

Minorities in Science

Learning Target: I can analyze graphs to identify patterns in who goes into science and how it is affecting people at home and around the world



Part 1: Morning Message: Click [here](#) for video

Today's Tasks

- Watch the Morning Message for announcements and directions
- Complete the warm up reflection
- Watch the video & identify evidence
- Analyze graphs & answer questions
- Padlet- tell us about your experience
- Aspire to- Challenge Task
- Click "turn-in" in Google Classroom

Part 2: Warm Up: Think back to previous lessons and your personal experiences.

In the box below, define racism in your own words and consider its impact in science.

1) Define racism in your own words here:

2) Do you think racism occurs in science? Why or Why not?



Part 3: Directions: Watch the following video. While watching, consider the question "Does racism occur in science?" What is the evidence to support or not support this idea (claim)?

Click [here](#) for video

Part 4a: Directions: Analyze this graph below and write a reflection on what you think the graph communicates to you. To guide you in your response, start with some of these observations:

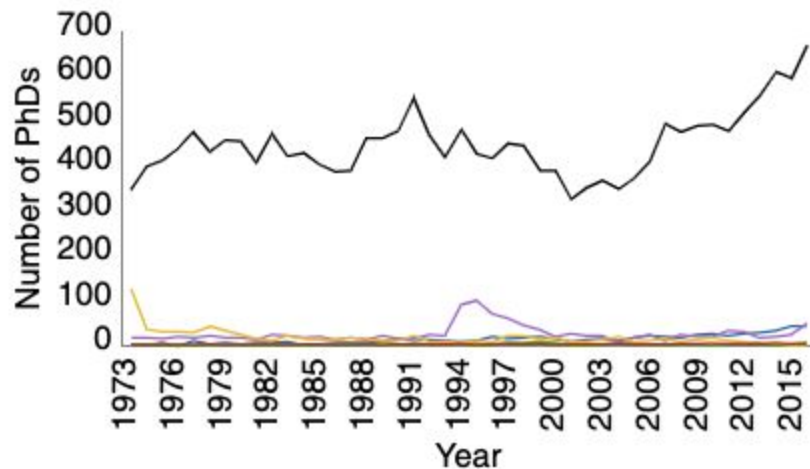
(If you need help reading a graph watch [this video](#) and [this video](#). Remember to pause and rewind the video as needed)

- What is the topic of the graph?
- What are some observations can you make about the graph? What patterns do you see in the data? Be specific
- Based on the patterns in this graph, what do you think will happen in the next year?
- What questions do you now have after reading this graph? What limitations (problems) do you notice?

Percent of PhD (Doctor of Science) degrees earned over time

Graph b: For more information on graph click [here](#)

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

In one sentence, explain the main conclusion you can draw from the evidence (patterns in data) in this graphs.

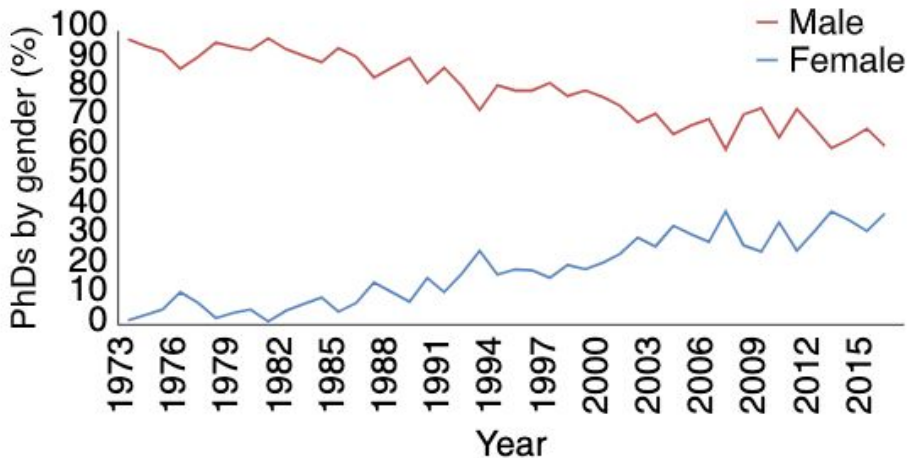
Part 4b: Directions: Analyze the 2 graphs below and write a reflection on what you think the graphs communicate to you. To guide you in your response, start with some of these observations:

(If you need help reading a graph watch [this video](#) and [this video](#). Remember to pause and rewind the video as needed)

- What are the topics of the two graphs?
- What connections can you make between the two graphs?
- What are some observations can you make about the graphs? What patterns do you see in the data? Be specific
- Based on the patterns in these graphs, what do you think will happen in the next week? Next year?
- What questions do you now have after reading this graph? What limitations (problems) can you think of?

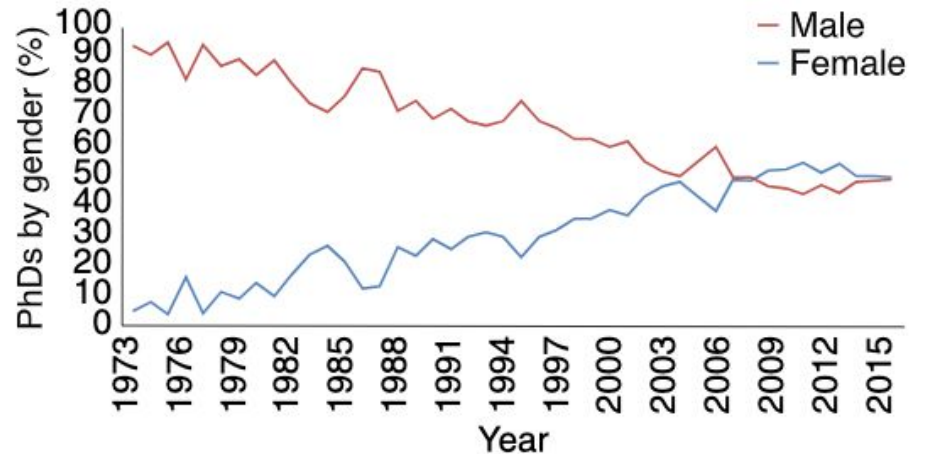
Percent of PhD (Doctor of Science) degrees earned over time

b Atmospheric sciences



Graph B: For more information on graph click [here](#)

c Ocean sciences



Graph C: For more information on graph click [here](#)

In one sentence, explain the main conclusion you can draw from the evidence (patterns in data) from these two graphs.

Part 5a: Directions: Watch this video about the racism experienced by Sally Ride, the first female astronaut to fly into space, and complete the reflection.

(Troubleshooting: Double click on video image and play video in the pop up window)

What was inappropriate about the questions Sally Ride was asked?

What kind of questions should the press have asked?

What makes these questions racist?



Part 5b Directions: read the news headlines below. Reflect on how we can address racism in science. Go to Padlet ([link](#)) and answer the question.

 Beth Kostka • 3m
Racism and Science- Next Steps
 After analyzing the evidence, what do you think are the next steps? How can we improve diversity in science? To help you in answering, consider interests, schooling, opportunities, mentorship, salaries... What are our next steps?



NatURe GeoScieNce | VOL 11 | MAY 2018 | 292–295 | www.nature.com/naturegeoscience

comment

No progress on diversity in 40 years

Ethnic and racial diversity are extremely low among United States citizens and permanent residents who earned doctorates in earth, atmospheric and ocean sciences. Worse, there has been little to no improvement over the past four decades.

Rachel E. Bernard and Emily H. G. Cooperdock

Black Geoscientists



Observer > 2012 > May/June > Diversity Makes Better Science

PRESIDENTIAL COLUMN
Diversity Makes Better Science
 Douglas L. Medin and Carol D. Lee

Where in the world...are all the black geoscientists?!



Blackgeoscientists@gmail.com

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NatURe GeOscieNce | VOL 13 | JanUary 2020 | 2–3 | www.nature.com/naturegeoscience

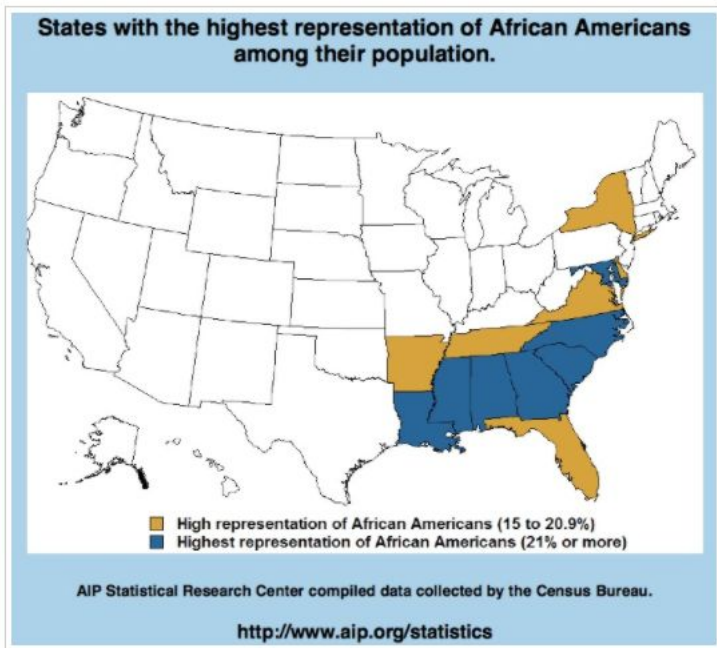
comment

Race and racism in the geosciences

Geoscientists in the United States are predominantly White. Progress towards diversification can only come with a concerted shift in mindsets and a deeper understanding of the complexities of race.

Kuheli Dutt

Part 6: Directions: CHALLENGE TASK (Optional 5-8)



Map from the AGI report "Salaries and Employment Locations of Recent Geoscience Graduates" published October 2013.

Analyze these three "graphs". What conclusion can you draw from each?

Type your answer here:

What single conclusion can you draw from the three graphs together?

Type your answer here:

For more information on all 3 graphs click [here](#)

Universities that awarded the most geoscience bachelor's degrees to African Americans during the 5-year period from 2004 through 2008.

Jackson State University
Mississippi State University
Pennsylvania State University
Savannah State University

According to the NCES, each of the universities listed above awarded more than 10 geoscience bachelor's degrees to African Americans over the last 5 academic years.

AIP Statistical Research Center compiled data collected by the NCES.

<http://www.aip.org/statistics>

Table 4 of the AIP report "African Americans Among Degree Recipients in Physics and Geoscience" published October 2010.

Part 7: click "Turn in" in Google Classroom