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Exemplifying the Scientific Enterprise through Diversity, Equity, and Inclusion

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Exemplifying the Scientific Enterprise through Diversity, Equity, and Inclusion

Workshop at Carnegie Institute





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Darryl Dickerson

PhD, Biomedical Engineering, Purdue University

Chair of Board of Directors, National Society of Black Engineers (NSBE), 2007 - 2008

Pre-College Initiative Chairperson, NSBE, 2004 - 2007

Associate Director, Minority Engineering Program, 2012 - present

President and Executive Director, National Association of Multicultural Engineering Program Advocates (NAMEPA)

Board Director, NAMEPA 2015 - present



Stephen Secules

B.E. Engineering, M.S. Acoustics, PhD Education

Visiting Assistant Professor, Purdue University

My research is on culture and equity in Science, Technology, Engineering, and Math (STEM) educational settings

I collaborate with faculty and staff to create more inclusive institutional culture for many student groups

As a social scientist, I think critically about STEM culture and help others to do



You shared with us...

Your goals

- “just to participate” x6
- “to learn how we might build more diverse audiences for our public programs”
- “to help people who aren't affected by them understand why those things are so important”
- “concrete steps for the Carnegie leadership to take in response to this discussion, and a plan to follow up on any progress in several month's time”

Purpose and Plan





Purpose

We are researchers focused on diversity, equity, and inclusion (DEI) in STEM education and professional settings.

We believe DEI concerns **all** members of the scientific community.

We have come to reflect **with you** on the DEI mission of Carnegie and to brainstorm ways to make progress.



Plan

Monday: Workshop to collectively brainstorm:

- What is the mission of Carnegie Institute?
- What are its key activities?
- What are its key characteristics?

And how do each of these relate to diversity, equity, and inclusion?

After the workshop: We will synthesize the findings and produce a framework to help guide future progress.

Wednesday: We will be following up with some constituent groups at the Observatories to present our initial findings and hear their perspectives.

Talking about Diversity





Suggested ground rules

Share from your personal experience as you feel comfortable

Lean in to your “learning edge” about diversity, equity,
inclusion

Icebreaker 1

Talk in pairs:

What is one thing that people might not guess about you when first meeting you that is important to your experience or perspective?

2 minutes

Icebreaker 2

Talk in pairs:

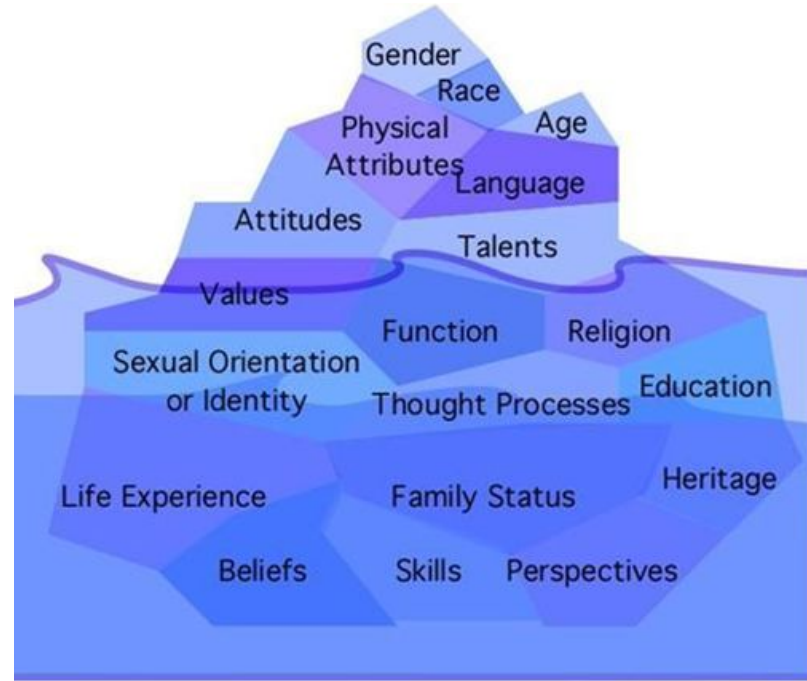
What is one thing that people probably would guess about you that is important to your experience or perspective?

2 minutes

Diversity = differences among people

Diversity means the ways we differ.

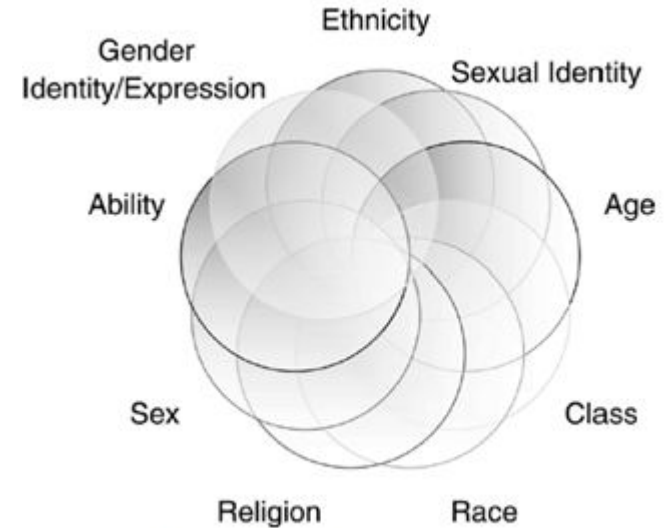
It includes the readily visible differences and the differences that may be below the surface.



Diversity = differences among people

Identity =

- Who you are and how that positions you in relation to others
- Demographic social identities
- Roles (e.g., scientist, engineer, parent)
- We can hold multiple identities
- They can be more or less significant to us in different situations



Source: Developed by Camille O'Bryant

Diversity

Think about Identity:

- How do you identify in each of the following categories?
- How do most scientists identify? Why does this matter?

Social Identity Categories	Social Group Members
Race	Black, White, Asian, Latino, Native American, Multiracial
Sex	Female, Male, Intersex
Gender	Men, Women, Transgender, Genderqueer
Religion	Jewish, Muslim, Christian, Hindu, Buddhist, Mormon, Atheist, Agnostic
Sexual Orientation	Lesbian, Gay, Bisexual, Heterosexual
Class	Owning, Poor, Upper Middle, Middle, Working Class
Ability	Disabled, Temporarily Able-Bodied
Age	Elders, Adults, Young People

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Equity / Inequity

- Social groups often have different status and power.
- This gives some social groups unearned advantages while others face barriers.
- Inequity can be created on group, institutional, systemic, or cultural levels.

Think about Equity:

- What does science have to do with equity/inequity?

Culture

The things we do
automatically and don't
have to think about

Habits and norms

Climate

"The air we breathe"

Insiders and Outsiders may
notice different aspects of
culture

Inclusion / Exclusion

Inclusion of specific demographic
groups.

Welcoming or hostile professional
contexts.

Exclusion can be intentional or
unintentional.

Think about Inclusion:

How inclusive is Carnegie? To
whom? Would everyone agree
with my assessment?



More suggested ground rules as we go on

Share from your personal experience as you feel comfortable

Lean in to learning about diversity, equity, and inclusion

Avoid generalizations about entire groups of people

Assume what is shared in the conversations is confidential

Be aware of letting everyone have a turn to speak

Listen to each other

Accept imperfection from others and be kind as you disagree

Institutional Context





Areas for reflection about an Institution

Mission

Fundamental
purpose

Activities

Key areas of
effort

Characteristics

Aspects of the
organization

Mission





Mission = Fundamental Purpose



Institutional Context: Carnegie Institute for Science

Mission:

Andrew Carnegie established a unique organization dedicated to scientific discovery “to encourage, **in the broadest and most liberal manner**, investigation, research, and discovery and the application of knowledge **to the improvement of mankind...**” The philosophy was and is to **devote the institution’s resources to “exceptional” individuals** so that they can explore the most intriguing scientific questions in an atmosphere of complete **freedom**. Carnegie and his trustees realized that **flexibility** and **independence** were essential to the institution’s success and that tradition is the foundation of the institution today as it supports basic scientific research.



Mission:

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Over the time course of a year, what do you do within your professional role (job responsibilities) that advances the mission of Carnegie?

How can focus on diversity, equity, and inclusion advance the mission of Carnegie?

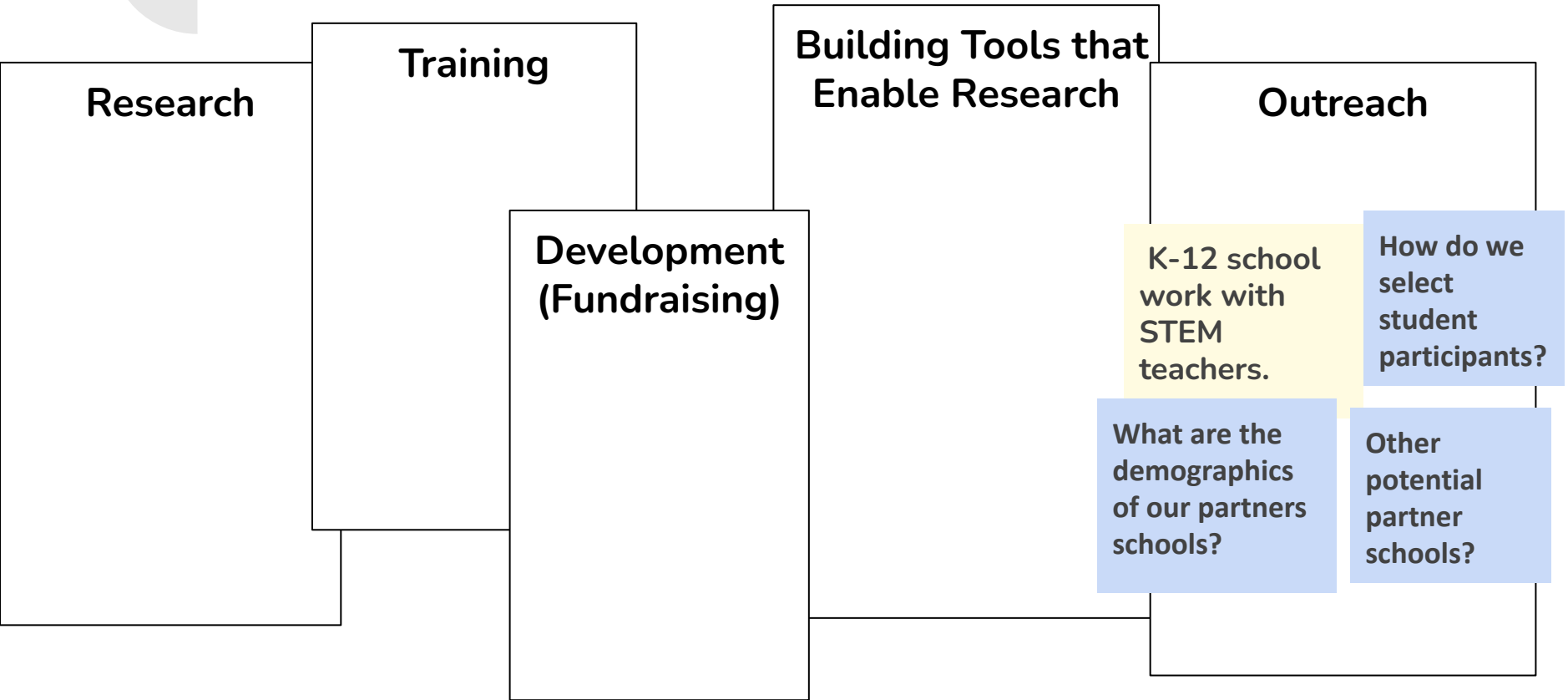
Group Brainstorm 1:

Activities





Carnegie Institute of Science Activities





RESEARCH

OUTREACH

DEVELOPMENT

BUILDING TOOLS
TO ENABLE
RESEARCH

K-12 school
work with
STEM
teachers.

How do we
select
student
participants?

TRAINING

What are the
demographics
of our partners
schools?

Other
potential
partner
schools?

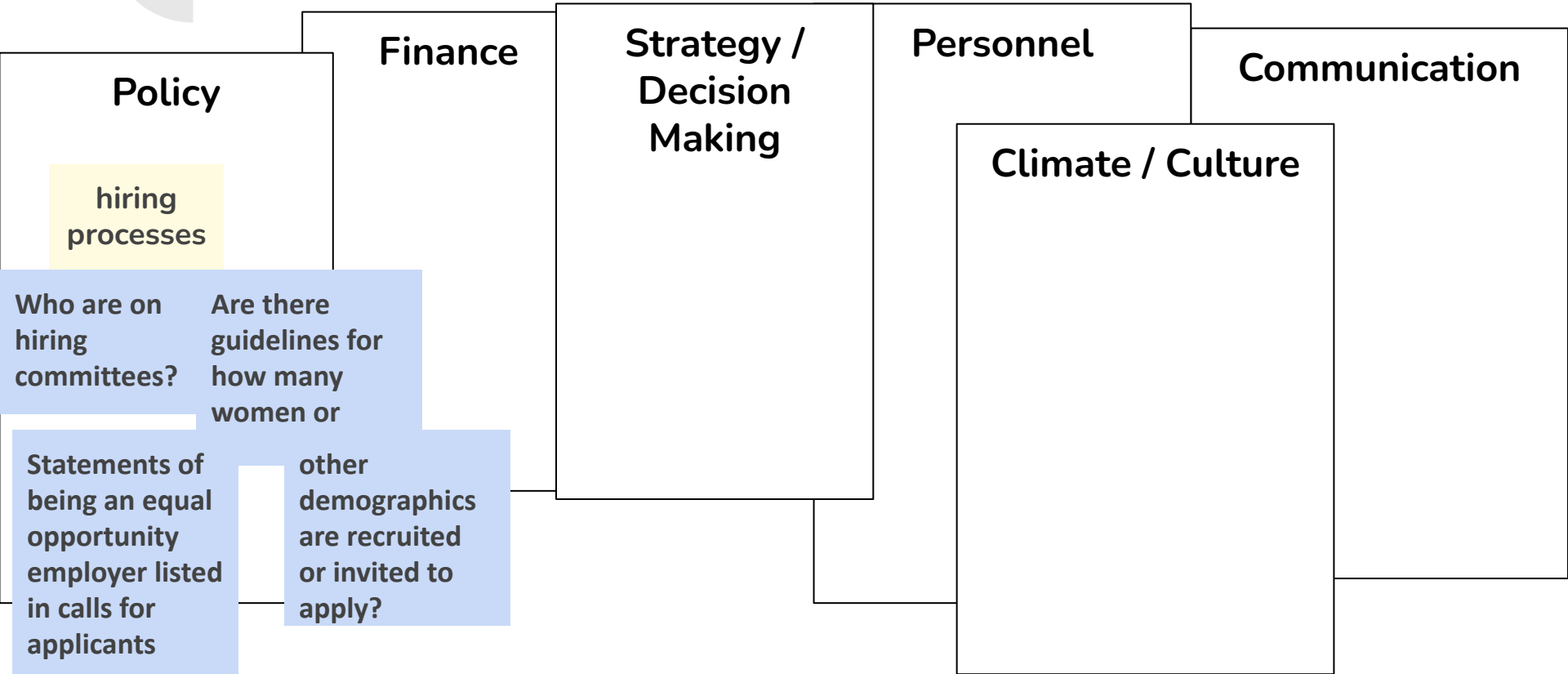
Group Brainstorm 2:

Characteristics





Carnegie Institute of Science Characteristics



Conclusion





Individual Takeaways

Think about and write down...

- Your Ultimate Ideal Vision: What would you like to see happen in at Carnegie?
- The Challenge: What is most pressing at Carnegie regarding DEI?
- Shorter Term Vision: How could things look differently within a year?
- Your Influence: What can you do from your seat at Carnegie to advance towards the vision?



Community Takeaways

Holding Yourself and Each Other Accountable

Developing a Shared Vision for DEI at Carnegie (to be continued on Wednesday)

Resources from us (a checklist of questions to ask)

Thank you for participating!

If you have more thoughts, feel free to email us
ssecules@purdue.edu , ddickerson@purdue.edu .

Or respond anonymously at: <http://tinyurl.com/carnegieDEI>

