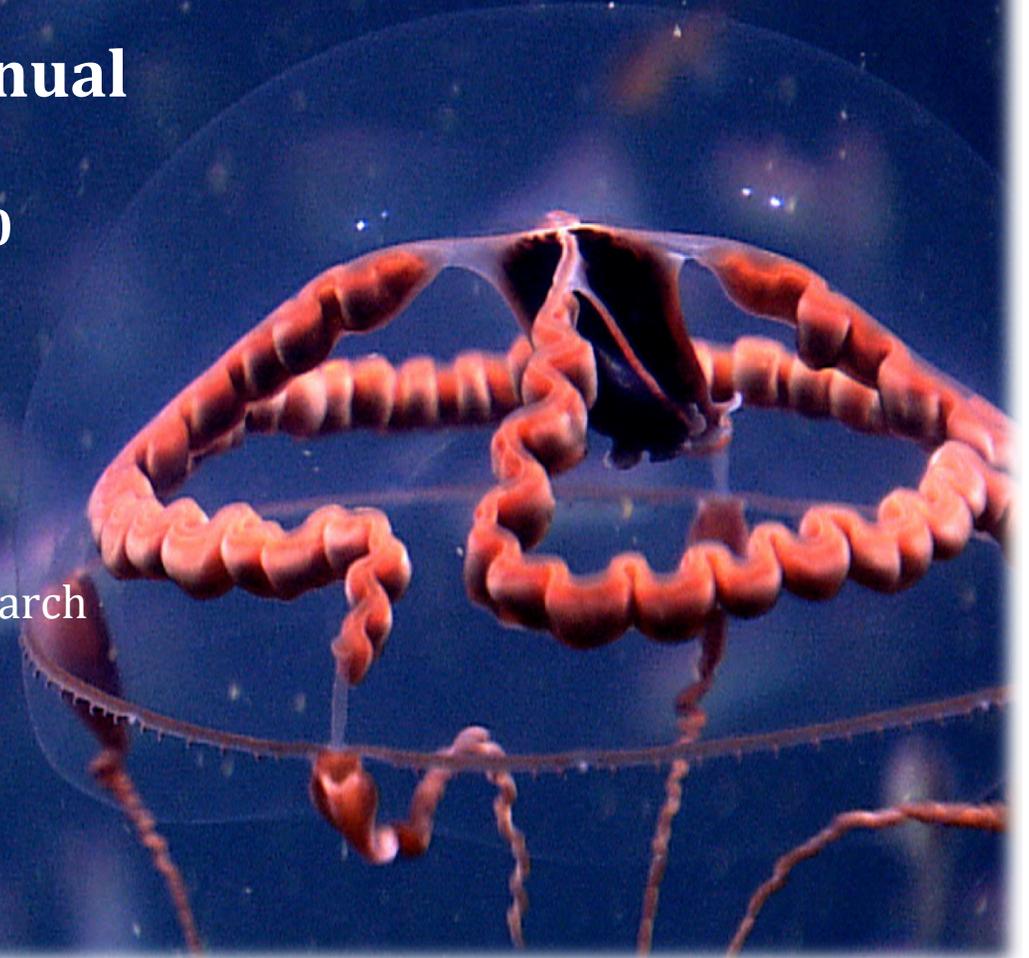


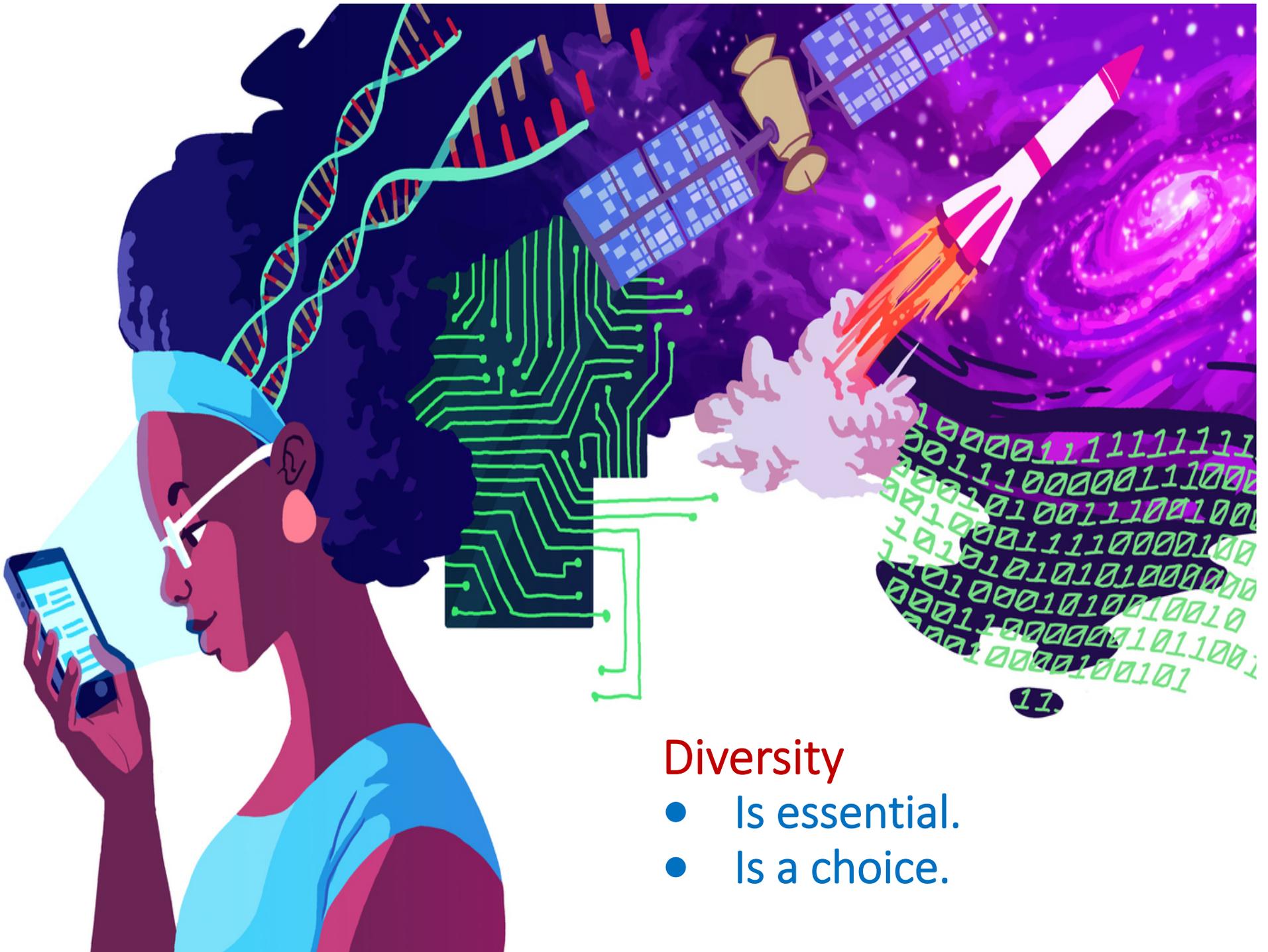
Equity Through Access: Navigating a Sea of Obstacles & Opportunities to Diversity Sea Grant Programs

Sea Grant
Association Annual
Meeting
March 11, 2020

Catalina Martinez
Regional Program Manager
NOAA Office of Ocean Exploration & Research

Jeanette Davis
Ocean Science Policy Advisory
NOAA Fisheries, Office of Policy





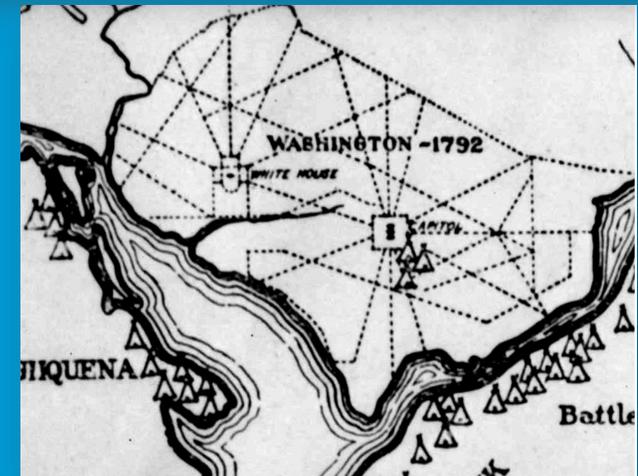
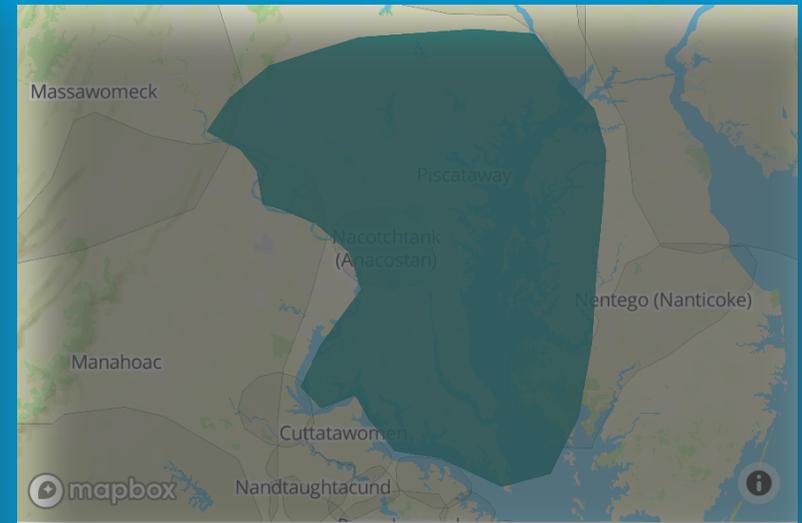
Diversity

- Is essential.
- Is a choice.

Honoring Traditional Native Inhabitants



Indian delegations at Washington—presentation to the president / From a photograph by A. Gardner, Washington, D.C. Harper's Weekly, March 16, 1867. Library of Congress Prints & Photographs Division, LC-USZ62-106694.



Anacostans (Nacotchtank, Piscataway, Pamunkey peoples)

THE CHANCE OF BIRTH

. . . dictates access to opportunities and resources on all levels

- **Family**
- **Community**
- **Identity**
- **Economic, social, and cultural capital**

WHO YOUR PARENTS ARE ...the chance of birth

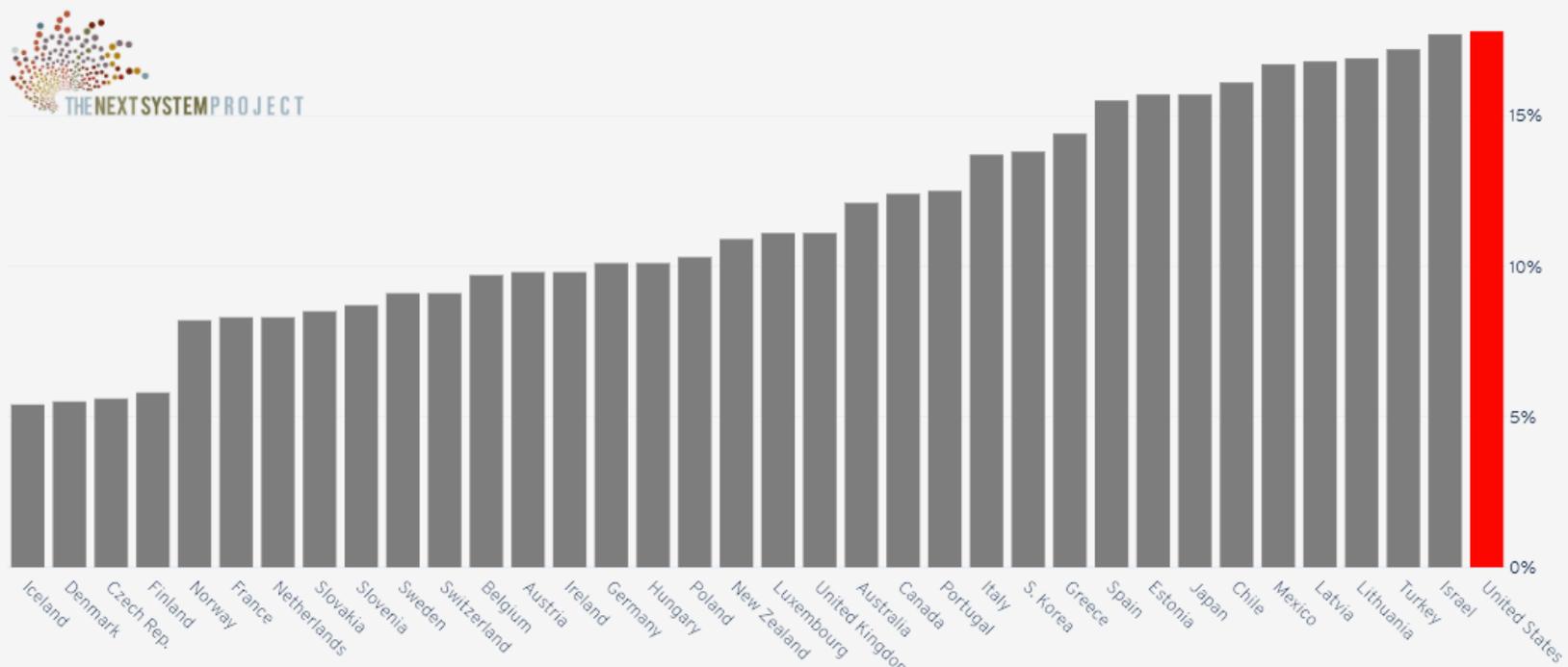
Inequality in America

Poverty Rate (After Taxes and Transfers; 50% Poverty Line)

Social Justice Index of 36 developed nations



The U.S. comes in dead last 20%



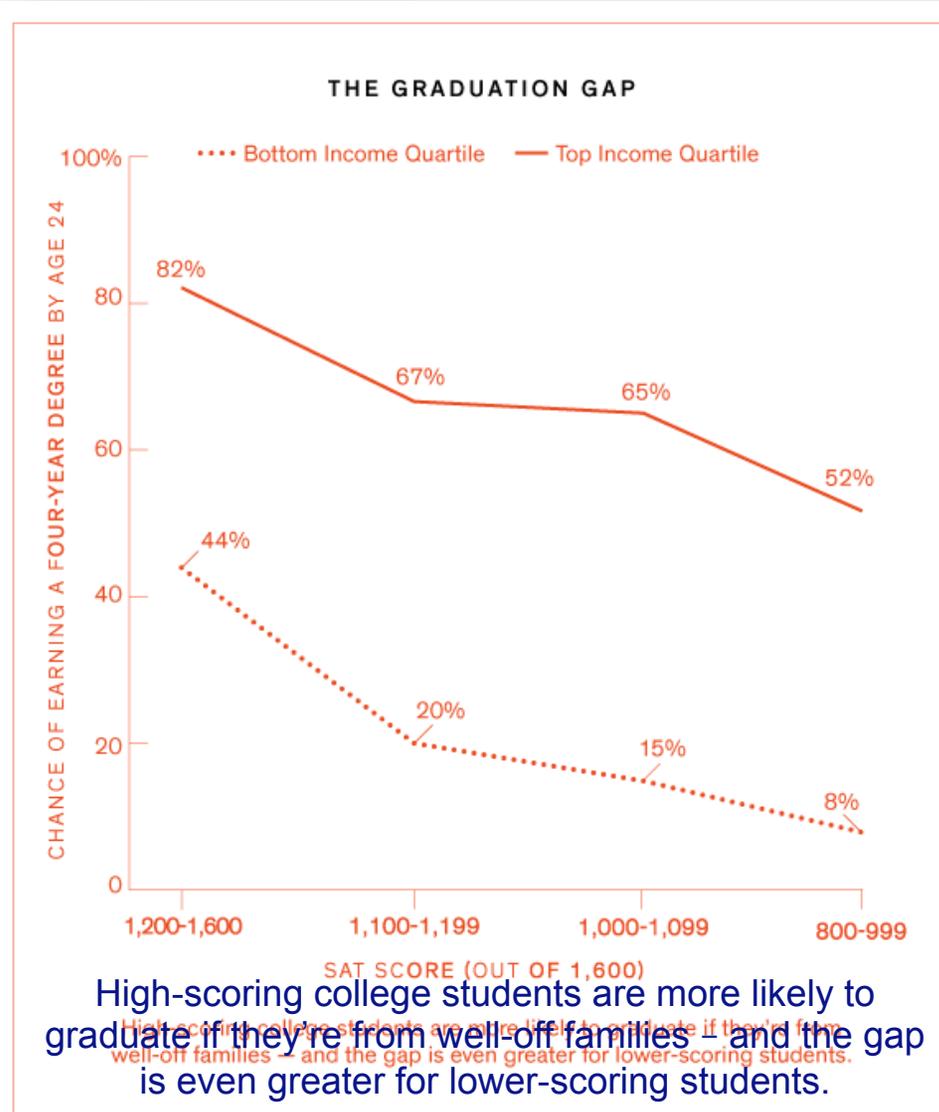
From the *Index of Systemic Trends*

Source: "Income Distribution and Poverty: Poverty Rate After Taxes and Transfers, Poverty Line 50%,"
OECD.Stat, accessed 1/2/19.



THE CHANCE OF BIRTH

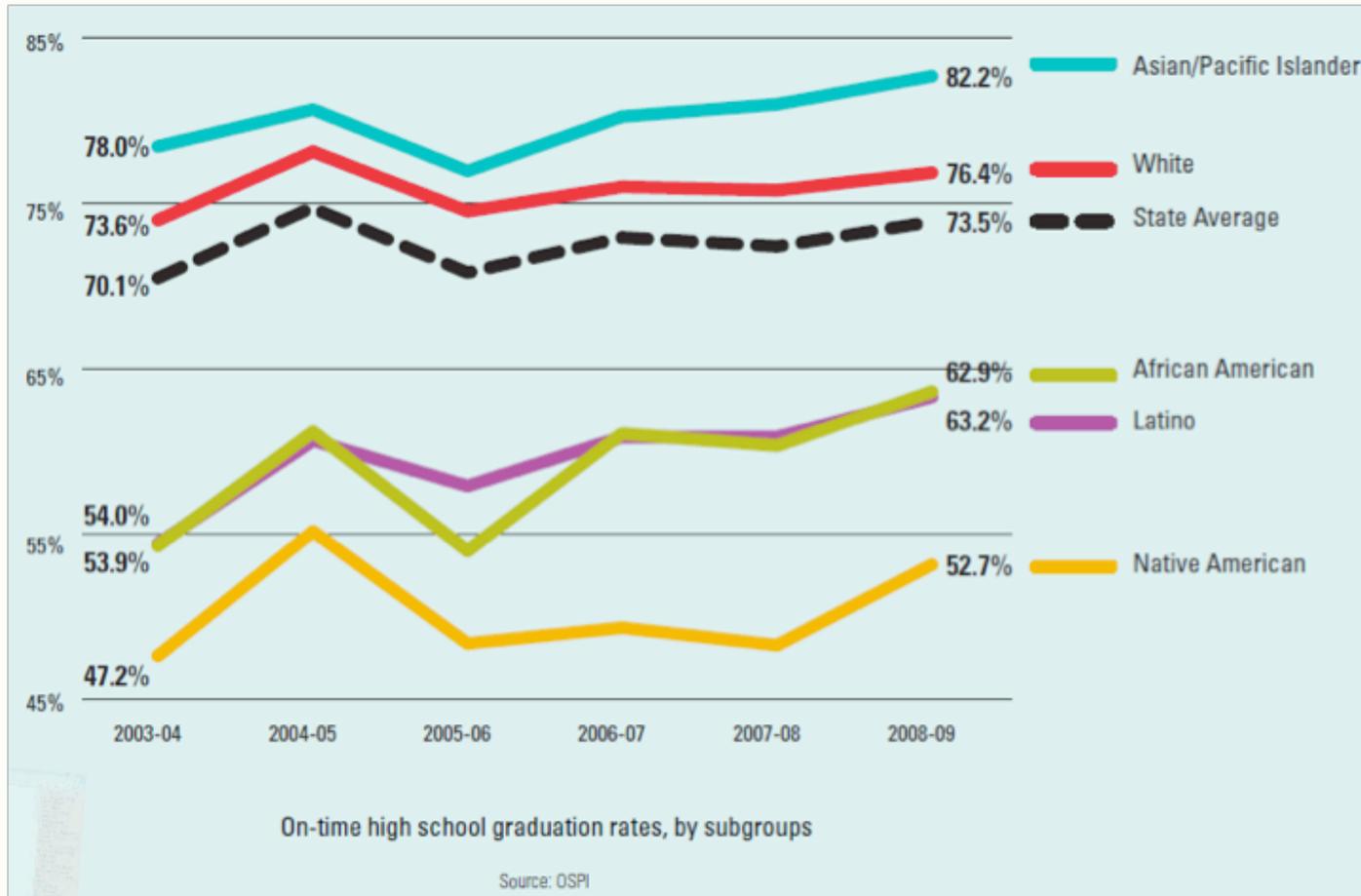
Who gets to graduate?



Correlation of income and graduation rates

THE CHANCE OF BIRTH

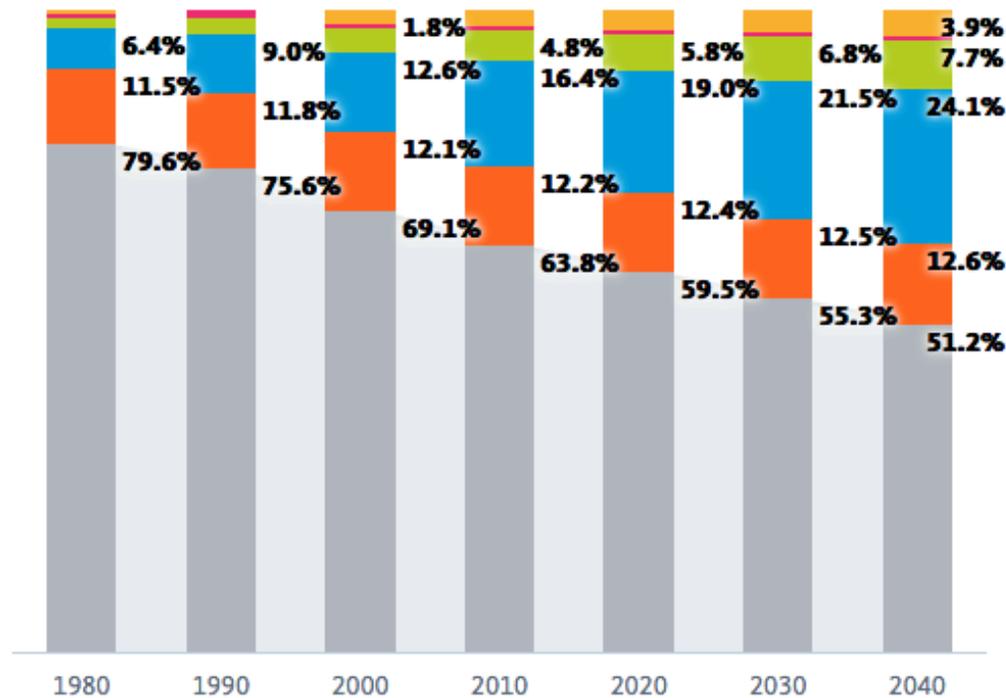
Achievement gaps in public education



US Education is NOT an equal opportunity experience

Racial/ethnic composition: United States, 1980-2040

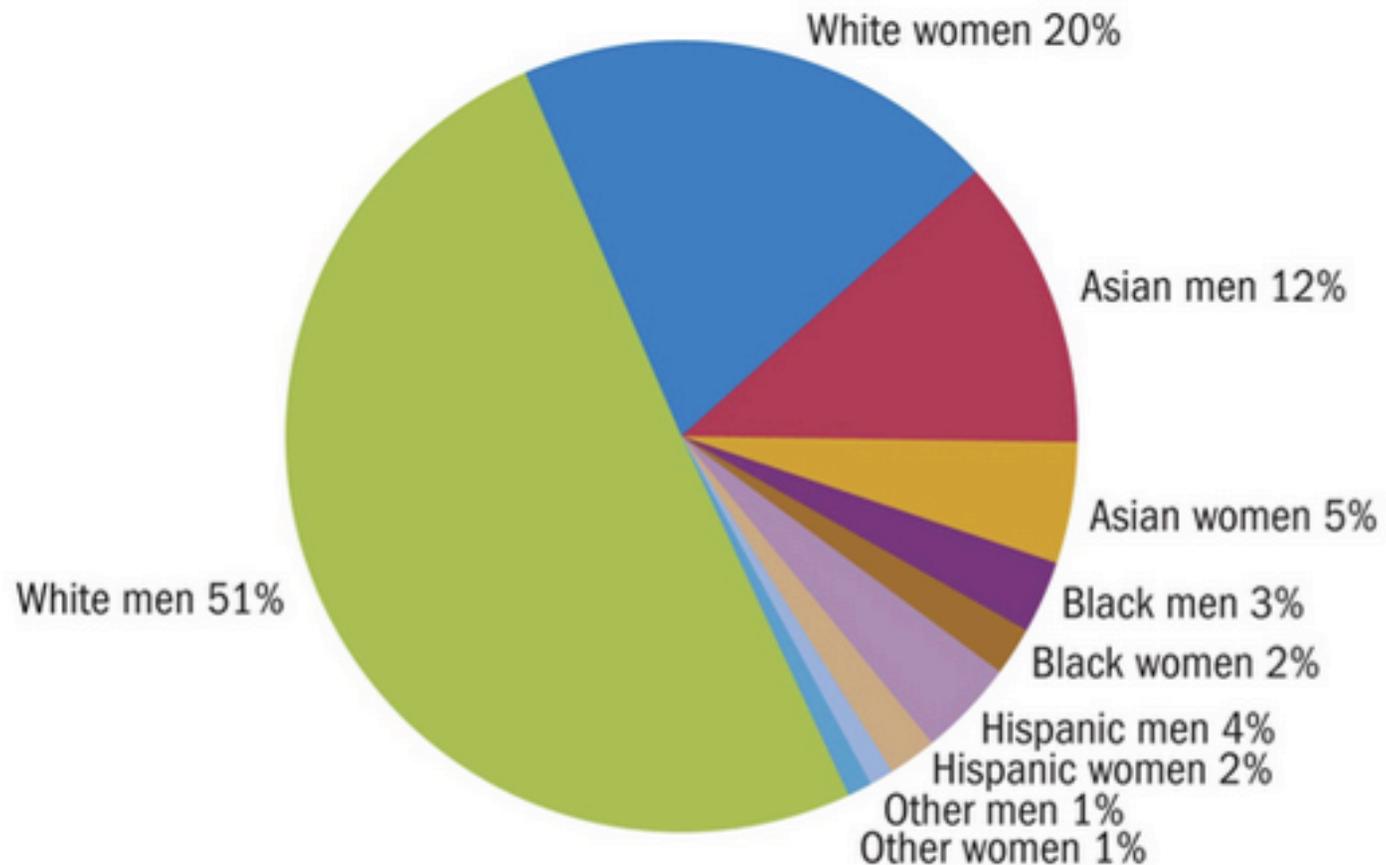
- White
- Black
- Latino
- Asian or Pacific Islander
- Native American
- Mixed/other
- U.S. percent white



Face of America . . .
is changing

Face of STEM in America is not

The chart below shows scientists and engineering occupations in 2013:



White & Asian workers make up 88% of all science & engineering jobs

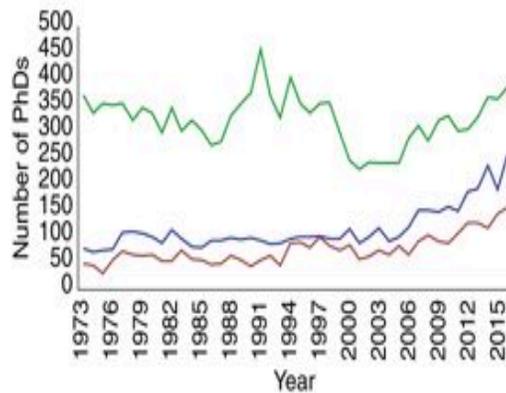
Face of STEM in America is not

Fig. 1: PhDs earned by US citizens and permanent residents between 1973 and 2016.

From: *No progress on diversity in 40 years*

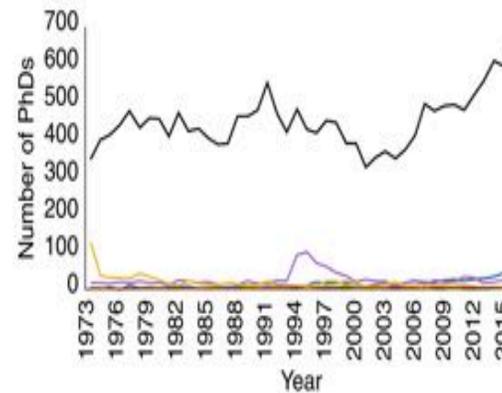
Total PhDs earned over time

a By subfield



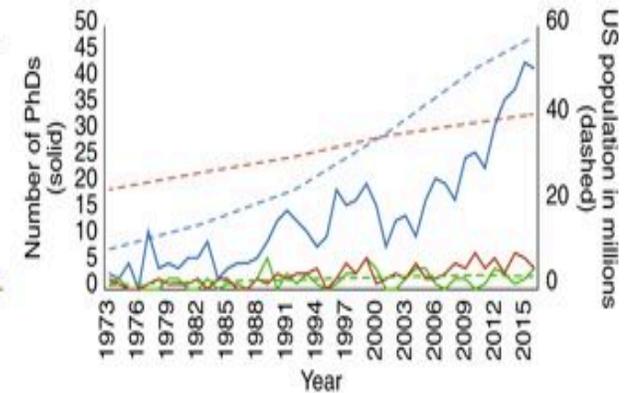
- Earth
- Ocean
- Atmospheric

b By race and ethnicity (subfields combined)



- White, non-Hispanic
- Native American, non-Hispanic
- Asian, non-Hispanic
- Black, non-Hispanic
- Hispanic or Latino
- Other or unknown

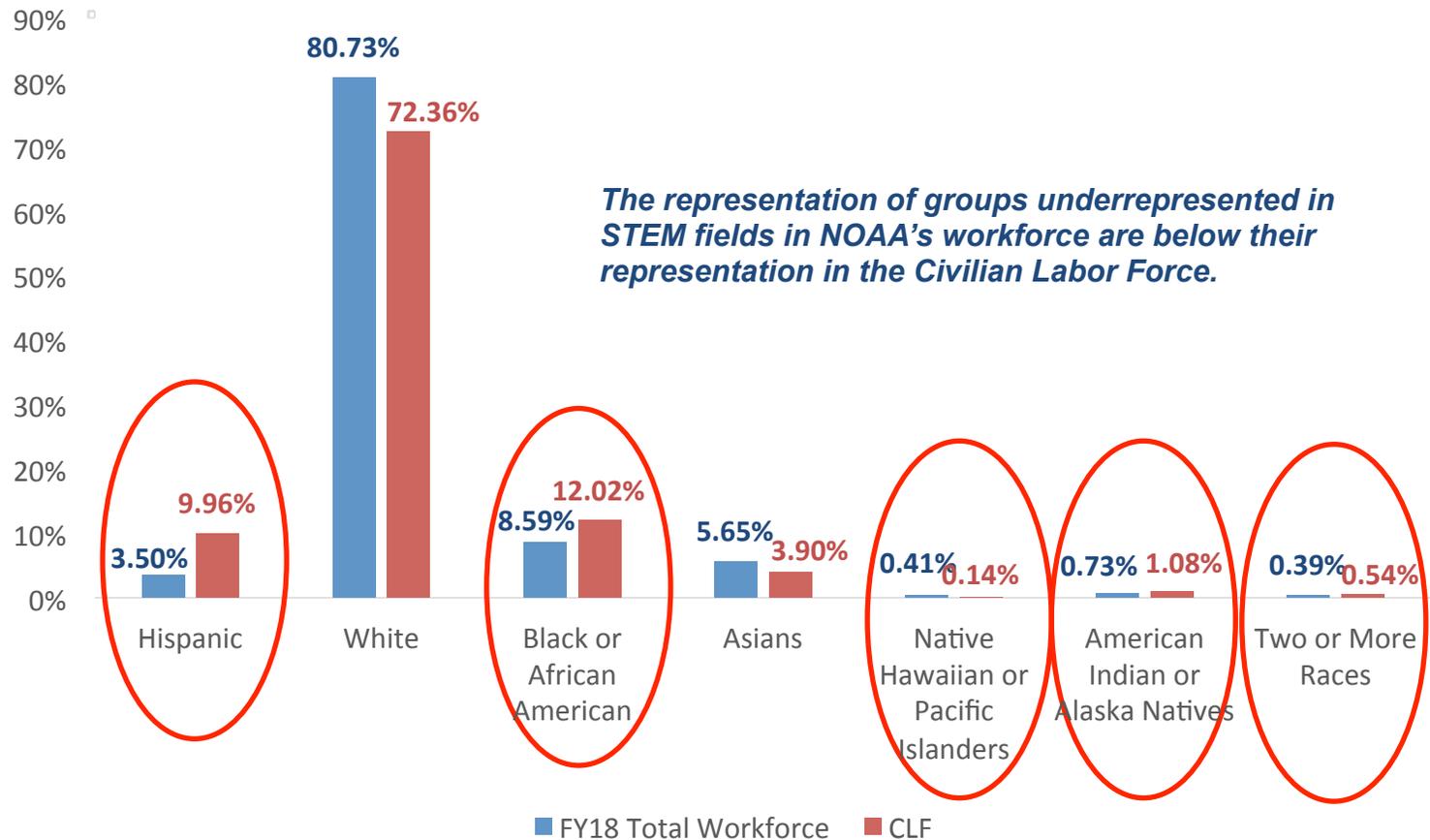
c For underrepresented minorities only (subfields combined)



- Geoscience PhDs
- Hispanic or Latino
- Native American, non-Hispanic
- Black, non-Hispanic
- US Population

NOAA Total Workforce Distribution Five Year 2018

Office of
Inclusion
and
Civil Rights



Total FY18 Participation: 11,341



(Data collected from HR Connect Workforce Analytics Reporting System - Table A1 – Data as of 9/30/2018)

Can We Talk?

***Difficult Conversations with Underrepresented People of Color:
Sense of Belonging and Obstacles to STEM Fields***

DOCUMENTARY FILM by Kendall Moore



Can We Talk? Captures the unique socio-emotional experiences of students, administrators, and medical professionals of color who are pursuing, in, and/or have left, STEM fields

***REPRESENTATION
MATTERS...***

***SO DOES THE
ENVIRONMENT***

“Belonging is the degree to which you feel connected to a community and feel that you have power to shape the culture, dynamic, and narrative that that community engages in on a daily basis”

-Bryan Dewsbury, PhD

How do we bridge the gaps?



Benefits of Experiential Opportunities

- Gaining mentors and champions
 - Expanding professional networks
 - Learning technical skills
 - Develop hard and soft job skills
 - Applying academic training to real world problems
- Assessing interest in particular fields
 - Strengthening resumes
 - Gaining insight into an organization's culture & increasing potential for future employment
 - Build 'science identity' & social belonging
 - Develop professional relationships
 - Apply for & receive additional opportunities

Longer-Term Benefits of Experiential Opportunities

- Publish in peer-reviewed journals
- Obtain graduate degrees
- Attainment of higher level jobs
- Increased earning potential
- Intangibles: health, happiness, world views, identity, lifting others, etc.

Jessica Cooper, Kristen Jabanoski & Marlene Kaplan (2019):
Exploring experiential opportunity impacts on undergraduate outcomes in the geosciences, *Journal of Geoscience Education*,

Link: <https://doi.org/10.1080/10899995.2019.1581394>

NOAA Office of Education: <https://www.noaa.gov/office-education>

NOAA Undergrad Scholarship Programs



Hollings
2018
(150)

EPP-MSI
2018
(8)



Hollings Scholarship Assessment Process

- Researched effective practices
 - Assessed Tangibles: Programmatic requirements, processes, guidance, documentation, data
 - Intangibles Remain: Behaviors, attitudes, perceptions, practices, 'culture,' biases, etc.
- 6 Categories
 - Overall Review Process
 - Targeted Recruitment & Guidance
 - Application Requirements
 - Reviewer Selection Criteria
 - Reviewer Guidance & Instruction
 - Selection Process
- Developed white paper with recommendations

Hollings/EPP Application Components

-	General	<ul style="list-style-type: none">• 3.0 GPA• US Citizen• Enrolled as a 2nd year, full time student• Declared a NOAA-mission related major
30%	Education	<ul style="list-style-type: none">• Relevant Coursework
20%	Activities	<ul style="list-style-type: none">• Experiences, extracurricular activities, honors, awards, volunteering, inter and intrapersonal skills, etc.
20%	References*	<ul style="list-style-type: none">• 2 Letters from Academic Advisor or Professor
30%	Essay	<ul style="list-style-type: none">• Outlines education and career plans

Hollings Recommendations

COLLECT DEMOGRAPHIC DATA!

Holistic Reviews – Critical to Build Equity

- All evidence & data used to come up with potential of individual

Targeted Recruitment & Guidance – Bridge the Grooming/Info Gap!

- Must happen EARLY, as eligibility may be limited (Hollings = Sophomore)
- Outreach and guidance videos & workshops
- Reach out to students who start, but do not complete applications

Application Requirements – Overcoming Initial Hurdles

- 1 Prof reference letter & 1 professional/academic other
- Contact students who start, but do not submit applications



Hollings Recommendations

Reviewer/Panelist Selection – Diversify beyond NOAA

- Ensure diversity of institutions/organizations, gender, demographics

Reviewer Guidance & Instruction – Comprehensive & Video Assisted

- Define ‘holistic’ review
- Describe Broadening Participation as a major objective
- Provide implicit bias training

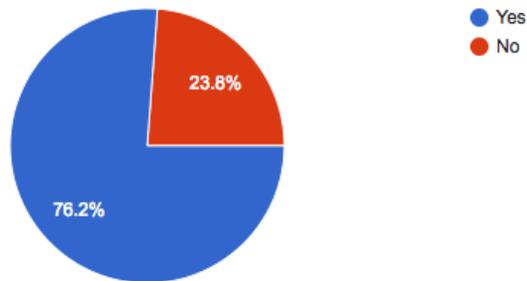
Review/Selection Process

- Group applicants into categories to meet certain objectives
- Provide detailed, constructive feedback to ALL applicants

Ocean Discovery Institute & UCLA CDLS

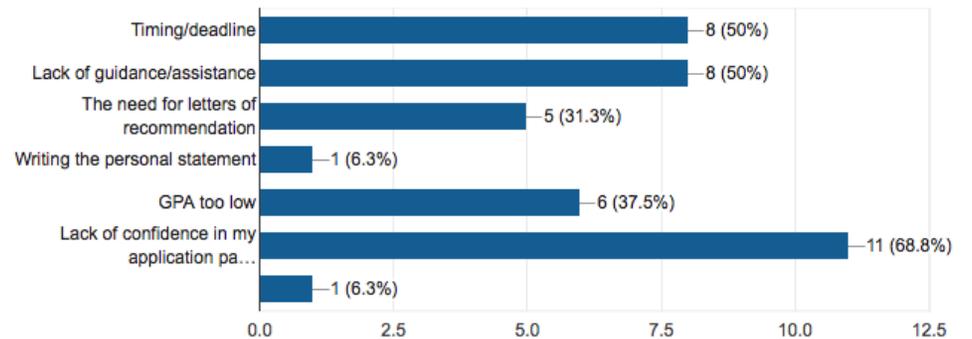
Have you ever started, but not completed an application for an internship, scholarship, and/or fellowship?

21 responses



If yes, what were the barriers to completion?

16 responses



Experience with NOAA opportunities

Jeanette Davis



- **GPA: 3.7**
- ***Phi Beta Kappa* National Honor Society**
- **DREAMS Scholars (NSF)**
- **Honda Diversity Scholar**
- **Internships**
 - **Summer at Sea (MAST)**
 - **REU**
 - **LMRCSC**
- **Presenter at three Ocean Science Meetings**

Experience with NOAA opportunities



Experience with NOAA opportunities



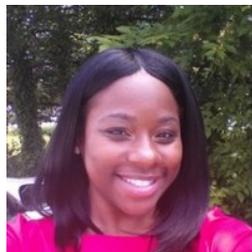
- **GPA: 3.5**
- **Two Year NSF Fellowship**
- **Professional Memberships**
- **Presenter at 2 International Science Conferences**
- **Student President**
- **Mentored 3 Summer Interns (LMRCSC)**
- **Co-instructor for NSF Summer Program**
- **Three first author publications**

Experience with NOAA opportunities

Nancy Foster Fellowship



Experience as 2015 Knauss Fellow



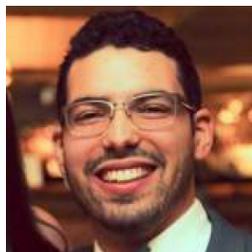
Jeanette Davis
Maryland Sea Grant



Efturi Oghenekaro
Maryland Sea Grant



Monique Baskin
Virginia Sea Grant



Jhoset Burgos-Rodriguez
Puerto Rico Sea Grant



Paloma Aguirre
California Sea Grant



Yvonne Baker
Virginia Sea Grant



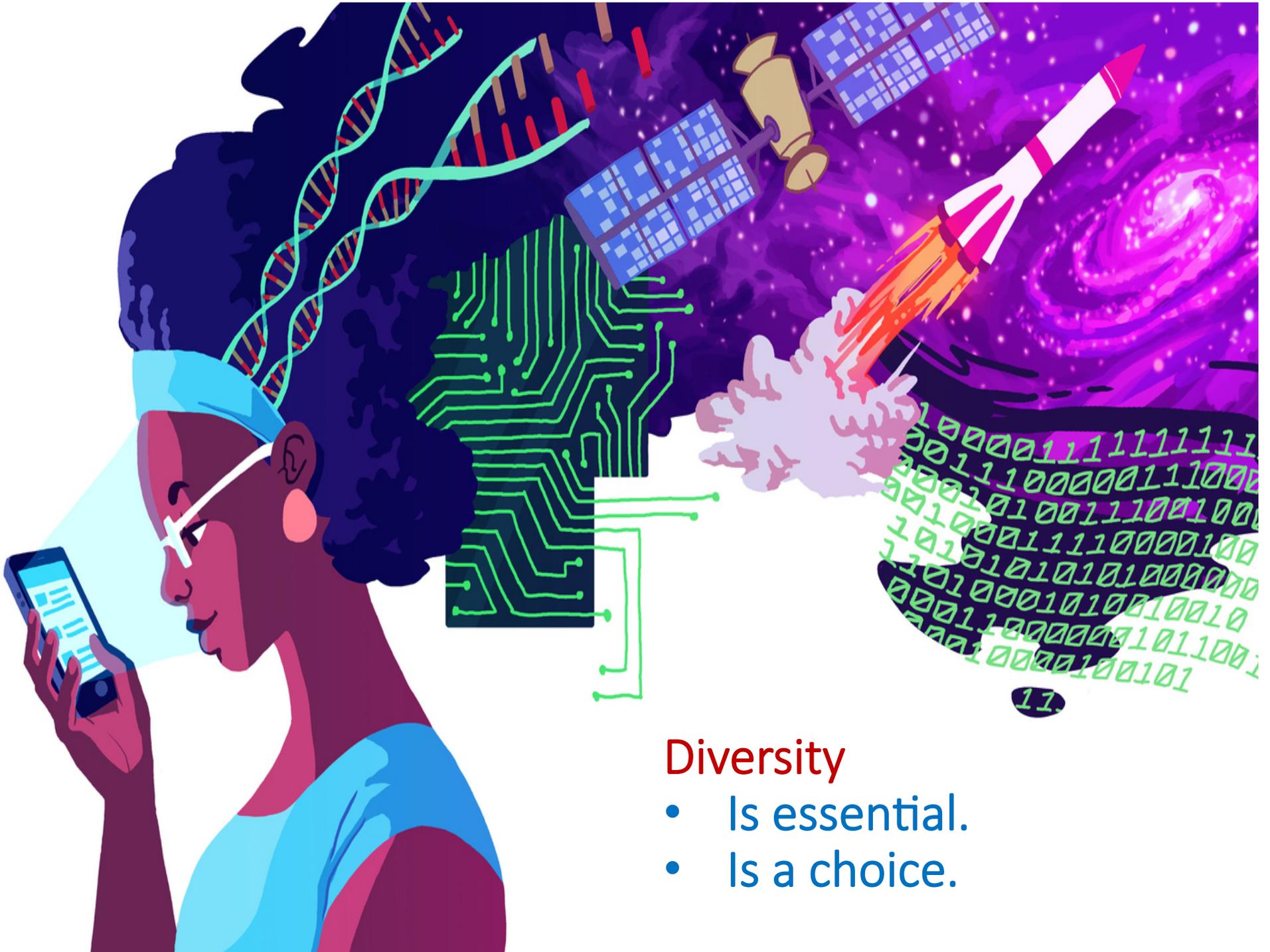
Larry Redd
Virginia Sea Grant



Symone Johnson
Delaware Sea Grant

Break-out Group Questions

- Can you identify any particular challenges, barriers, issues or unique opportunities for underrepresented students of color associated with the Knauss application and selection processes within your Sea Grant office?
- What about other Sea Grant state program opportunities (e.g. Fellowships, Internships, Review Panels, Speakers at workshops and other similar events)?
- What are some mitigation strategies you might be able to employ in the short-term? Ideas for the long-term?
- Are there particular resources required for implementation beyond what is currently available?



Diversity

- Is essential.
- Is a choice.