## **DIVERSE & INCLUSIVE TEACHING**

The Illinois Mathematics and Science Academy

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http://digitalcommons.imsa.edu/

#### **Courageous Conversation**

Stay Engaged:

Speak Your Truth:

**Experience Discomfort:** 

Don't mentally check out of a conversation

Be honest about your thoughts, feelings and opinions. Don't just say what you think others want to hear

Don't be afraid to express or acknowledge frustration, pain, anger, fear or other emotions that are uncomfortable.

Expect and Accept Non-Closure:

You may not reach closure. You may not reach a solution. That is okay, even expected.

### Examining Diversity, Equity & Inclusion





#### **Dimensions of Diversity**

#### Diversity

Includes all the ways in which people differ, and it encompasses all the different characteristics that make one individual or group different from another. A broad definition includes not only race, ethnicity, and gender the groups that most often come to mind when the term "diversity" is used but also age, national origin, religion, disability, sexual orientation, socioeconomic status, education, marital status, language, and physical appearance. It also involves different ideas, perspectives, and values.



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## Vocabulary

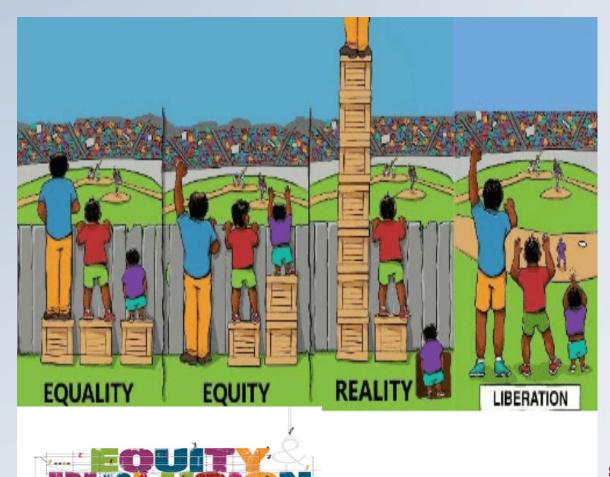
□ Equity:

The guarantee of fair treatment, access, opportunity and advancement for all students, faculty and staff, while at the same time striving to identify and eliminate barriers that have prevented the full participation of some groups.

□ Inclusion:

The act of creating environments in which any individual or group can be and feel welcomed, respected, supported and valued to fully participate. An inclusive and welcoming climate embraces differences and offers respect in words and actions for all people.

### **Equity-Mindedness**



The outlook, perspective or mode of thinking exhibited by those who call attention to patterns of inequity and are willing to assume personal and institutional responsibility for the elimination of inequity. This includes being "color conscious," noticing differences in experiences among racial-ethnic groups, and being willing to talk about race and ethnicity as an aspect of equity. Equity perspectives are evident in actions, language, problemsolving, and cultural practices.

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#### The Unequal Opportunity Race

System or form	Race	Gender	Class	Ability	Sexual	Age
of Oppression	Oppression	Oppression	Oppression	Oppression	Oppression	Oppression
Assumed	White	Male-bodied	Middle-	'Able'-bodied	Heterosexual	Adults
norm:			upper Class			
What's	ALANA	Female-	Working	'Disabled'	Homosexual,	Children,
considered to	(Asian,	bodied,	class, Poor	people	Bisexual,	Youth and
be marginal	Latino,	transgender,			Queer,	Elderly
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	African-	transsexual,			Asexual	
	American,	intersex				
	Native					
	American),					
	<b>Bi-Racial</b>					
History	'Race' and racism in the West	There are different accounts of how	The development of capital- ism and	Tied to the development of	In the European context: 1800s when	The term "ageism" was coined in 1969
	developed during	gender oppression	private property in	modern medicine	modern medicine	by Robert N. Butler,
	Europe- an	developed. Some	Europe. There are	(1800s) when	named the	M.D when there
	colonialism (1492 onwards) and the	attribute it to the beginnings of	varying dates for this.	'disability' was medical- ised as an	homosexual'.	was apprehension about moving
	advent of	capitalism and		illness.		elderly poor to
	capitalism.	private property.				Chevy Chase, MD
Type of	Racism	Sexism,	Classism	Ableism	Heterosexism,	Ageism
discrimination		Transphobia			Homophobia,	Č
		±			biphobia,	

#### **Culturally responsive pedagogy**

Instruction and interaction that allow students to maintain the integrity of their cultural identity, while succeeding academically and socially-emotionally. In culturally responsive pedagogy, faculty use aspects of students' cultures in an asset-based approach as opposed to deficit-based to make academic and student life relevant to them, and increase their skill acquisition, engagement, and *learning outcomes.* (National Institute for Learning Outcomes Assessment).

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## Why Diversity, Equity and Inclusion classroom?

We have an academic responsibility and a moral obligation to provide students with an inclusive education that will enable them to deal with the contingencies of living in a diverse world.

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- Research shows that when students are taught from an inclusive curriculum they are eager to learn; they are more engaged in the teaching/learning process.
- Faculty who are involved in integrating diversity into their curriculum report that their teaching is revitalized, their student evaluations improved, and their overall job satisfaction increased.
- It benefits both minority and majority students, especially in improving attitudes and feelings toward intergroup relations.
- Has a positive impact on students' attitudes toward racial issues, fostering opportunities for interacting in deeper ways with diverse perspectives and cognitive development.

What kinds of information, skills and resources do I need to acquire to <u>effectively teach from a</u> <u>diverse and inclusive perspective that promotes equity?</u>

<u>Course description and objectives</u> that reflect diversity - How does my discipline help prepare students to live and work in today's global/interdependent world?

<u>Content integration</u> that includes multiculturalism—What issues of diversity, social justice, and civic engagement are infused in my course curriculum & how?

Instructional resources and materials—How inclusive are my selected materials?

<u>Faculty and student worldviews and learning styles</u>—How do student and faculty worldviews, learning styles, and teaching strategies match, and how are my students' learning styles accommodated?

<u>Instructional strategies</u>—How diversified are my strategies for facilitating instruction and classroom dynamics?

<u>Equity-mindedness -</u> What are some inequities that exist and in what ways do I make my teaching personalized and responsive to these inequities?

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<u>Assessment diversification</u>—How do assessment activities accommodate my students' learning styles?

#### Diverse, Inclusive & Equity-Minded

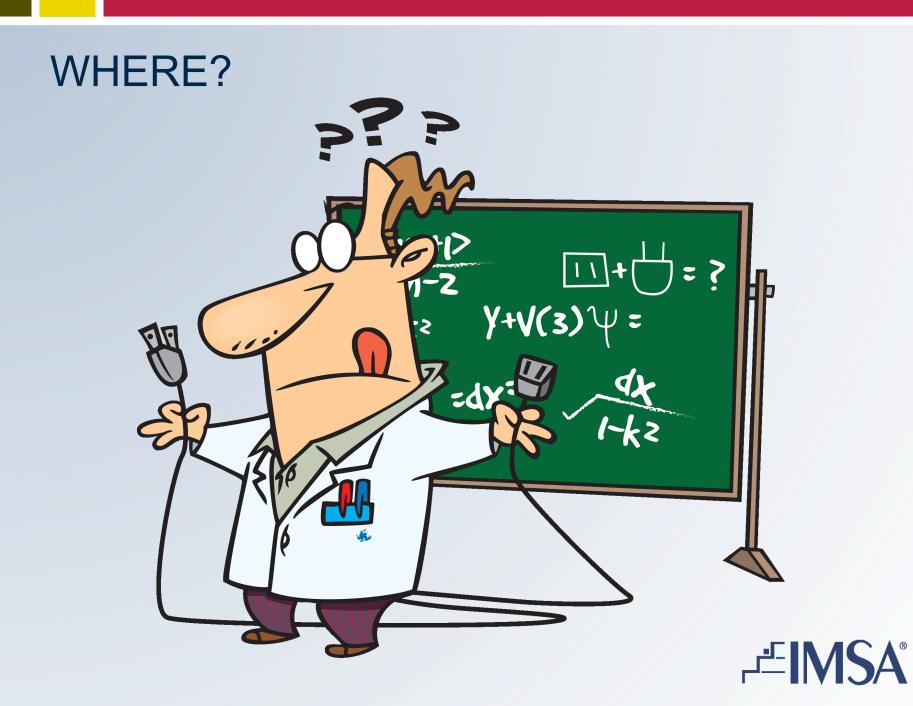
- Check your BIAS Harvard University Implicit Association Test
  - https://implicit.harvard.edu/implicit/takeatest.html
- Treat each person as an individual and respect the individual for who he or she is...treat them as they want to be treated.
- Do your best to be sensitive to terminology that refers to specific ethnic and cultural groups as it changes...Do speak up when you hear biased language.
- Become Culturally Competent...more informed about the history and culture of groups other than your own.
- In order to understand other's perspectives engage in bold, inclusive conversations.

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- Reveal and Explore Systematic Social Injustice
- Do acknowledge intersectionality.
- Create Safe Spaces!!!

#### RATIONALE FOR SCIENCE CLASSROOM DIVERSITY UNIT

- Humans are by nature egocentric and sociocentric as well. We believe that the groups we belong to are right, privileged, special. We systematically deceive ourselves into thinking that we are right, we avoid recognizing our biases and treat people and groups without due consideration and respect, even when there is clear evidence to refute our point of view. (Elder, 2004).
- Through this unit, I hope to teach students to be aware of, and to guard against, their native egocentric and sociocentric tendencies. Otherwise these tendencies will keep them from reasoning well through diversity issues.
- Elder, L. (2004). Diversity: Making sense of it through Critical Thinking. The Critical Thinking Community.



#### HUMAN PHYSIOLOGY



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## INTRODUCING DIVERSITY IN THE SCIENCE CLASSROOM

- A Diversity, Epidemiology and social justice unit was incorporated into the Physiology and Disease curriculum in Fall 2016
- PAD is a Biology elective for juniors and seniors at IMSA that deals with changes in homeostasis in the human body and its outcomes, as well as pathophysiology of disease formation.
- The diversity unit was integrated into the nervous system unit because this seemed to be the best fit in the curriculum.



#### DIVERSITY IN THE CLASSROOM (continued)

- Students were given diversity topics and were provided with an introduction, rationale, recent events and a list of readings for these topics.
- Students were required to synthesize the information with recent events and create a short presentation building specific case studies for discussion with their peers.
- Emphasis was placed on discussions dissecting the ethics and moral dilemmas of recent events in the light of the background provided.

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#### STUDENT DIVERSITY DISCUSSIONS

- Students were given instructions on the assignment and were provided with one 100 minute class to complete their presentations.
- Two sections of 20 students each were provided with background information and asked to present.
- Many interesting discussions were held as a result of student research into their topics.
- Students brought up many interesting views but were united in their thinking and this was very noteworthy considering the fact that they were all from different backgrounds and diverse cultures.



#### **DIVERSITY DISCUSSION TOPICS**

- □ Some of the topics discussed included:
- Brain preferences in terms of diversity
- Social and cultural influences on Diversity Thinking
- Diversity Development in the Brain
- Early development of diversity thinking
- Social justice and epidemiology and
- Selective Treatment in Hospitals Based on Race



# STUDENT DIVERSITY DISCUSSIONS (CONTINUED)

- Students independently incorporated cases of social injustice against people of color into every single topic discussed.
- Students brought up many interesting points regarding causes for social injustice such as disparity in income, lack of education, and lack of tolerance toward people of other races.
- An example of their case studies includes identical twins brought up in different environments, one tolerant and the other not toward people of color, and followed their path through adolescence and adulthood.
- Their discussions brought forth many aspects of diversity that enhanced their learning by integrating real life experiences.

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#### HISTORY OF DIVERSITY IN PHYSIOLOGY

- In Fall 2017, students were introduced to additional diversity awareness through the development of the history of physiology and medicine.
- Special emphasis was placed upon social, racial and gender barriers.
- Students presented information from scholarly papers provided to them to set the background.
- They then discussed the situations presented and took sides voicing their opinions.



## WHY ARE THESE PHOTOGRAPHS SIGNIFICANT?



Dr.Anandabai Joshee,Seranysore,India Dr. Kei Okami, Tokio, Japan Dr. Tabat M. Islambooly,Damascus,Syria

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#### FIRST WOMEN PHYSICIANS IN WORLD HISTORY



October 10, 1885 Dr.Anandabai Joshee,Seranysore,India Dr. Kei Okami, Tokio, Japan Dr. Tabat M. Islambooly,Damascus,Syria

https://s-i.huffpost.com/gen/1072427/images/o-WOMEN-DOCTORS-1885-facebook.jpg , **∠**<sup>±</sup>IMSA<sup>®</sup>

#### **FIRSTS IN HISTORY**

- Three women, each the first woman from their respective country to graduate with a medical degree, made history when graduating from the Women's Medical College of Pennsylvania in 1886.
- □ What were the circumstances that led to these historic events?
- □ How has diversity impeded or enhanced medical education?



#### **FIRSTS IN HISTORY**

Take a few moments to discuss among yourselves the obstacles these women had to face as

- Women trying to gain an education
- Women living abroad unsupervised
- Medicine being predominantly a male field
- Women being hanged as witches (Salem witch trials) for daring to practice the art of healing

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Since then, what impediments or enhancements have been evident in medical education?



#### **BROWN VS BOARD OF EDUCATION**, 1954



https://www.archives.gov/publications/prologue/2004/spring/brown-v-board-2.html

#### HISTORY OF EDUCATION

- Education has always been a privilege. Most of us do not realize this.
- Opposition to the implementation of diversity and social equality has littered history.
- The Brown vs Board of Education (1954) is an example of protests to remove impediments to education.



#### **HISTORY OF EDUCATION**

- □ What advancements have been made in education since then?
- □ Are inner city schools free of inequities? Why?
- Have there been any similar protests since the Brown vs. Board of Education that had the same impact upon education?







#### SELMA TO MONTGOMERY MARCH, 1965



http://www.history.com/topics/black-history/martin-luther-king-jr/pictures/martin-luther-king-jr/mlk-1965-selma-montgomery-march-3

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#### **HISTORY OF EDUCATION**

- Civil rights were not always available to all. This is hard to fathom under present day circumstances.
- There has always been severe opposition to the implementation of social equality.
- The Selma to Montgomery March (1965) is an example of protests to remove impediments to civil rights.



#### **HISTORY OF EDUCATION**

- Do you believe that civil rights are available to everyone in our present day?
- There are often protests regarding inequality in major cities. Is this the right thing to do? What is an alternative action?
- The shootings in schools in the past year have been a severe wake-up call to injustice. Why is this happening in our so-called "equitable" world?

#### **HISTORY OF INVENTIONS**





#### **HISTORY OF INVENTIONS**

- Many modern inventions and improvements were conceived under circumstances that included dire poverty and social inequality.
- □ Examples are
  - George Washington Carver (peanut farmer and inventor)
    Otis Boykin (constructed resistor and control unit for pacemaker) and
  - Garrett Morgan (invented a breathing device, hair straightener and automated traffic signal, also famous for his heroic rescue of workers trapped in a water intake tunnel in 1916, 50 feet below Lake Erie)

#### **HISTORY OF INVENTIONS**

- Can you name some inventors who received the credit they deserved?
- Others who did not?
- Why does this inequality still exist?



#### WHY HISTORY?

It would greatly benefit our students to be aware of the diversity, or lack thereof, of the times when these inventions and discoveries were made, so that they can appreciate better the circumstances of these discoveries and their modernization



#### WHAT WILL STUDENTS DO?

- Students will focus on specific events in the history of education and medicine and lead short discussions on
  - the ethics of the decisions made
  - what might have been the modern reaction to these events and

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how knowledge of these events might improve their education and social awareness of justice and equality

#### NEXT STEPS

- The success of this project has set the stage for development of diversity curriculum for other disciplines and other schools in the state of Illinois.
- The ease of inserting this unit into an advanced biology course is encouraging and suggests that incorporation into other disciplines should be a smooth transition.
- Students greatly benefit by relating to and thinking about diversity with respect to their learning.
- Steps are under way to further develop this curriculum and train other educators to do the same in their academic institutions.