

Using Mathematical Teams to Teach the CCSS Practice Standards



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Presentation Description & Objectives

Student-Centered Study Teams

- incorporate the use of effective study teams
- support positive teacher evaluations
- create student-led discourse & collaboration
- opportunities for higher order thinking facilitation
- enhance classroom climate and promote problem solving
- support the CCSS for mathematical practice

How do you create groups?

Types of Groups

- Heterogeneous
- Homogenous
- Level of each student
- Assessment data
- Random
- Structure of class/lesson/unit

Grouping Ideas

- Deck of cards (All Aces together, or one of each suit together)
- Cartoons (Cut up different math cartoons and find their group)
- Puzzle Pieces (Cut up puzzle pieces and have them fit together)
- Multiple Representations (Graph, table, equation, situation)
- Shapes (All squares together, or one of each kind of shape together)
- Color words (all blue items sit together, etc.)
- Facilitator=tallest, task manager=shortest, etc.

TEAM ROLES



Resource Manager:

- Get supplies for your team, and make sure your team cleans up.
- Call the teacher over for team questions when all members are stuck.
- The teacher may give you extra information to share with your team.

Recorder/Reporter:

- Be sure you understand and are able to describe the mathematical thinking of the team to the rest of the class.
- Share your team data with the class.
- Make sure that all group members are taking neatly written notes.

Facilitator:

- Help your team get started by having someone read the task.
- Keep the team together and make sure everyone understands your team's answers before you move on.

Task Manager:

- Make sure no one talks outside your team.
- Make sure your team is on-task and talking about math.
- Listen for statements and reasons.

How do you “train” students to learn like this?

- Teambuilding
- Classroom Management
- Team roles



When would you use these team teaching strategies?



- Hot Potato
- Red Light, Green Light (Yellow Light)
- Huddle
- I-Spy
- Listening Post
- Reciprocal Teaching
- Participation Quiz
- Teammates Consult (Pencils in the Middle)
- Carousel
- Math Chat
- Fortune Cookie
- Numbered Heads
- Pairs Check
- Silent Debate
- Think-Ink-Pair-Share
- Walk and Talk
- Swapmeet

Hot Potato



- Every team has one sheet of paper and each student has a different colored pencil.
- A problem is given to the group.
- Person 1 writes the first step of the solution process, explaining aloud, and passes the paper on to Person 2.
- Person 2 makes any corrections and adds the next step, explaining aloud, and passes the paper on.
- Process continues until the problem is completed.

Hot Potato

$$\{[3 \times 5(3 + 6 \times 2) - 125] + 20\} / 10$$



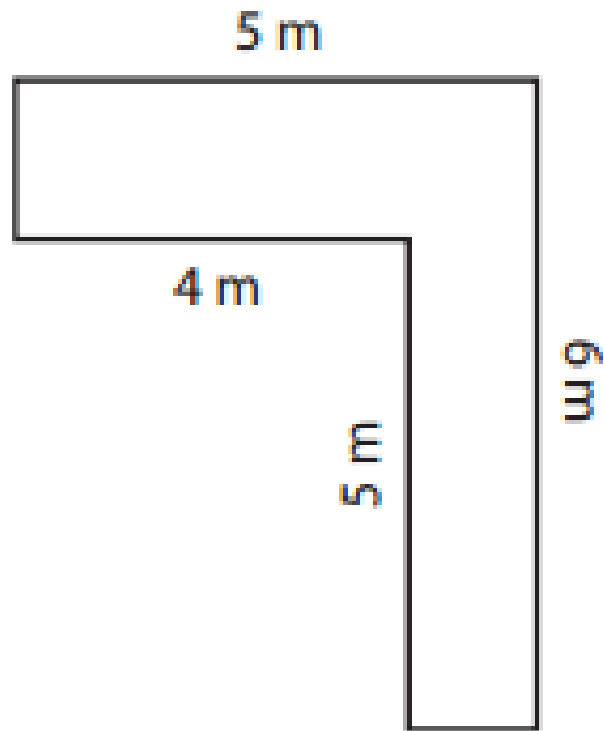
Pairs Check



- Each pair has one paper and pencil.
- Student #1 writes what Student #2 explains OR Student #1 does the first problem while Student #2 only watches, listens and asks questions.
- Then roles are reversed for the second problem.
- Then each pair checks their work with the other study team pair.
- Continue on to the next pair of problems.

Pairs Check

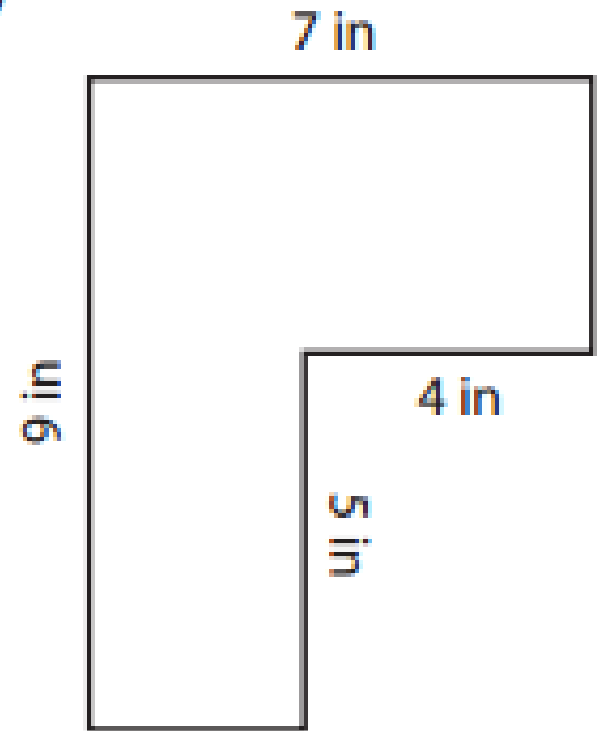
2)



Area: _____

Perimeter: _____

3)



Area: _____

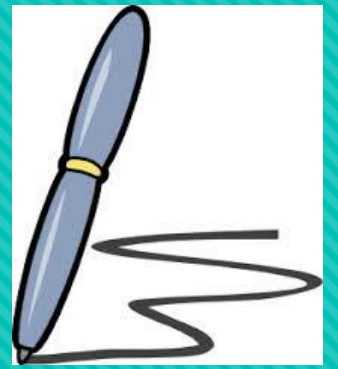
Perimeter: _____

Facilitating Mathematical Teams



- Questioning
- Track Progress

Think-Ink-Pair-Share



- **Think and Ink:** How do study team teaching strategies integrate the CCSS math practice standards?
- **Pair & Share:** Compare and contrast your ideas with a partner's ideas.

CCSS Math Practice Standards

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Questions & Answers

- What are your questions?
- What do you want to know more about?

http://padlet.com/lisa_krause1/QA

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