

# Syosset Mathematics

December 16, 2019

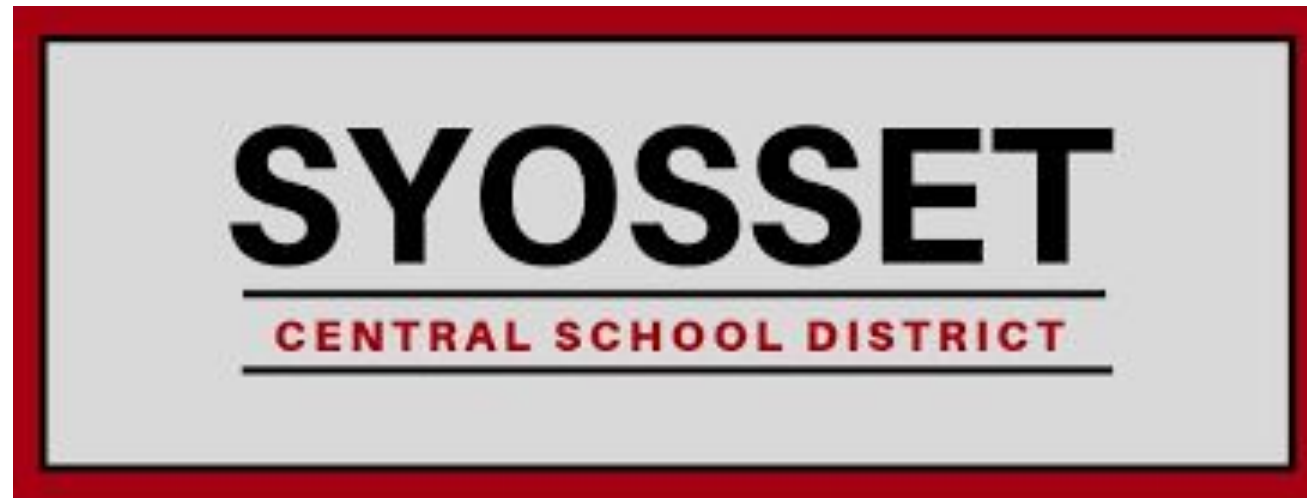
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# Syosset CSD Mission Statement

The mission of the Syosset Central School District is to prepare students to thrive in both the future we imagine and one which may evolve in ways yet to be envisioned.







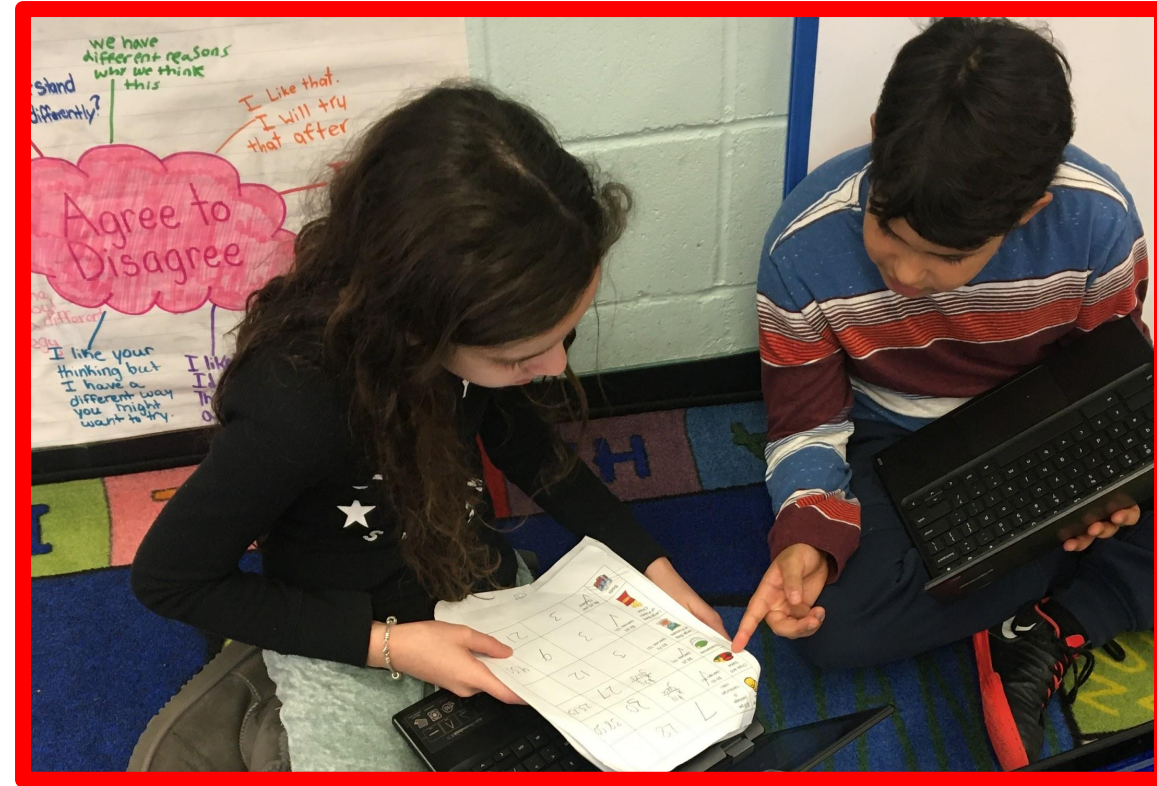


# Syosset CSD Elementary Mathematics

## We set the foundation.

We want students to know...

- ... math is fun!
- ... math is all around us!
- ... math SHOULD be challenging.
- ... math is better learned through COLLABORATION.

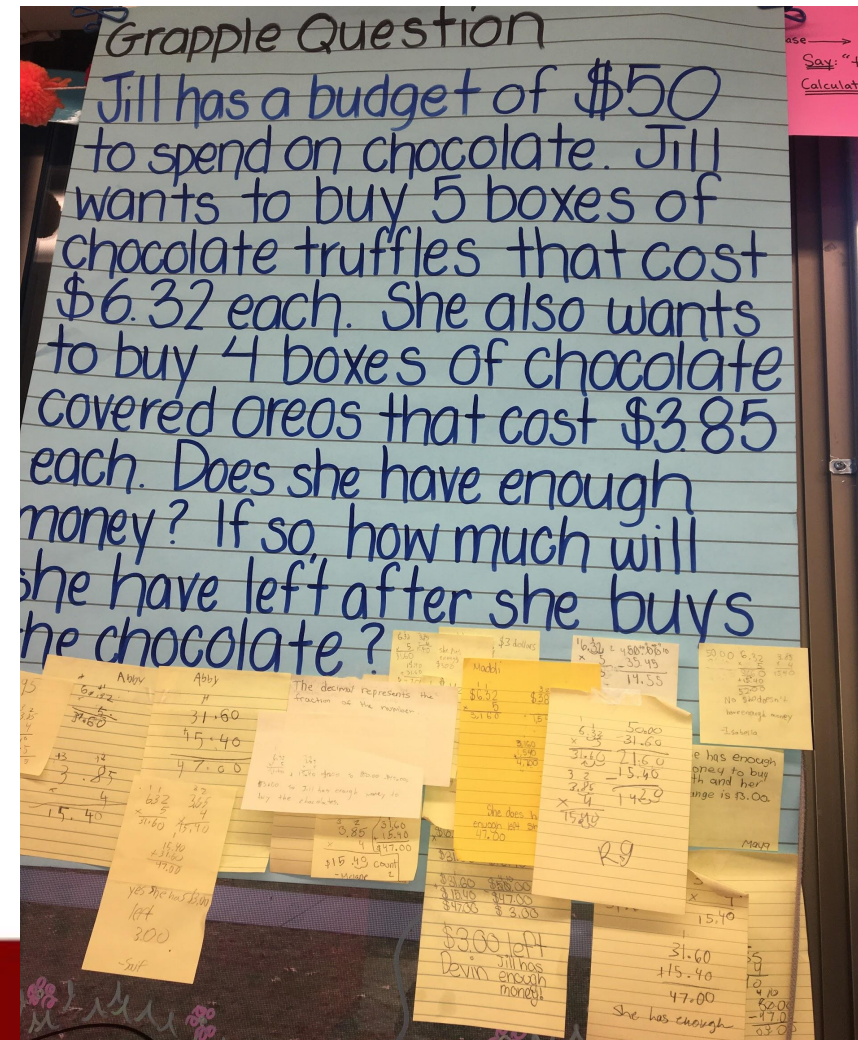


# Implementing the Teachers College Workshop Model to teach Mathematics

## Process - Authenticity - Time - Independence - Choice

**Mini Lessons:** focused introduction of math concepts with real world application

**Student conversation:** discussion stems, turn-and-talk





Math is not a body of facts and procedures.

## Math is conceptual and strategic problem solving.

- **Growth Mindset:** Understanding that learning something new in mathematics takes time and perseverance.
- **Student Agency:** Discussing mistakes, asking questions, finding the most efficient strategy via **collaboration**.
- **Connecting math to the real world:** Solving problems that are relevant, authentic and rigorous.



# Implementing the Teachers College Workshop Model to teach Mathematics

**Process - Authenticity - Time - Independence - Choice**

**Flexible Structure:** The structure of small group instruction in math varies from day to day and class to class. Some examples are:

- Teacher as facilitator
- Research - Decide - Teach
- Multiple entry points
- Access and supports





# Promoting a love of mathematics!

## Supporting the **POWER OF YET!**

- **Learning vs. Performance**

- Targeted feedback
- Student goal setting
- Quality vs. quantity

- **Accessibility for all learners**

- Respecting the learner
- Perseverance
- Importance of conceptual understanding

Chapter 3 Mid Chapter Check In

Just do your best work! Remember, this is a way for us to see

- What strategies you're using
- How you're using estimation as a mathematical tool
- How you're explaining your mathematical thinking

1.  $26 \times 22$

Write a word problem for  $(26 \times 22)$  *pro.*

John 26 Boxes of toys. Each Box has 22 toys. How many toys Does John have.

work

$26 \times 22 =$   
↓ Est.  
 $25 \times 20 = 500$

I did this so I use get a good idea of the sum. I also did this because 25 is close to 26 and 20 is close to 22.

I like use this box to show my work.

20	400	120
2	40	12

↓

400  
120  
40  
12  
+ 572

↓

This is my answer to  $26 \times 22$

Bravo!

Juice 6 flavors 156 bottles  
water 6 bottles per pack  
156 bottles  $6 \times 26 = 156$

Water

6, 12, 18, 24, 30, 36, 42, 48, 54, 60, 66, 72, 78, 84, 90, 96, 102, 108, 114

119, 125, 131, 137, 143, 149, 155,

Water-bottle packs = 26

Juice

$156 \div 26 = 6$

(26) (26) (26) (26) (26) (26)

Teacher's Lounge

Notes

- 6 flavors of juice
- 6 bottles/packs
- 156 bottles each machine

circles in each  
juice flavor  
 $6 \times 26 = 120$

$156 - 120 = 36$   
Flavors cans in each  
 $6 \times 6 = 36$  Flavor

Juice machine  
needs 26 packs

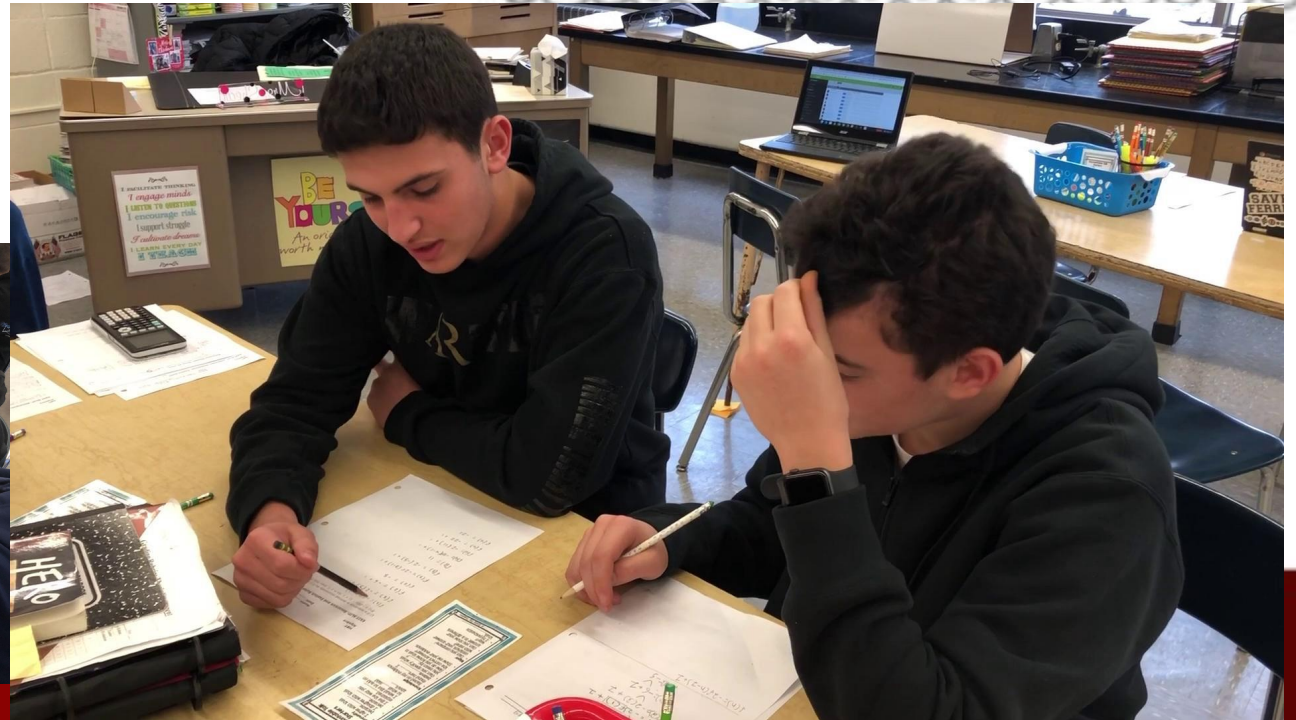
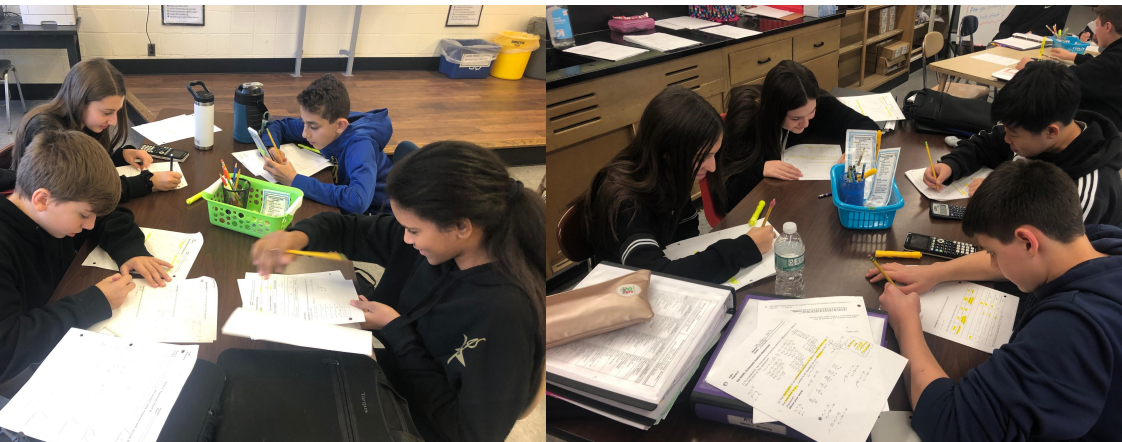


# Learning by collaborating

- Each student has a role in the lesson (facilitator, recorder, resource manager, and understanding coordinator)
- Technology is being used to enhance the curriculum

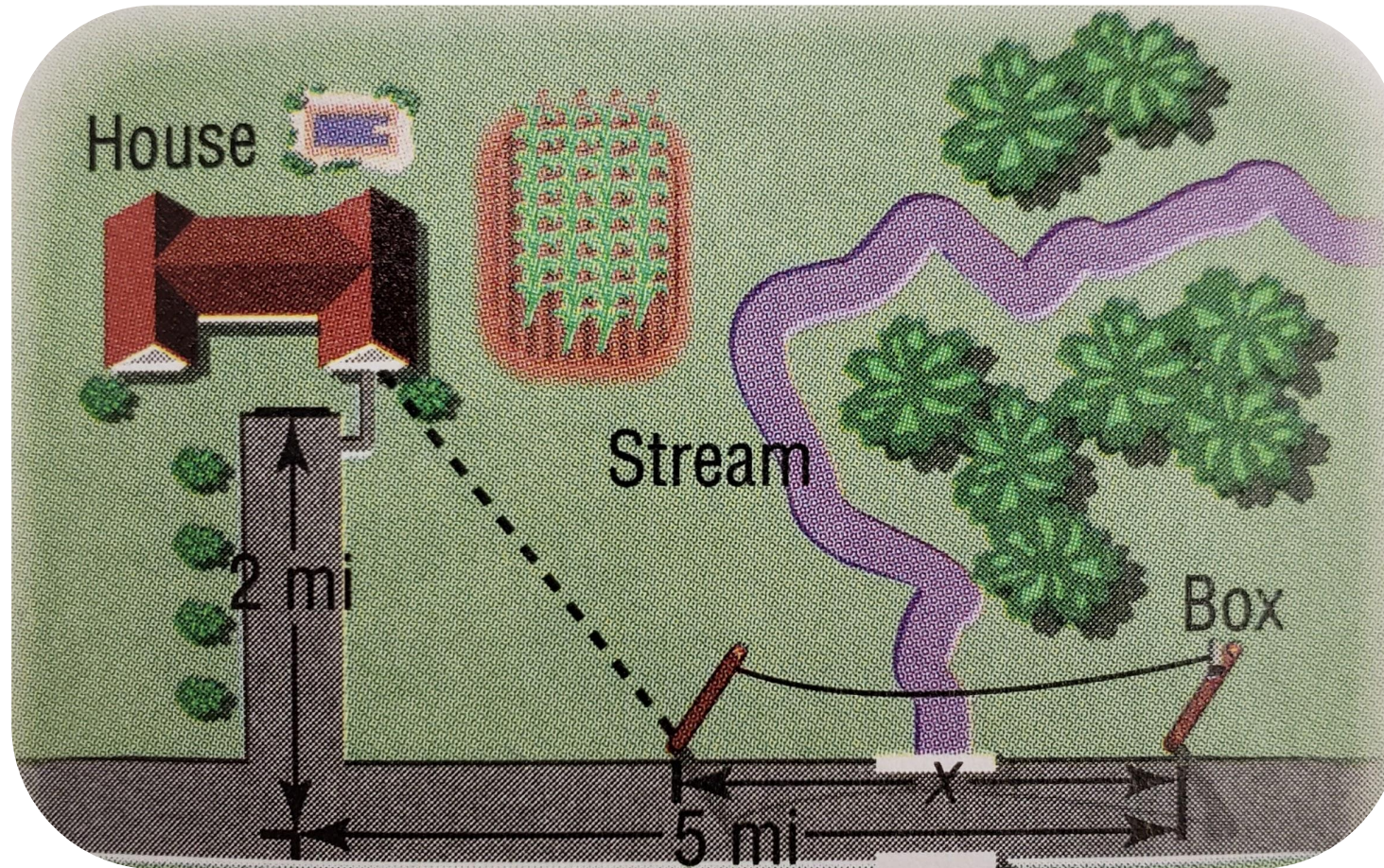
## Accountable Talk:

- ★ I agree with you because...
- ★ I disagree with you because...
- ★ Why do you think that?
- ★ I do not understand can you help?
- ★ I know my answer is right because...
- ★ I solved this problem by...
- ★ another way to solve this problem is...



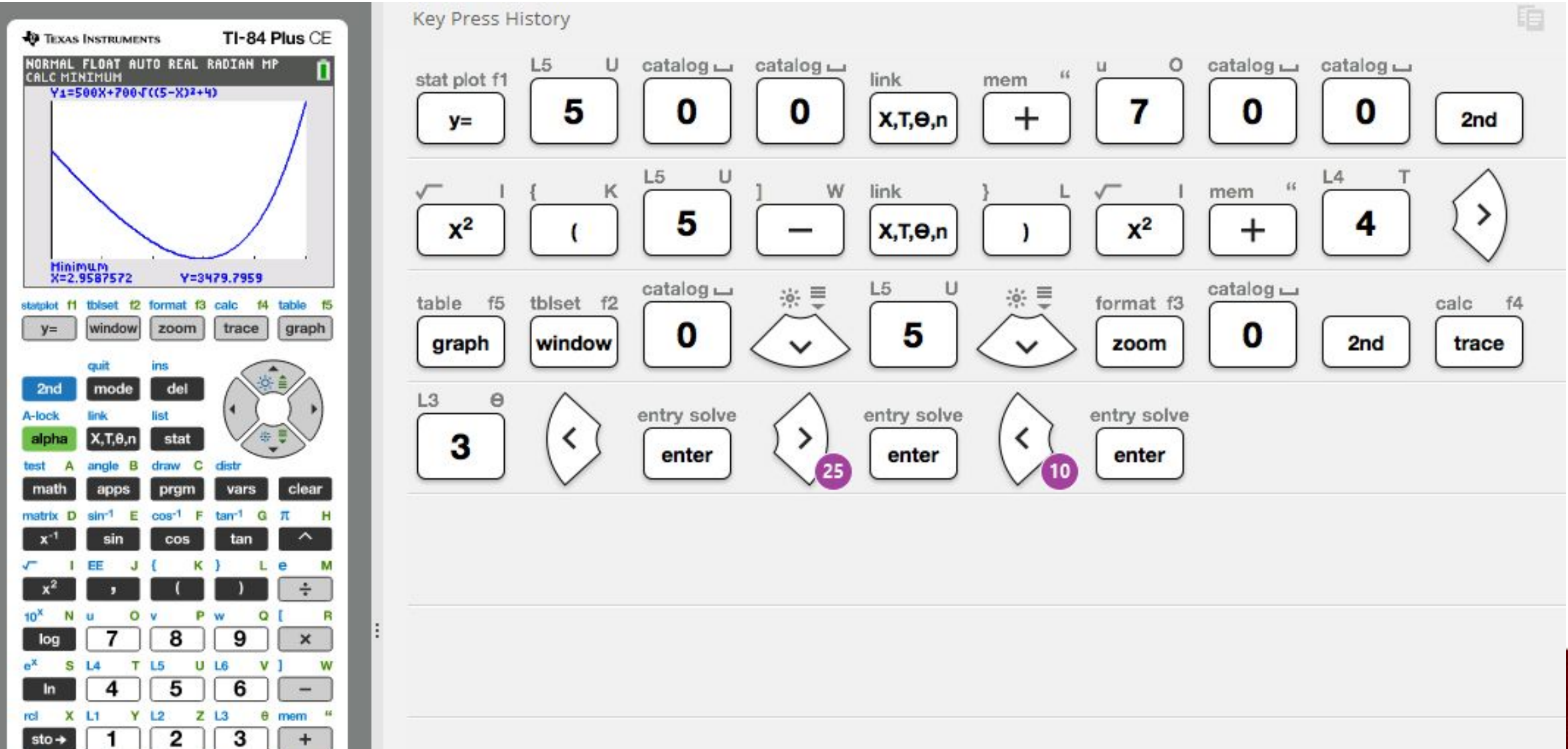


Using technology as an instructional amplifier.

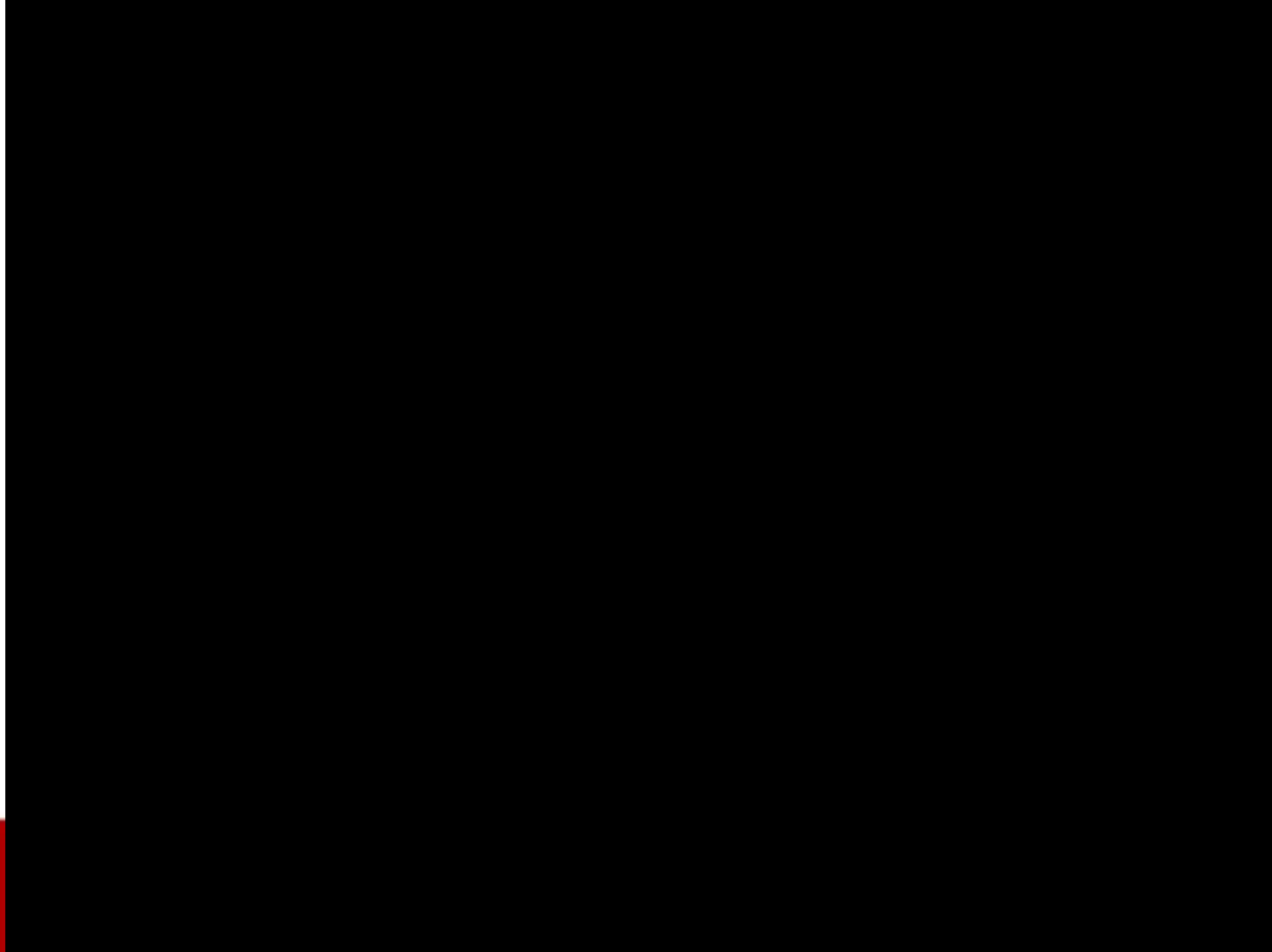




# Using technology as an instructional amplifier



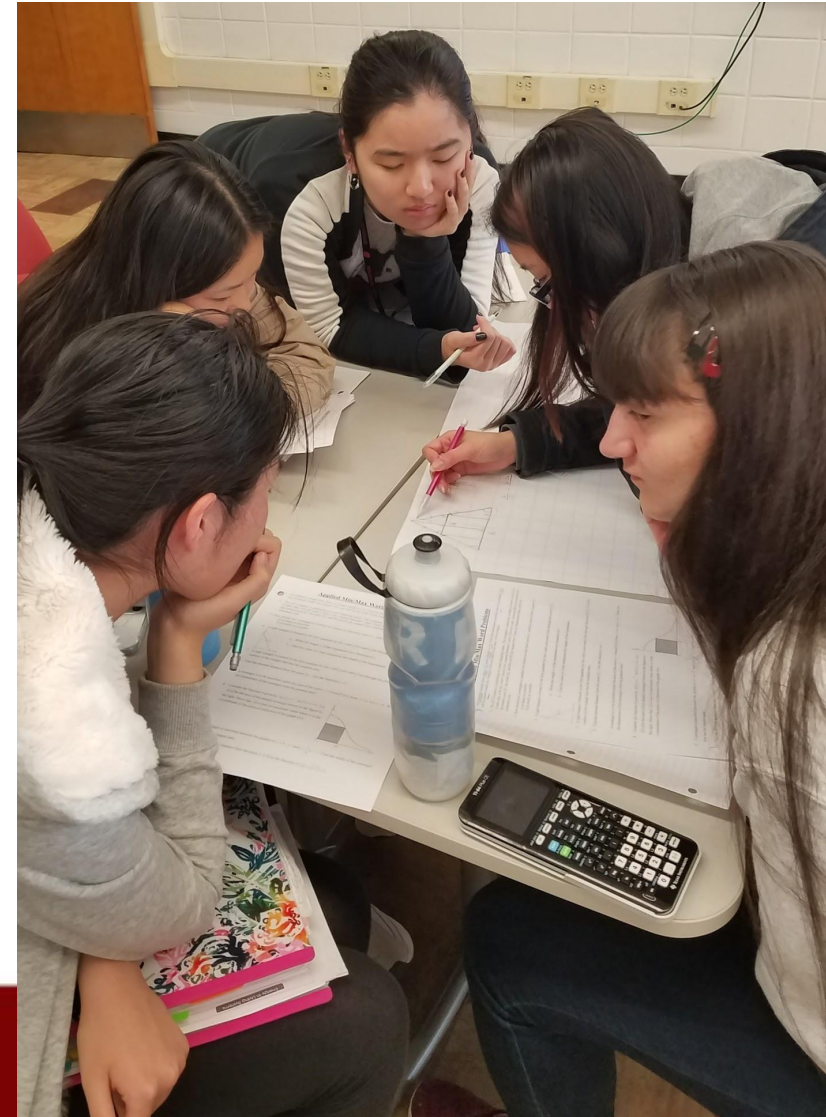
# Using technology as an instructional amplifier





# Fostering multiple approaches

- Promoting mathematical discourse and cooperative learning
- Rearranging classroom spaces



# Using technology as an instructional amplifier

- Promoting mathematical discourse and cooperative learning
- Rearranging classroom spaces





# Mathematics department focus areas

- To shift the study of mathematics from a body of facts and procedures to fostering multiple approaches through collaboration and a growth mindset.
- To promote a love of the subject, its connections, and its application to the world - making math for everyone!
- To use technology as an instructional amplifier.

