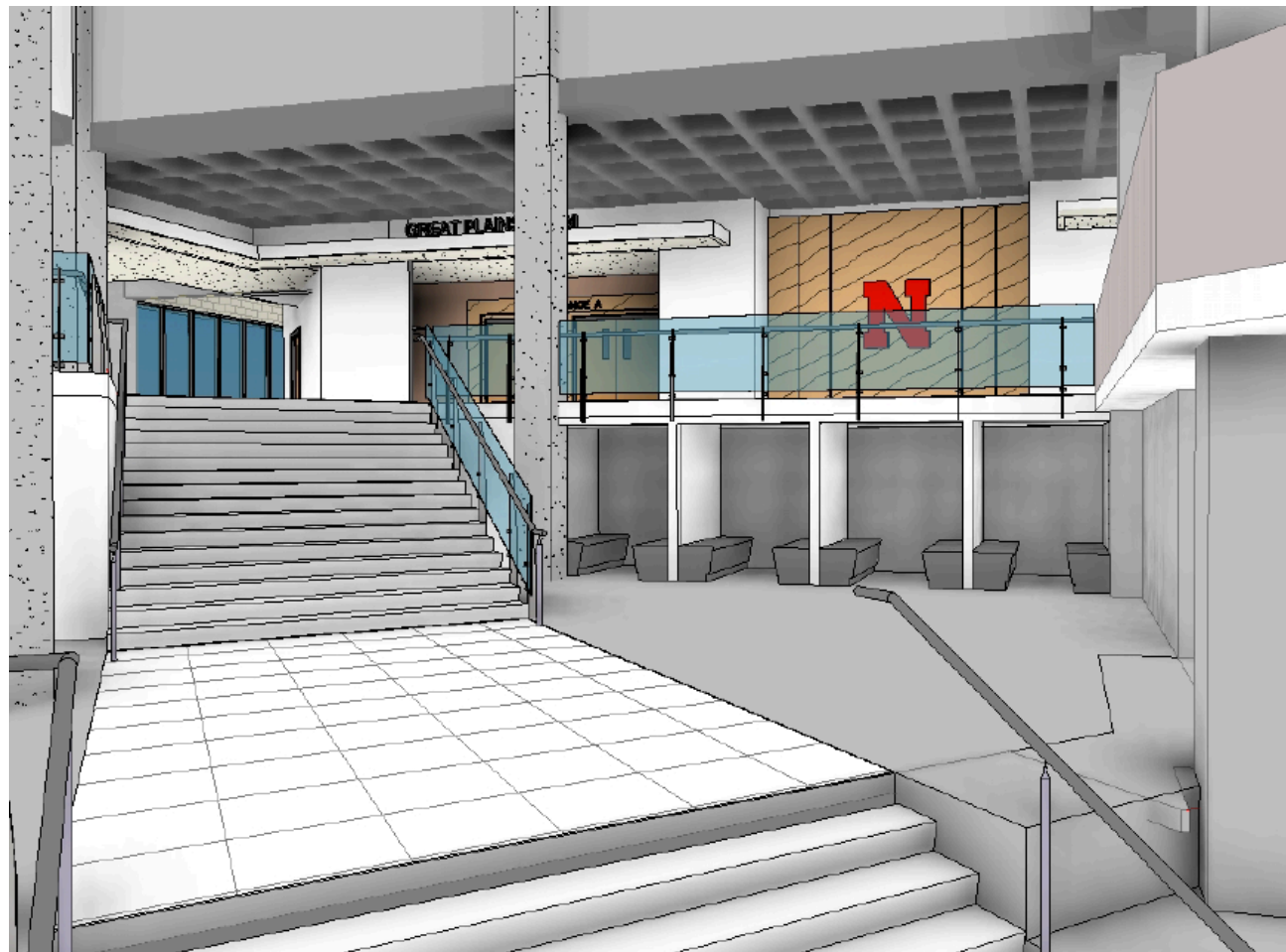
**IANR facilities allow teaching, research,
and engagement to come together.**

IANR

ENREC Christenson Building expansion



Facility Updates



East Campus Union renovation

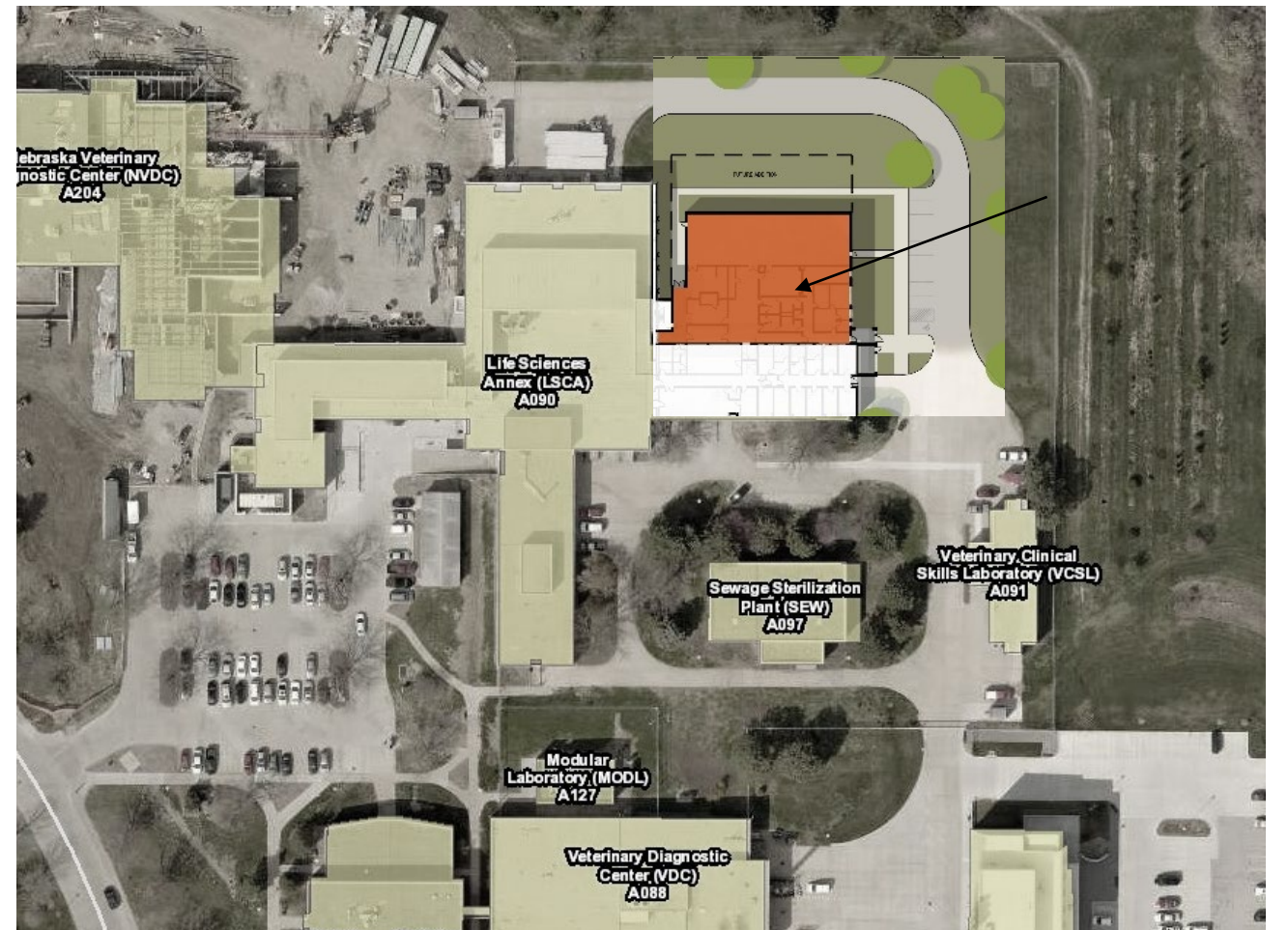


C.Y. Thompson transformation



Dairy Store shift

Gnotobiotic Mouse Vivarium addition





**Public and private partnerships enhance
the important work of IANR.**

PARTNERSHIP



NIAMRRE

**National Institute of
Antimicrobial Resistance
Research & Education**

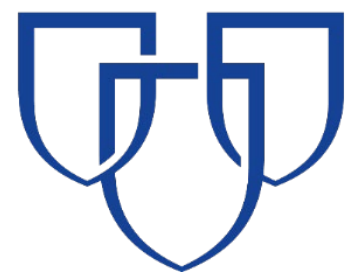
**Public/
Private
Partnerships**



**IOWA STATE
UNIVERSITY**

IANR

**MAYO
CLINIC**



**University of Nebraska
Medical Center™**



**Public/
Private
Partnerships**



Starting from the best possible place.

START

Update on IANR Budget

Recent events

SEPTEMBER

No tuition increase

OCTOBER

Nebraska Economic Forecasting Advisory Board met and raised revenue projections

NOVEMBER

Governor Ricketts re-elected;
No mid-year rescission

DECEMBER

Federal shutdown begins

JANUARY

Online sales tax collected;
Unicameral began 90-day session;
Governor released state budget;
Federal shutdown ends

On the radar

FEBRUARY 28

Nebraska Economic Forecasting Advisory Board meets and releases state revenue budget projections

MARCH 4

NU Appropriations Committee Hearing

University of Nebraska (excluding NCTA) Biennial Request (in millions)

	2019-20		2020-21	
	NU Request	Governor's Budget	NU Request	Governor's Budget
Core Operations				
Compensation				
Salaries & Benefits	14.5	14.5	14.8	14.8
Health Insurance	0.5	0.5	4.5	4.5
Workers Compensation	(0.1)	(0.1)	-	-
Subtotal	14.9	14.9	19.3	19.3
Operations				
Utilities	1.4		1.5	
General Operations	0.9		0.9	
DAS Accounting/fuzioN Assessment	0.2		-	
Subtotal	2.5		2.4	-
Core Operations Total	17.3	14.9	21.7	19.3

Biennial request did not reflect all of the needs of the University



N®



**GO
BIG
RED**™

N150 Core Aspirations

- Nebraska students co-create their experience.
- Our research and creativity transforms lives and learning.
- Every person and every interaction matter.
- Engagement builds communities.





IANR's Six Communities



IMPACT

Students

Staff

Faculty

Society

REC's

Centers

Research Sites

Program Units

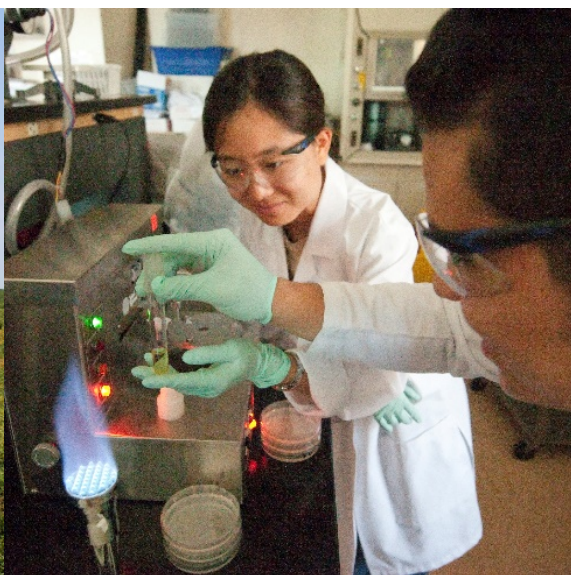
NU Wide Institutes

Academic Units

IANR Senior Leadership Team



*By focusing on the success of our people,
being **accessible, equitable, diverse & inclusive**,
being an **engaged university**,
through **authentic partnerships**,
we will make a difference in the world.*





“Land-grant institutions, contrary to some popular beliefs, are not merely about agricultural development, but rather about changing the world in a positive, meaningful, and enduring way. Land-grant institutions perhaps best represent the very core of what greatness means in American society--namely, equal opportunity for all and, through it, the chance to make our society and the world a better place in which to live.”

-The Modern Land-Grant University, 2014