

High-Impact STEM Education

a SENCER-Campus Compact partnership

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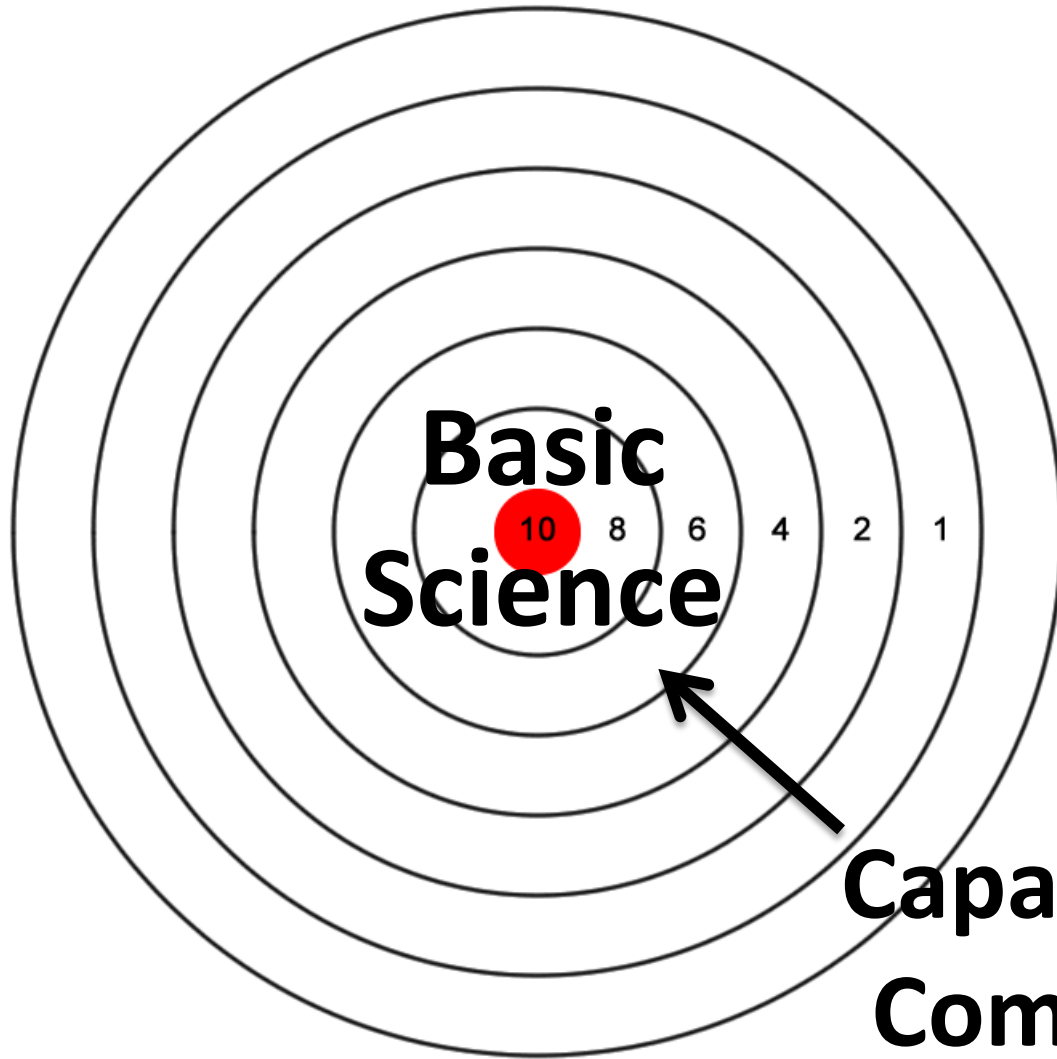
Mahalo ...
Team SENCER/Campus
Compact

**Science Education for New
Civic Engagements and
Responsibilities**

National Science Foundation

2001

non-majors courses
learning communities
laboratories
majors courses
general education programs



**Basic
Science**

10

8

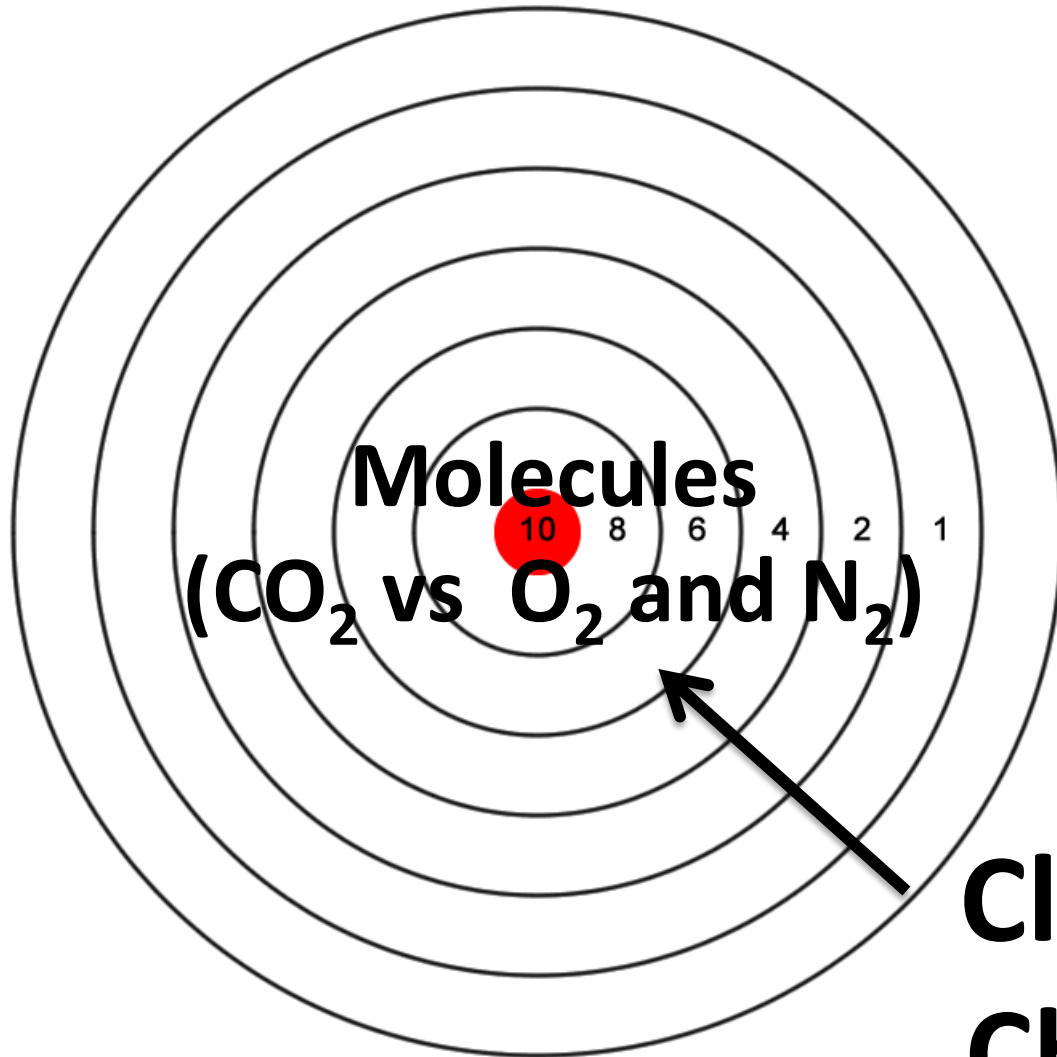
6

4

2

1

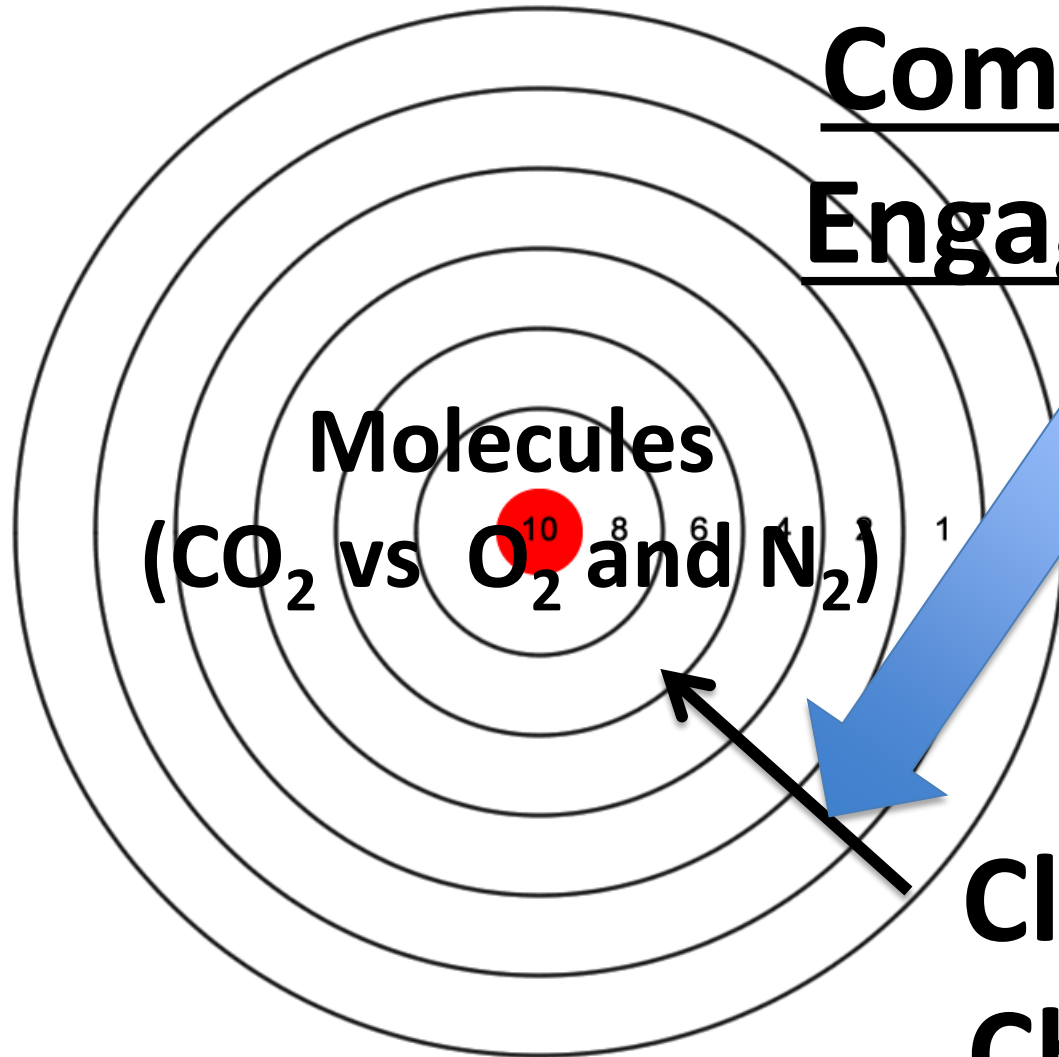
**Capacious
Complex
Issue**



Molecules
(CO₂ vs O₂ and N₂)

**Climate
Change**

Community Engagement



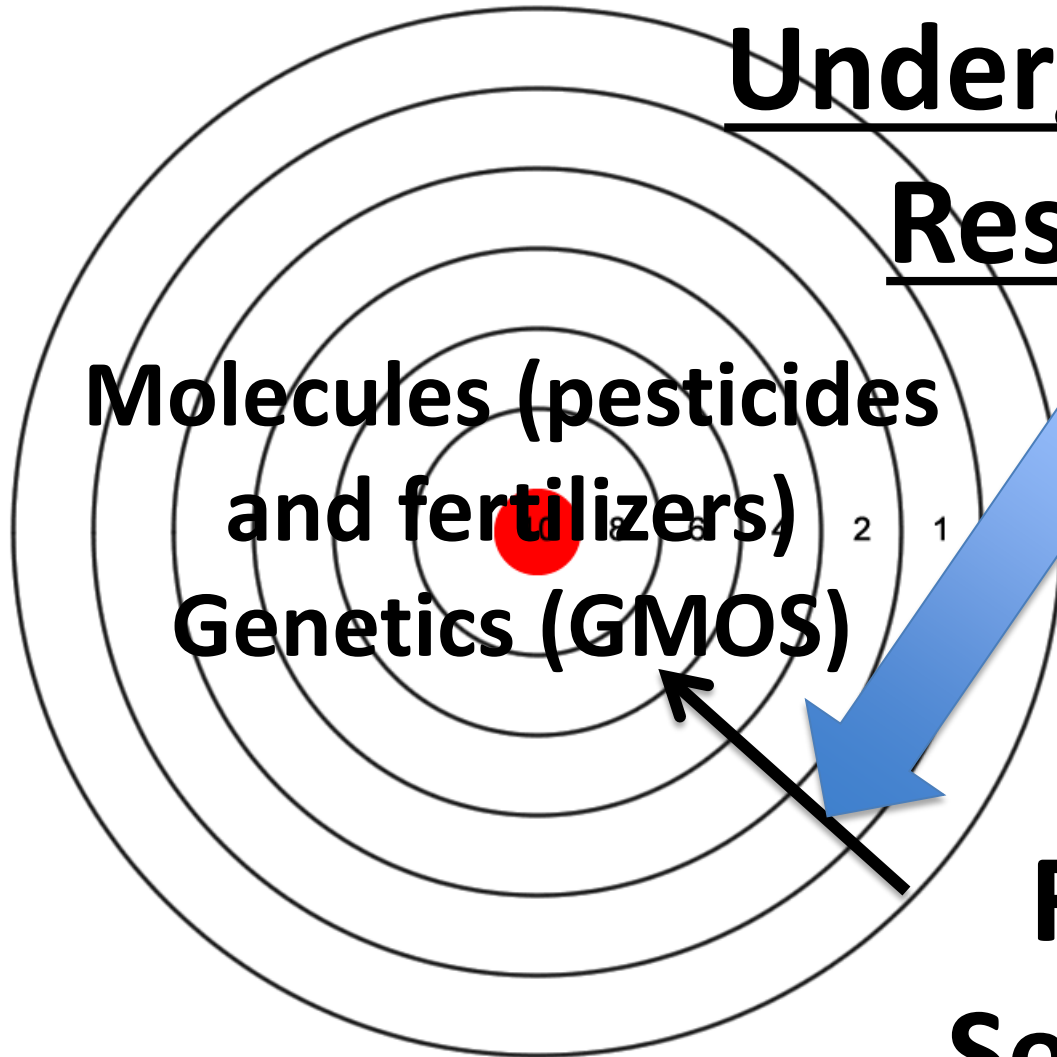
Molecules
(CO₂ vs O₂ and N₂)

Climate Change

Undergraduate
Research

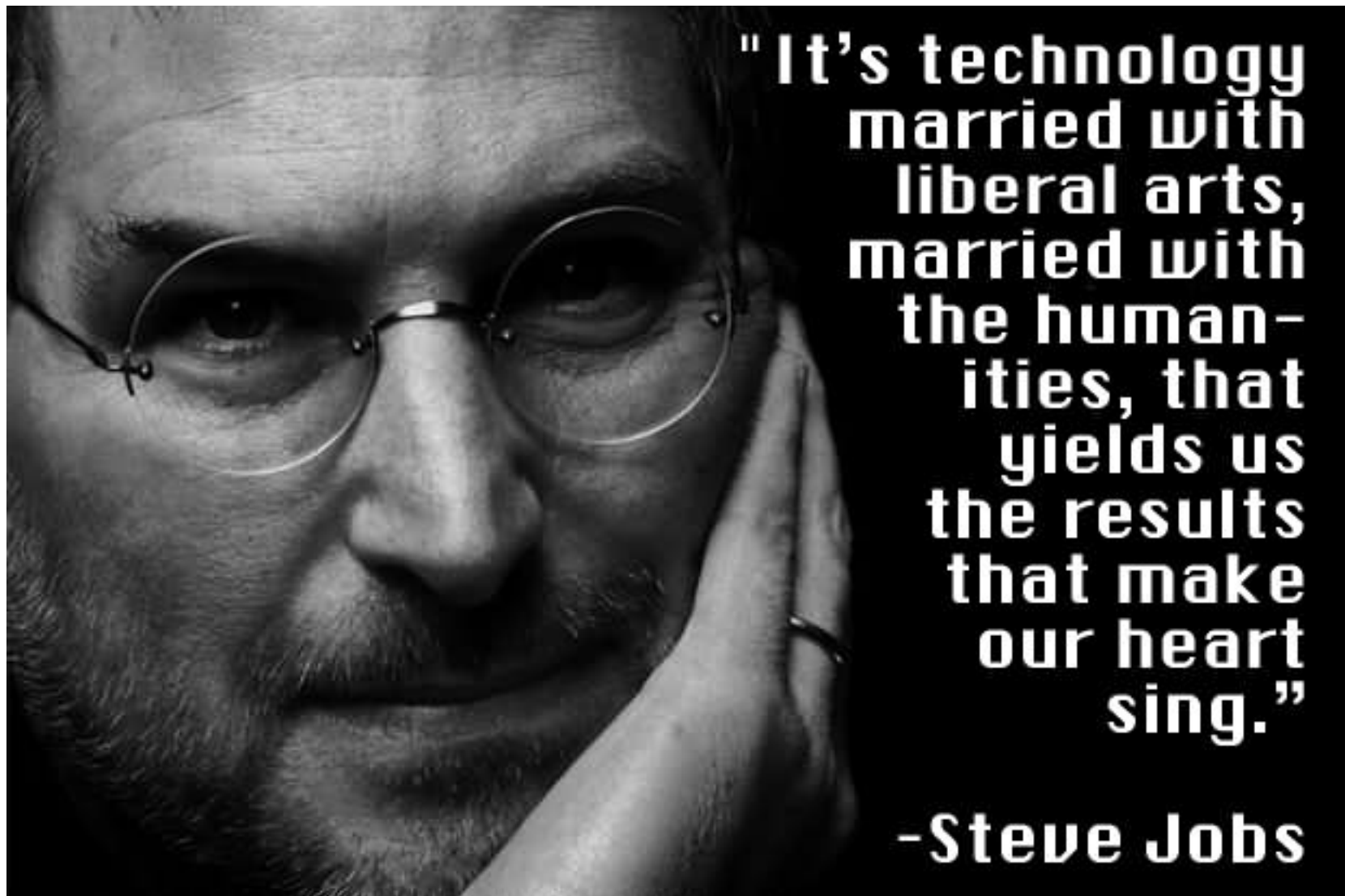
**Molecules (pesticides
and fertilizers)**
Genetics (GMOS)

**Food
Security**



Multidisciplinary Trouble

Sustainability



**"It's technology
married with
liberal arts,
married with
the human-
ities, that
yields us
the results
that make
our heart
sing."**

-Steve Jobs

SENCERizing

CIVIC ENGAGEMENT implies **working to make a difference** in the **civic life** of our communities **and developing the combination of knowledge, skills, values and motivation to make that difference**. It means promoting **the quality of life** in a community, through both political and non-political processes.

For students, civic engagement can include **community-based learning through service learning, undergraduate research, community-based research, or service within the community**.

**Knowledge
through civic engagement**

Indigenous knowledge and understanding

**Knowledge
brings responsibility**

Obligation

Action

SENCERization

**SENCER Summer Institutes,
Models Courses,
International Journal,
Assessment Tools,
Regional Meetings,
Web Resources**



SENCER.net

SCIENCE EDUCATION FOR NEW CIVIC ENGAGEMENTS AND RESPONSIBILITIES

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Get Involved		Southwest			
		West			

Community of Transformation

Kezar, A. and Gehrke, S.

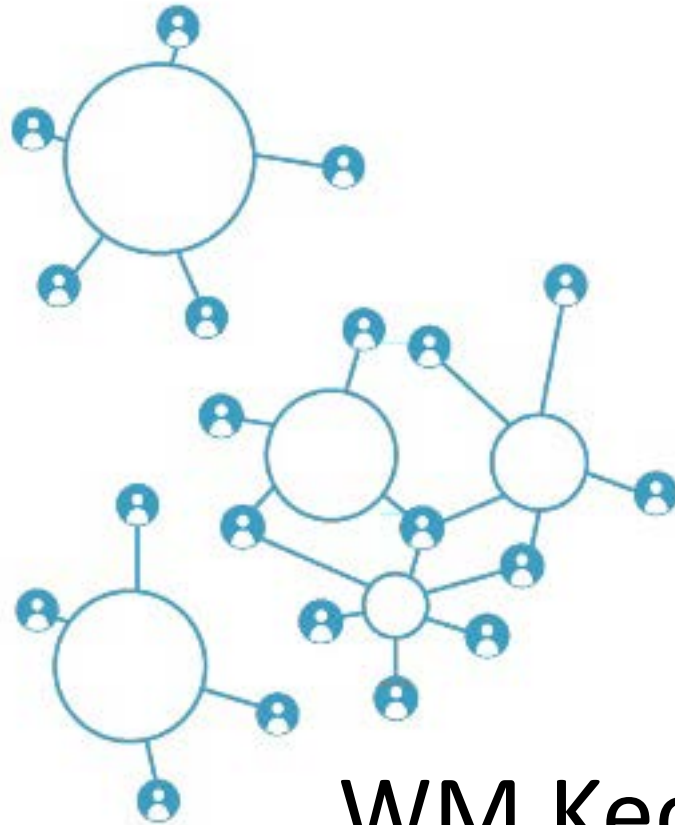
*Communities of Transformation and Their Work Scaling STEM
Reform, 2015*

SENCER Center of Innovation (SCIs)

2012

SCEWestNET

Nodal Network Approach



WM Keck Foundation

2015



SENCER
HAWAII

SCIENCE EDUCATION FOR
NEW CIVIC ENGAGEMENTS
AND RESPONSIBILITIES

SENCER Model State

(video)

WHY SENCER? BECAUSE its
everyone's RESPONSIBILITY.