

PREPARING FOR THE COMMON CORE ASSESSMENTS

Tricia Salerno
SMARTTraining, LLC
www.singaporemathtraining.com
Tsalerno@singaporemathtraining.com

 SMARTTraining Now ©

$$2\frac{3}{4} \div \frac{1}{2} = ?$$

Please:

Solve.

Justify your answer by drawing a picture.

Write a word problem using your solved equation.

 SMARTTraining Now ©

WOULD ANYONE LIKE TO SHARE THEIR WORD PROBLEM?

Example:

A recipe calls for $2\frac{3}{4}$ cups of flour. The only size measuring cup available is a $\frac{1}{2}$ cup measure. How many measuring cups are required to complete the recipe?



 SMARTTraining Now ©

WOULD ANYONE LIKE TO SHARE THEIR WORD PROBLEM?

Example:

A jogger stopped halfway through her morning run after jogging $2 \frac{3}{4}$ miles. She realized that she had run $\frac{1}{2}$ of her goal for the day. What was the jogger's goal for the day?



SMARTTraining Now ©

RAMP UP THE RIGOR

- Make sense.
- Persevere.
- Reason.
- Discuss.
- Critique.
- Model.
- Be precise.



SMARTTraining Now ©

WHAT DOES A LESSON LOOK LIKE?

1. Foundational activity/Journal writing
2. Guided practice
 - Teacher models
 - Teacher scaffolds
 - Teacher lets the students go
3. Independent practice
4. Explanation

SMARTTraining Now ©

SAMPLE FOUNDATIONAL ACTIVITY

1. Count 5 square tiles.
2. Make a shape using the 5 tiles.
3. Talk to your friends. Do any of you have the same shape?

"Oh, I forgot to tell you that there are some rules."

Rule 1: All tiles must be flat on the table.

Rule 2: The tiles may not be stacked.

Rule 3: When square tiles touch, they must touch completely.

"How many shapes can you make?"

Last rule: If you can lay one of your shapes on top of the other and they line up, they are not 2 different shapes.



DE-BRIEFING FOUNDATIONAL ACTIVITY

What must all students learn?

To count to 5

How should students be grouped?

Probably heterogeneously

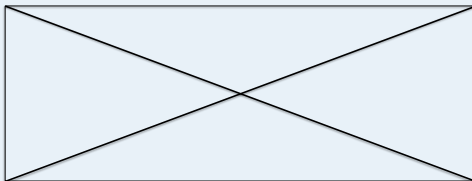
How can we differentiate this lesson?

1. Allow struggling students to listen to the ideas of others.
2. Ask advanced students more open-ended questions.
3. Challenge advanced students to convince others if their opinions differ.
4. If advanced students get done early, ask them how many shapes they can make with 4 tiles.



SAMPLE FOUNDATIONAL ACTIVITY

Do these diagonals create fourths?



Why or why not? Please discuss in your groups.



DE-BRIEFING FOUNDATIONAL ACTIVITY

What must all students learn?

Fractional parts of a whole must have equal area.

How should students be grouped?

Probably heterogeneously

How can we differentiate this lesson?

1. Allow struggling students to listen to the ideas of others.
2. Ask advanced students more open-ended questions.
3. Challenge advanced students to convince others if their opinions differ.
4. If advanced students get done early, ask them to create thirds in different shapes (triangles, hexagons, etc.) in as many ways as possible.



SAMPLE FOUNDATIONAL ACTIVITY

The ratio of boys to girls was $\frac{4}{3}$.
 After 160 boys leave the ratio is $\frac{4}{5}$.
 What was the number of girls?



DE-BRIEFING FOUNDATIONAL ACTIVITY

What must all students learn?

To model ratios and understand the concept of changing ratios

How should students be grouped?

Probably heterogeneously

How can we differentiate this lesson?

1. Allow struggling students to listen to the ideas of others.
2. Ask advanced students more open-ended questions.
3. Challenge advanced students to convince others if their opinions differ.
4. If advanced students get done early, ask them to write a changing ratio word problem.



JOURNAL WRITING

Start in kindergarten to develop the habit.

Ask students to name the lesson after they have completed the foundational activity.

Ask students to draw or write about their favorite method for solving the problem.

Challenge advanced students to draw or write about more than one method.



COLLABORATION

Students learn from each other.

Students learn when communicating.

Students learn while convincing others, observing others, and being critical, both of self and of others.



GUIDED PRACTICE

Teacher models, scaffolds, lets go:

Teacher is not the “sage on the stage.”

Asks carefully sequenced, differentiated questions.

Models with manipulatives or pictures and has groups do the same.

Rarely answers the questions!



INDEPENDENT PRACTICE

There are **PLENTY** of independent practice - problems in the Singapore-based textbooks and workbooks (and probably many others as well.)

INDEPENDENT means **INDEPENDENT!!!**

Differentiate if necessary.



EXPLANATION

In Singapore classrooms, the teachers **NEVER** explain first.

Explanation is done at the end, to help students refine their understanding.