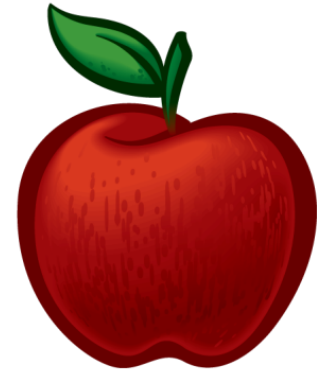




**N A P E**  
National Alliance for  
Partnerships in Equity  
STEM Equity Pipeline

**UTeach***Dallas*  
The University of Texas at Dallas  
Natural Sciences and Mathematics



*A Blueprint for Embedding  
Micromessaging in Teacher  
Preparation Programs*

# INTRODUCTIONS

## ○ **Tegwin Pulley**

- Texas Director
- NAPE STEM Equity Pipeline

## ○ **Floyd Dorsey**

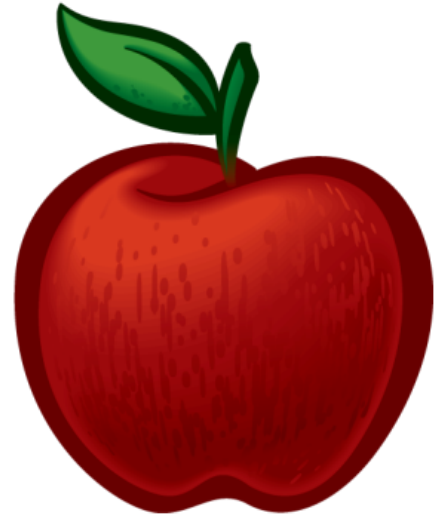
- Clinical Professor/Master Teacher
- UTeach Dallas – University of Texas at Dallas



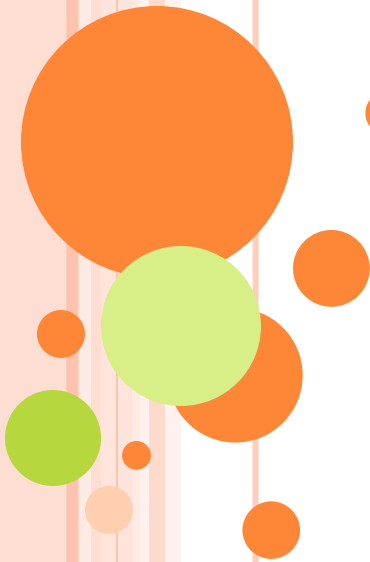
# UTeach*Dallas*

The University of Texas at Dallas

Natural Sciences and Mathematics



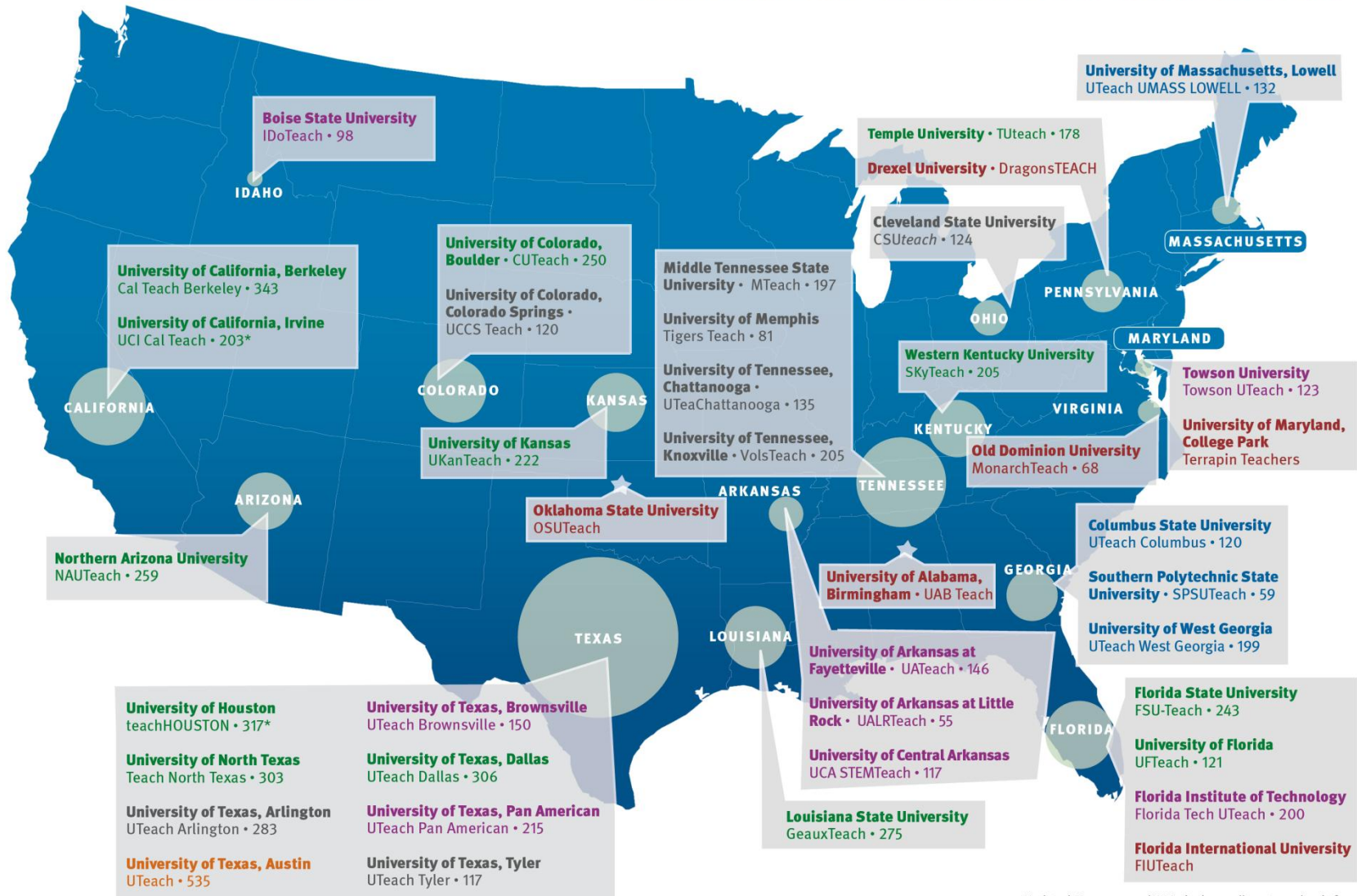
- *UTD's Teacher Preparatory Program for Future Secondary Science & Mathematics Teachers*



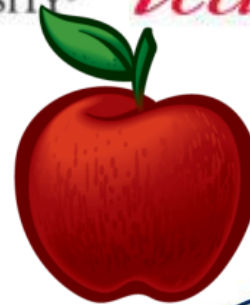
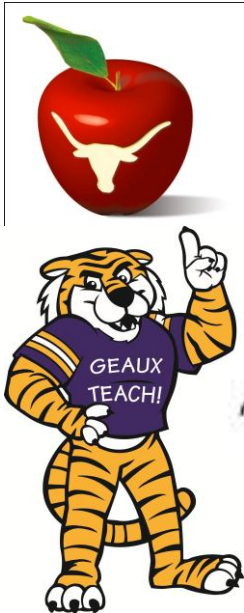
# Universities Replicating UTeach

## Spring 2014 enrollment nationwide (6,704 students)

COHORT 1: 2008–2012   COHORT 2: 2010–2014   COHORT 3: 2011–2015   COHORT 4: 2012–2016   COHORT 5: 2013–2018

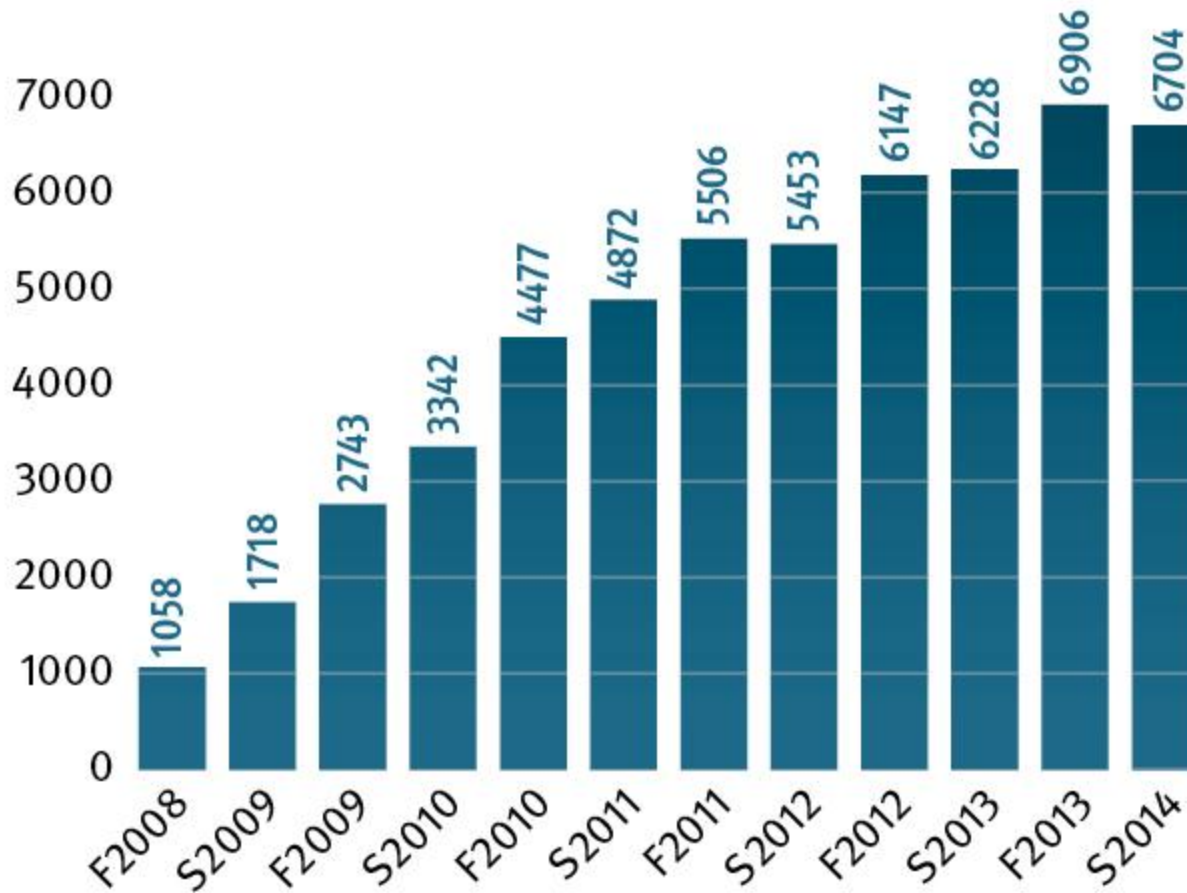


Updated May 2, 2014. \*UC Irvine's enrollment number is from Fall 2013; University of Houston's is from Spring 2013. UTeach Institute, [uteach-institute.org](http://uteach-institute.org)

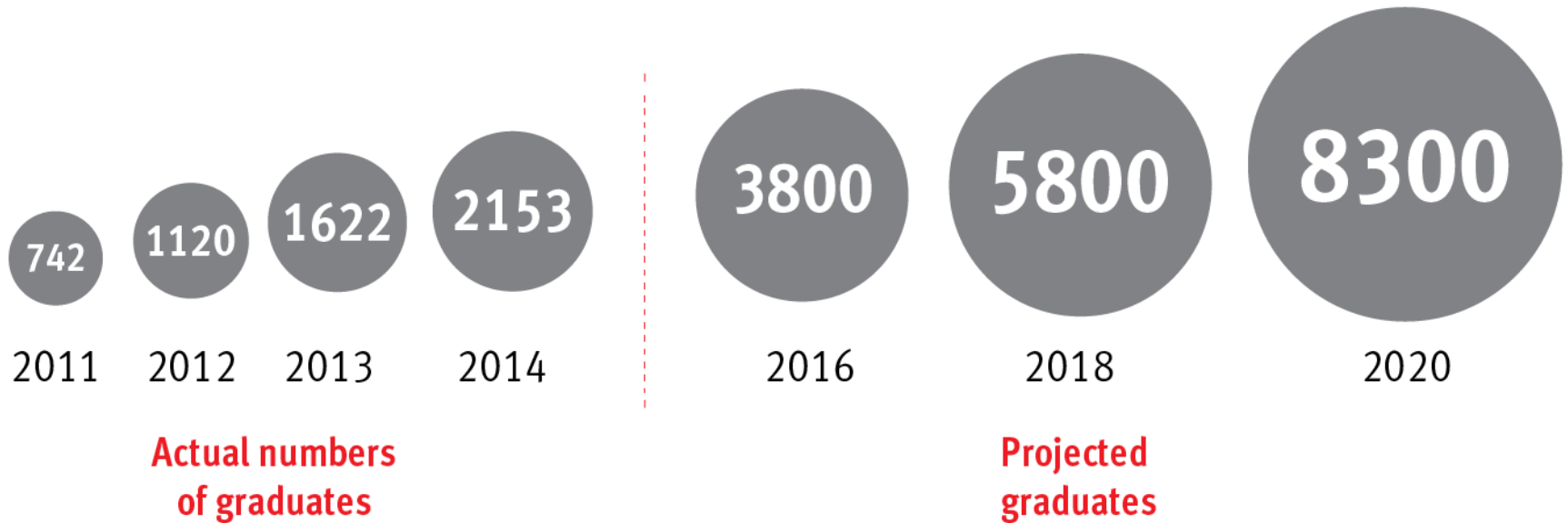


# NATIONWIDE ENROLLMENT IN UTEACH PROGRAMS

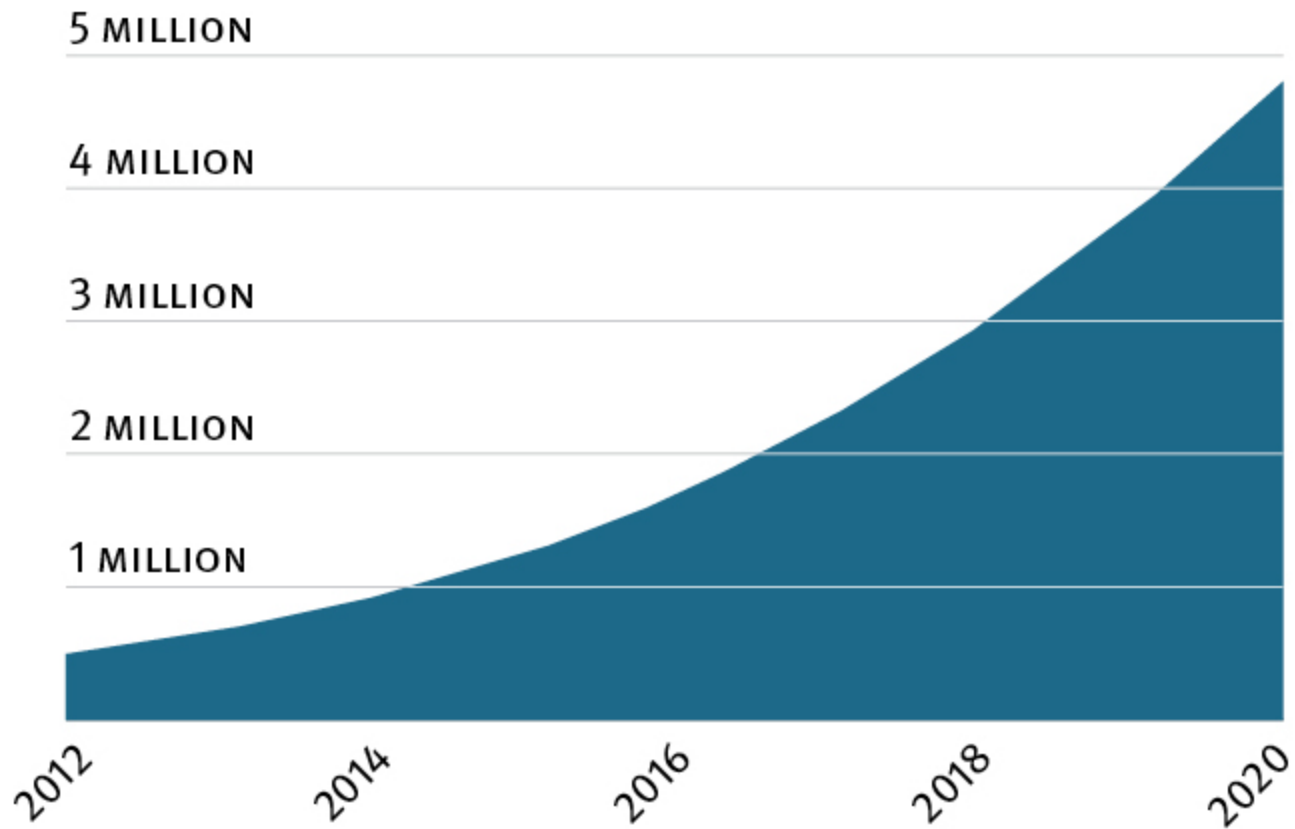
## FALL 2008 TO SPRING 2014



# UTEACH PROGRAM GRADUATES (CUMULATIVE COUNT)



## PROJECTED NUMBER OF SECONDARY STEM STUDENTS TAUGHT BY UTEACH GRADUATES





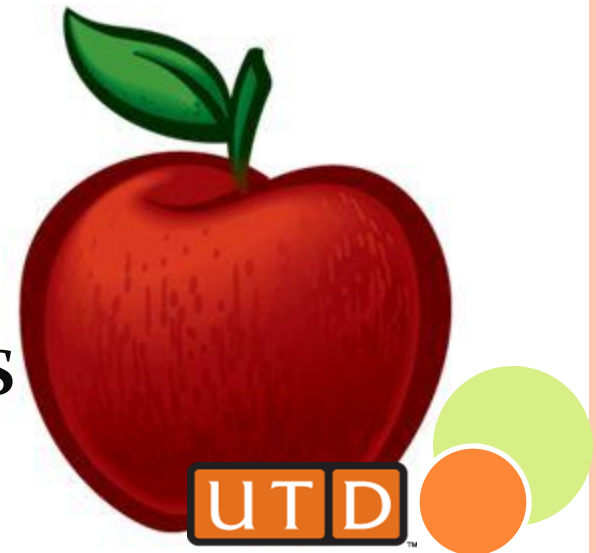
# Why UTeach Dallas?

- Same bachelor's degree plus teacher certification within same time frame (4 years)
- Find out early if you like teaching
- Manageable time commitment
- Financial support (reimbursements for 1<sup>st</sup> two courses, paid internships, scholarships)
- Courses taught by NS&M faculty
- On-going field experiences in Elem, MS & HS



# Compatible Degree Plans

- **Biology** BA/BS
- **Biochemistry** BS
- **Chemistry** BA/BS
- **Computer Science (varied)** BS
- **Engineering (varied)** BS
- **Geoscience** BA
- **Mathematics (varied)** BS
- **Molecular Biology** BS
- **Neuroscience** BS
- **Physics** BA/BS



# Possible UTeach Course Sequences

Year 1		Year 2		Year 3		Year 4	
Semester 1	Semester 2	Semester 3	Semester 4	Semester 5	Semester 6	Semester 7	Semester 8
STEP 1	STEP 2	Knowing & Learning	Classroom Interactions	Perspectives	Research Methods	Project-Based Instruction	Student Teaching/ Seminar
STEP 1	STEP 2 + Knowing & Learning	Classroom Interactions	Research Methods + Perspectives	Project-Based Instruction	Student Teaching/ Seminar	<b>Suggested 1st Semester Sophomore Pathway: (6 semesters)</b>	
<b>Late Start Sophomore: (5 semester)</b>	STEP 1 + Perspectives	STEP 2 + Knowing & Learning	Research Methods + Classroom Interactions	Project-Based Instruction	Student Teaching/ Seminar		
STEP 1 + STEP 2 + Perspectives	Knowing & Learning + Classroom Interactions	Research Methods + Project-Based Instruction	Student Teaching/ Seminar	<b>Suggested 1st Sem. Junior Pathway: (4 semesters)</b>			

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Natural Sciences and Mathematics



# MICROMESSAGING TO REACH & TEACH EVERY STUDENT – UTEACH DALLAS INTEGRATION



# MICROMESSAGING TO REACH & TEACH EVERY STUDENT – UTEACH DALLAS INTEGRATION

## ○ Step 1 & Step 2

- Introduction to Micromessaging
  - Introduction to Bias
  - Introduction to Adolescent Brain Research
  - Recognizing students for their effort, rather than talent
  - Introduction to cultural norms that may influence how students interact
- 
- Brief Introduction to Equity
    - Special Needs Students



# MICROMESSAGING TO REACH & TEACH EVERY STUDENT – UTEACH DALLAS INTEGRATION

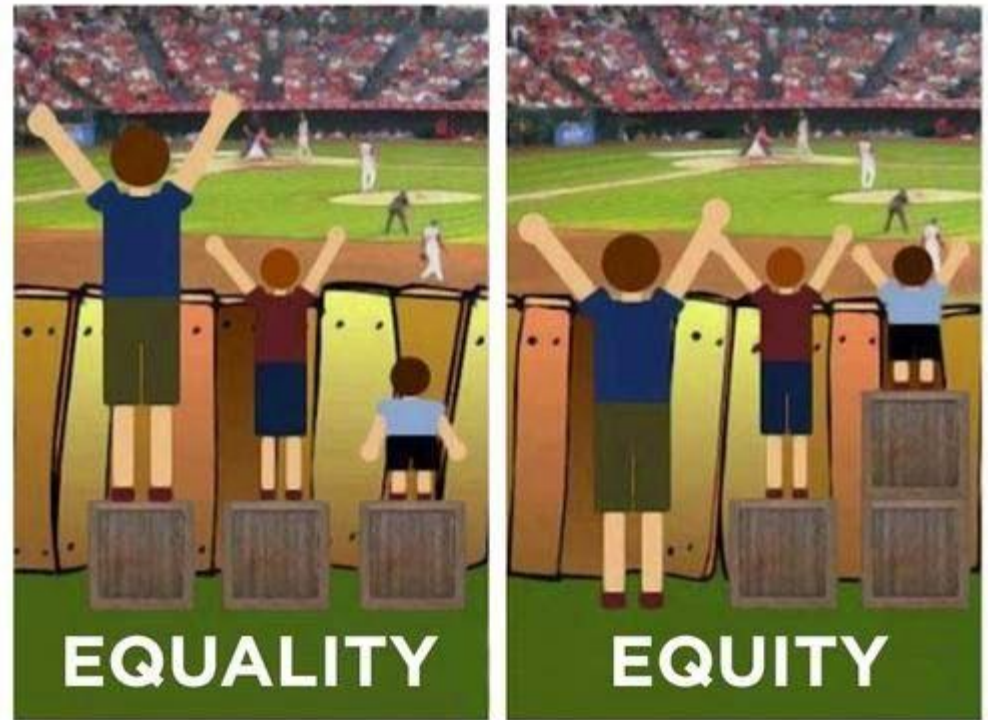
## ○ Classroom Interactions

- Welcoming/Awareness Activity
- Power of the Educator Discussion
- Formal Definition of Micromessaging – Common Vocabulary
- Portfolio Essays Devoted to Equity & Inclusive Design
- Stereotype Threat
- Growth vs. Fixed Mindset
- Accommodations for Special Needs Students
- Equity Presentations
- Differences Between “Equity” & “Equality”
- Discussion of Implicit Bias in Marketing
- Scenario Role Play



# WHAT IS THE DIFFERENCE BETWEEN “EQUALITY” & “EQUITY”?

- Equality = All the same
- Equity = Give each individual what she/he each needs to succeed



# LOCAL DISTRICT BELIEF STATEMENTS

## Garland ISD Equity Belief Statements

- “All children, regardless of their racial & SES differences, have the capability to learn & succeed at equally high academic levels as required by the TEKS.”
- “It is the responsibility of all of the adults in the district to ensure that all of the children succeed academically.”
- “Equitable and excellent classroom learning is the primary focus of district operations.”

Retrieved on 9/9/13 from  
<http://www.garlandisd.net/departments/divisions/div-edops.asp>





# LOCAL DISTRICT BELIEF STATEMENTS

Dallas ISD Core Belief Statement (one of many)

- “With our help, at risk students will achieve at the same rate as non-at risk students.”



Retrieved on 9/9/13 from  
<http://www.dallasisd.org/visionandbeliefs#sthash.PENBrIea.dpbs>



# DALLAS ISD/MICROMESSAGING ACADEMY

## Pre- & Post Survey Data

Participant Perceptions	Strongly Agree	Agree	Disagree	Strongly Disagree
a. I am knowledgeable of ways in which I contribute to an environment that encourages all students in my classroom.	28%	70%	0%	2%
	<b>50%</b>	<b>50%</b>	<b>0%</b>	<b>0%</b>
b. I believe that all students can succeed in STEM disciplines.	22%	71%	6%	0%
	<b>46%</b>	<b>52%</b>	<b>2%</b>	<b>0%</b>
c. I would advise my students to take as many STEM courses as they can.	35%	63%	2%	0%
	<b>61%</b>	<b>36%</b>	<b>2%</b>	<b>0%</b>
d. I understand ways in which the classroom environment does or does not encourage all students.	24%	76%	0%	0%
	<b>55%</b>	<b>46%</b>	<b>0%</b>	<b>0%</b>
e. I am aware that I am responsible for creating an equitable classroom.	46%	52%	2%	0%
	<b>75%</b>	<b>25%</b>	<b>0%</b>	<b>0%</b>
f. I am knowledgeable about methods to decrease micro-inequity in the classroom.	8%	51%	39%	2%
	<b>48%</b>	<b>52%</b>	<b>0%</b>	<b>0%</b>
g. I am knowledgeable about strategies to evaluate the effectiveness of classroom interventions.	8%	75%	17%	0%
	<b>43%</b>	<b>55%</b>	<b>2%</b>	<b>0%</b>
h. I feel confident in my ability to identify and address micro-inequities in my classroom.	8%	43%	49%	0%
	<b>36%</b>	<b>64%</b>	<b>0%</b>	<b>0%</b>
i. I am comfortable with evaluating the effectiveness of my classroom interventions.	14%	3%	22%	0%
	<b>43%</b>	<b>52%</b>	<b>0%</b>	<b>0%</b>

# Look carefully; What do you notice?

## super light, superhero tough

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make it your own!  
with a monogram,  
embroidery or both!  
details, p. 20



What about this picture.....what do you notice?



starcasm.net

## CI - SCENARIO/ROLE PLAY

Female Student: “I’m no good at algebra. No one in my family is good at math. I don’t like math, and let’s face it, girls are stupid at math. Why should I try?”



# MICROMESSAGING TO REACH & TEACH EVERY STUDENT – UTEACH DALLAS INTEGRATION

## ○ Project Based Instruction

- Discussion of the Merits of PBI in Terms of:
  - Students' Cognitive Development,
  - Equity, and
  - Motivation
- Continue the practice of instruction that promotes equitable & diverse participation



# MICROMESSAGING TO REACH & TEACH EVERY STUDENT – UTEACH DALLAS INTEGRATION

## ○ **Math Modeling & Research Methods**

- Professors report being more actively aware of interactions & micromessages with students
  - “Guys, can I have your attention?”
- Incorporate Student Experiences into Inquiries
- Awareness of Survey Vocabulary



# MICROMESSAGING TO REACH & TEACH EVERY STUDENT – UTEACH DALLAS INTEGRATION

## ○ **Apprentice Teaching & Induction**

- Feedback to Pre-Service Teachers Regarding Micromessages
- Evidence of Equity in Questioning
- Provide Several Professional Development Opportunities





# MICROMESSAGES ACCUMULATE!!



# QUESTIONS?

