



# 10 Strategies for Engaging YOUR Students for Success



HI-TEC  
Wednesday, July 31, 2024



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# Welcome and Introductions



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# Assumptions

- Each of you is a Subject Matter Expert (SME)
- Each of you wants your students to be successful
- None of you want to disenfranchise students
- Each of you wants to improve





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- 10 → Be intentionally inviting
- 9 → Connect before first class
- 8 → Introductions are Important
- 7 → Create a cultural collage
- 6 → Do a self-assessment
- 5 → Encourage multi-lingual classroom
- 4 → Plan how you create groups
- 3 → Use project-based learning activities
- 2 → Value different learning styles
- 1 → Think about what/how you speak



# 10

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	Intentionally	Unintentionally
Inviting		
Uninviting		



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0

# Intentionally Inviting

- On time
- Check out equipment
- Have a clear syllabus
- Learn names
- Give feedback in a timely manner





# Unintentionally Inviting

➤ Facial expression



# Un-intentionally un-Inviting Resting Face

- What you see
- What I mean





# Intentionally Un-inviting





# Before the First Class

- E-mail message
- Who I am
- Class Info
- Materials Needed
- What to Expect
- Ice Breaker

## Getting to know you - ice breaker

Please answer the questions below. If you don't want to answer something you can skip it. Save and send me the file at Enter [e-mail here](#) by (I suggest day before first class)

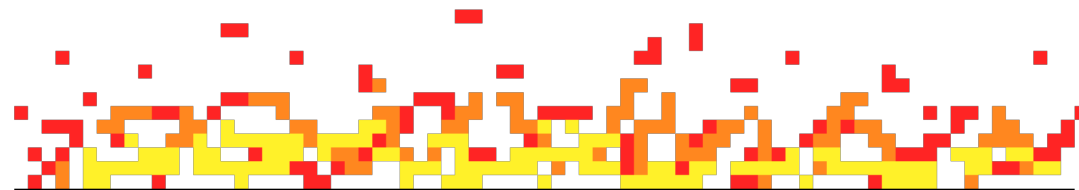
1. What is your name - do you have a preferred name (nickname)
2. What are your preferred pronouns?
3. What is your major?
4. When will you graduate?
5. Are you currently working? If so full or part time, and where?
6. Do you have a pet(s) - what type, name?
7. What songs have you completely memorized?
8. What is one thing on your bucket list you are absolutely determined to do?
9. What is your favorite type of food?
10. How do you relax after a hard day?
11. What else would you like me to know about you?





# Before First Class

- Students can share information such as preferred name
- Instructor can learn about students
- Instructor can share critical information
- Creates a sense of community



**START!**



# Introductions

- ❑ Take roll call
- ❑ Ask students how they are feeling in one word
- ❑ Follow up at times
  - ❑ For example, someone said “hungry” and another student shared crackers

# Introductions

- ❑ Learn names
- ❑ Acknowledge differences
- ❑ Safe place to share feelings
- ❑ Help find similarities



Hi there!

# 7

## Cultural Collage Activity

- Sharing *Cultural Stories* to engage students and release their *Cultural Strengths*

My Personal Collage / Storyboard

Juan Rodriguez



The collage consists of five distinct images arranged in a grid-like fashion. At the top left is a black rectangular box with several red and blue arrows pointing outwards. In the center is a large image of the Puerto Rican flag waving in front of a white domed building. To the left of the flag is a circular silver coin featuring a figure. To the right of the flag is a rectangular image with the word 'FAMILIA' in a stylized font. At the bottom right is a cartoon illustration of a diverse family of seven people.



# My Personal Collage / Storyboard

<name(*optional*)>

Insert and arrange numerous photos, graphics, diagrams, quotes, etc. to illustrate your:

- cultural heritage
- educational journey
- personal growth stories from challenges you faced
- people that inspired you
- other...

photo

graphic

photo

photo

photo

quote



# Collage

- ❑ More cohesive class environment
- ❑ More discussion of long-term academic goals
- ❑ Persistence
- ❑ Linguistic diversity





# Self-Assessment

- ❑ Developed during pandemic
- ❑ Determines participation grade
- ❑ Complete after each test and end of semester
- ❑ Provide details of their participation and give themselves numeric grade
- ❑ Can be overruled by instructor

**PARTICIPATION ASSIGNMENT 1: MATH AUTOBIOGRAPHY AND COMMUNITY SUPPORT**

Name:

Class:

Date:

Directions:

- 1) Complete the attached questionnaire by hand
- 2) Respond to the essay prompt in 3-5 paragraphs of professional academic writing. You may turn in a handwritten or typed essay.
- 3) Staple this page to your essay. Turn it in at the beginning of class on Wednesday, January 31, 2024.

ESSAY PROMPT:

On our first day, I shared with you my mathematical autobiography - my history with learning mathematics. I want to get to know you a little bit better and learn your math story. Write 3-5 paragraphs answering the following questions:

- 1) What are your educational goals? I.E. Why are you in school?
- 2) Briefly describe your history with mathematics. List at least one positive learning experience and one negative learning experience. Please include your most recent math learning experience.
- 3) Is there anything you want me to know about you?
- 4) Choose one of the class participation goals and tell me how you applied it in class and what you learned from the experience.
- 5) How do you plan to study for Exam 1?
- 6) Give yourself a grade for your participation during the first and explain why you believe you earned that grade.

Circle one:

I am on time to class	always	sometimes	never
I stay for the entire class	always	sometimes	never
I stay off of social media and the internet during class	always	sometimes	never
I communicate respectfully with Sarah and my classmates	always	sometimes	never
I am caught up on my homework	always	sometimes	never
I make mistakes and share them when asked	always	sometimes	never
I ask questions when I have them (asking classmates counts)	always	sometimes	never

Check all of the following goals that you completed in the first 6 weeks of class:

Mathematical Reflection:

- Take detailed notes in class including questions that I have
- Rewrite my notes and add examples from the homework and textbook
- Asked myself "How does this make sense, how does this fit with what I already know?" when presented with examples, definitions, and theorems
- Took note of when you didn't understand a symbol or vocabulary word
- Included a mistake I made in my notes with an explanation of how to avoid it in the future
- Tried to work along with examples and problems demonstrated in class
- Tried to guess what step might come next
- Tried to guess how the facts fit together
- Wondered if the math we are doing relates to something outside the classroom
- Wondered if I would ever use this in real life
- Made a conclusion about how something must work (right or wrong)
- Did extra problems or examples to help my understanding
- Thought about Pre-Calculus outside of class and homework

Community Support:

- I broke the ice in class discussion or in small group work
- I shared a mistake I made in class and what it taught me
- I asked a question
- I rephrased something Sarah was saying to help a classmate understand
- I rephrased something a classmate said to help Sarah understand
- I caught someone's mistake and explained to them what I noticed
- I caught Sarah's mistake and spoke up
- Someone caught my mistake and I learned from their explanation
- I reached out to include someone in a class or group discussion
- I spoke up in a class or group discussion
- I thanked someone for their help
- I thanked someone for asking a question that helped me
- I shared my notes with someone
- I asked Sarah a question my classmate was too shy to ask
- I participated by raising my hand, rating my understanding 1-10, or otherwise when Sarah asked.





# Self-Assessment

- ❑ Participation is more than talking
- ❑ Acknowledge contributions
  - ❑ Helping someone else
  - ❑ Accepting help from others
  - ❑ Being part of team (sharing notes)
- ❑ Allows students to share what is of value to them
- ❑ Safe space - One-on-one interaction



# Multi-Lingual Classroom

- ❑ Ask students about languages
- ❑ Encourage students to complete small group work in multiple languages
  - ❑ Have been Spanish, Arabic and Albanian speaking
- ❑ Students report out in English

NOTE: Learning Spanish so students like to help



# Multi-Lingual

- ❑ Shows that multilingualism is a valued skill
- ❑ Increases respect for strengths of multi-cultural and immigrant experiences
- ❑ Allows students to feel more at home



# Activity

# Group & Problem Based



*Will unpack after completion*

So, what is?

$$5 + 4 =$$

9



Instead

Give possible answers

$9 =$





# Groups



# Creating Groups

- Determine YOUR goal
- Instructor creates groups
  - Proximity
  - Random vs. planned





# Groups

- Students don't feel left out
- Students don't "Blame the instructor"
- Matches what employers want



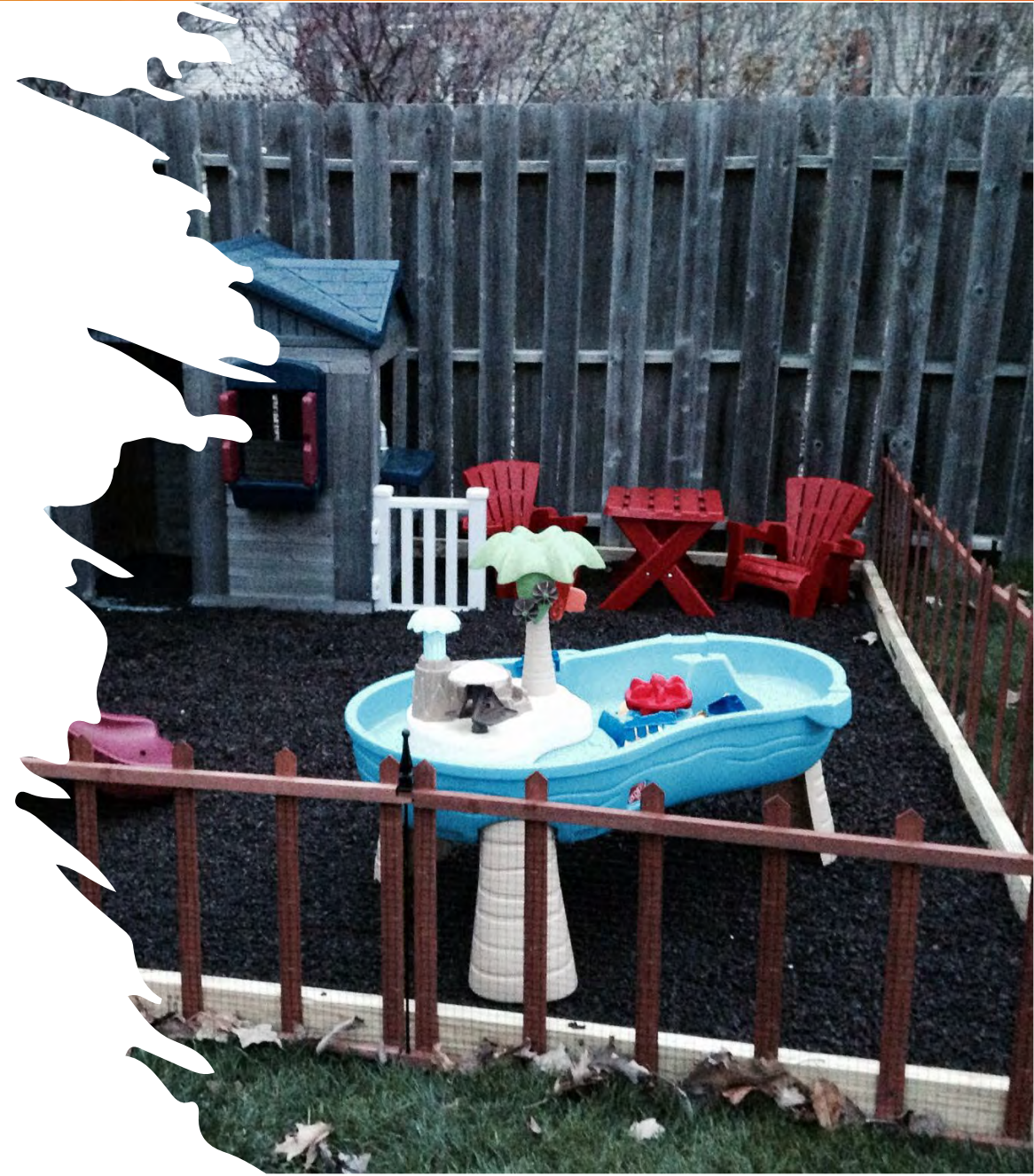


# In the Trenches: Learn by Doing (Problem or Project Based Learning)



# Project Based Learning

- No one right solution
- Work in groups
- Provide a “yard”
- Share solutions





People generally remember...  
(learning activities)

People are able to...  
(learning outcomes)

10% of what they read

20% of what they hear

30% of what they see

50% of what they see and hear

70% of what they say and write

90% of what they do

**Passive Learning**

**Active Learning**

Define  
Describe  
List  
Explain

Demonstrate  
Apply  
Practice

Analyze  
Define  
Create  
Evaluate



# Project-Based Learning

- Solve problems
- Research information
- Take responsibility
- Work in groups





# Value Differences in Learning Styles



Include	And
Collaborative, group work	Competitive activities
Contextual, hands on, what will it be used for	Information about the machine itself – size, speed etc.
Problem solving highly valued	Technology used highly valued
How the technology will help others	How to use the technology
Quiet reflection	Active discussion
Practical examples	Theoretical background
Timed proficiency drills	Long term projects





“I've learned that people will forget what you said, people will forget what you did, but people will never forget how you made them feel.”

Maya Angelou



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# Do you have anything to put in the boxes?

	Intentionally	Unintentionally
Inviting		
Uninviting		

# QUESTIONS

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# Leadership Development and Outreach for ATE

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