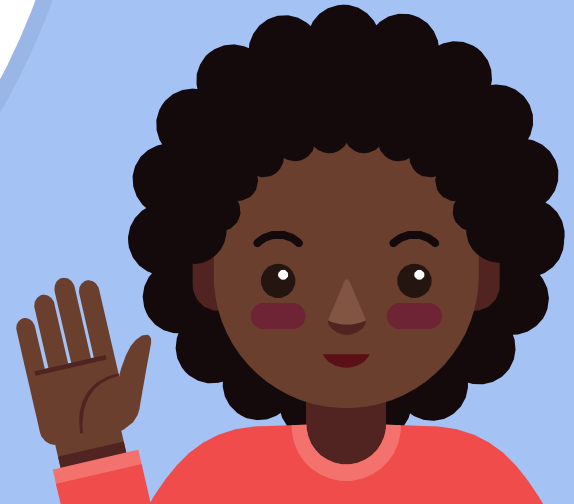


<https://quizlet.com/live>

# Structures That Encourage Students to Talk & Culturally Responsive Teaching Strategies

April Mouton  
June 21, 2017



# California Mathematics Framework

“Every teacher must incorporate into his or her curriculum instructional support for oral and written language as it relates to the mathematics standards and content. It is not possible to separate the content of mathematics from the language in which it is discussed and taught.”

-Francis et al. 2006a, 38

# Environment & Climate

- Read [Hammond](#) Article
- Complete a [3-2-1 sheet](#)
- Be prepared to share your thoughts with at least two other people

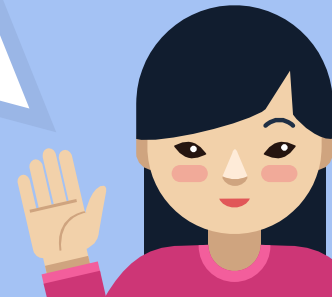


15 min



# Like Me

2:20-10:00

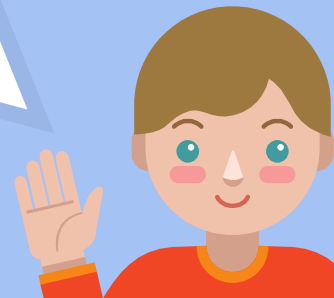
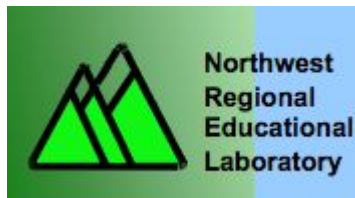


# Like Me Activity

× [Resources](#)

## Creating a Gender and Race Inclusive Classroom--Math Teachers

- Display posters, pictures, news, or magazine articles of women mathematicians on the bulletin board (include race and diversity)
- Have students research notable mathematicians of color and either make an oral presentation or write a report (stretch: research someone of a similar background and someone of a different background to encourage biculturalism)
- Discuss the obstacles that have presented women/people of color from participation in mathematics (or have students research this topic)



# Promoting Mathematical Discussions Article

*I  
noticed...*

*I  
disagree...*

*I  
think  
it  
could  
be...*



## Jigsaw:

1. Read the “ALL” sections
2. Read your assigned # section
3. Write a **gist** for your section
4. Provide a **new example** of the strategy

15 min.



# Philosophical Chairs: Classic Style

## Philosophical Chairs: Rules of Engagement

1. Be sure you understand the central statement or topic
2. Decide which section you will sit in
3. Listen carefully when others speak and seek to understand their arguments even if you don't agree.
4. Only one person speaks at a time
5. You must first summarize briefly the previous speaker's argument before you make your response
6. If you have spoken for your side, you must wait until three other people on your side speak before you speak again
7. Be sure that when you speak, you address the ideas, not the person stating them
8. Keep an open mind and move to the other side or the undecided section if you feel that someone made a good argument or your opinion is swayed

[Philosophical Chairs: Classic Style](#) is a structured form of academic discourse which relies on a prompt as the foundation for discussion and informed debate. It is a form of dialogue in which students develop a deeper understanding of a text or subject. This strategy gives students opportunities to improve verbal capability and fluency, as well as develop skills in the precise use of academic language.



# Practice!

Pick a central statement:

1. Teachers should not interact with students through social media websites
2. Girls should be able to participate in full-contact sports with boys.
3. High school dropouts should not be able to obtain a driver's license.

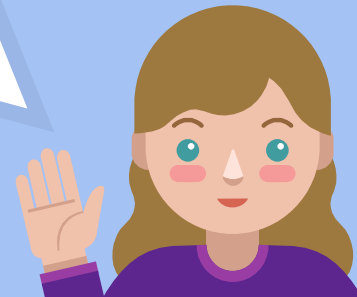
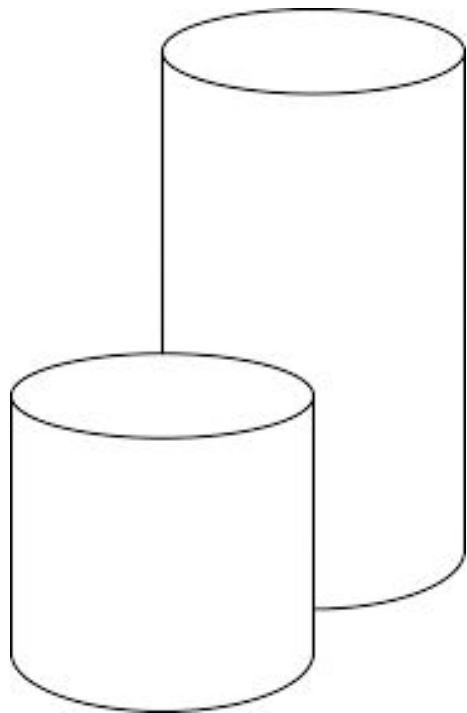
# Philosophical Chairs

## An investigation of cylinder volume

Choose one of the 3 claims

1. The cylinder with an 8.5in circumference holds more candy
2. The cylinder with a 5.5in circumference holds more candy
3. They cylinders hold the same amount of candy

Use [proposition & support frames](#) to craft your argument.



# Participation Quiz

## Mathematical Goals & Group

### Goals

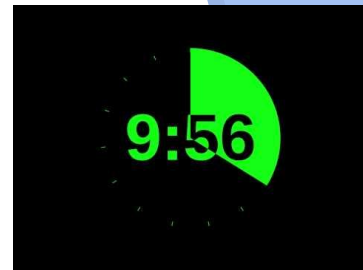
pg. 174/175 (mathematical mindsets)



# Encouraging Student Talk: (Low Floor & High Ceiling Tasks)



## Ice Cream Scoop



15 min

### Task Instructions:

In shops with lots of ice-cream flavors, there are many different flavor combinations, even with only a 2-scoop cone. With 1 ice-cream flavor, there is 1 kind of 2-scoop ice-cream, but with 2 flavors there are 3 possible combinations (i.e. vanilla/vanilla, chocolate/chocolate, and vanilla/chocolate)

1. How many kinds of 2-scoop cones are there with 10 flavors?
2. What about “n” flavors?
3. Create a poster that represents your group’s thinking.



# Key Messages

- Environment matters
- Students thrive when they have genuine opportunities to communicate their thinking
- Receptive + Expressive = Understanding
- When integrating group tasks, ask yourself: “For what purpose will students use language? What will it look and sound like?”
- Allow opportunities for oral and written contributions

<https://quizlet.com/live>

# Thanks!

## Any questions?

### Credits

Special thanks to all the people who made and released these awesome resources for free:

- × Presentation template by [SlidesCarnival](#)
- × Photographs by [Unsplash](#)

