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# I Asked a Question – Now What?



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# Welcome!



# Learning Outcomes

We will experience strategies to...

- increase productive discourse in classrooms
- encourage students to take ownership of academically productive talk

# Math Experience

- What decisions about math tasks can we make that will increase productive discourse?
- What does a task like this look like?

# The Newspaper Club Problem

The ratio of boys to girls in a school newspaper club is one to three. There are five boys in the newspaper club. How many girls are there?

What are the different ways you can solve the problem?

# Process the Math

- Does the work make sense and what was the group doing?
- As you examined the different strategies, how were they similar?

# Process the Experience

What in the Newspaper Club task promoted productive discourse?

## Original Problem:

The ratio of boys to girls in a school newspaper club is one to three. There are five boys in the newspaper club. How many girls are there?

*What are the different ways you can solve the problem?*

# What could the question be?

The ratio of boys to girls in a school newspaper club is one to three. There are five boys in the newspaper club.



# Features of Open Tasks

- Are open-ended in answer or approach
- Require application of facts and procedures
- Encourage students to make connections and generalizations

*Example:*

**A vase holds red and white roses. For every three roses, there are two white roses. How many flowers might be in the vase?**

“Effective teaching of mathematics engages students in solving and discussing tasks that promote mathematical reasoning and problem solving and allow multiple entry points and varied solution strategies.”

*Principles to Actions Ensuring Mathematical Success for All*  
National Council of Teachers of Mathematics

# Strategies for Increasing Productive Discourse

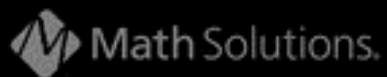
- How can we increase opportunities for talk in the math classroom?
- What does this look like?

# Viewing the Video

As you watch the clip, consider:

- 1 – What actions does the teacher take to get students talking?
- 2 – Record questions the teacher asks
- 3 – What do you notice students saying?

# From the Classroom



The Newspaper Club Problem from Talk Moves by Suzanne H. Chapin, and Cathy O'Connor, and Nancy Canavan Anderson. Copyright © Math Solutions Publications. All rights reserved

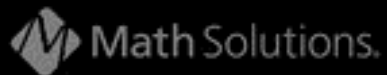
# Video Discussion

- 1 – What actions does the teacher take to get students talking?
- 2 – Record questions the teacher asks
- 3 – What do you notice students saying?

# Strategies for Increasing Productive Discourse

- Talk Moves (repeating, revoicing, turn and talk)
- Talk Formats (partner, small, whole)
- Student work in whole class discussions
- Questioning vs. Telling

# Revisiting the Classroom



The Newspaper Club Problem from Talk Moves by Suzanne H. Chapin, and Cathy O'Connor, and Nancy Canavan Anderson. Copyright © Math Solutions Publications. All rights reserved



# Instructional Practices Inventory

## LEARNING ENVIRONMENT

### Teacher

- Provides a respectful, safe learning environment in which mistakes are seen as an opportunity to learn.
- Structures the class for independent work, pairs, groups and whole class in a thoughtful and deliberate way.
- **Ask questions that both build and reveal new understanding of content and practice.**
- Avoids yes/no questions unless they also ask for justification
- Makes appropriate tools available and encourages their use.

### Students

- Take an academic risk and rely on their own thinking and the thinking of other students.
- Listen and ask questions to ask each other to clarify information; respectfully challenge ideas; make conjectures.
- **Explain their reasoning; construct viable arguments and critique the reasoning of others.**
- **Communicate using appropriate mathematical language both orally and in writing.**
- Work well in a variety of grouping structures.

# Establishing Norms

- What needs to be in place to make productive discourse happen?
- How do we encourage students to take ownership of academically productive talk?

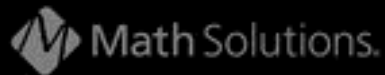
# Viewing the Video

As you watch the clip, consider:

In this clip, where do you see student behavior that reflects knowledge of and adherence to norms already in place?

How could you envision those norms being established?

# From the Classroom



Setting Up Classroom Talk Norms: Mary, may you please repeat that again? from Talk Moves by Suzanne H. Chapin, and Cathy O'Connor, and Nancy Canavan Anderson. Copyright © Math Solutions Publications. All rights reserved

# Discuss

In this clip where you see student behavior that reflects knowledge of and adherence to norms already in place?

How could you envision those norms being established?

# Two Major Goals of Setting Up Norms

- ***Respectful Discourse:*** Talk is respectful when each person's ideas are taken seriously; no one is ridiculed or insulted, and no one is ignored or browbeaten.
- ***Equitable Participation:*** Participation is equitable when each person has a fair chance to ask questions, make statements, and express his or her ideas. Academically productive talk is not just for the most vocal or the most talented students.

# Final Processing

- What stands out to you from this session that you want to take back to your school/district?
- What actions do you need to take to make that happen?

# Thank You!

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