



Singapore Math with Dawn Swartz

Lesson 13: Reminders and Tips; Rubrics for Assessing Bar Models

Outline:

Bar Modelling

- Bar modeling is a problem solving strategy.
- This is a visual for the students.
- You are not teaching a procedure, you are teaching a process.
- You will have to allow for variations. The rubrics will make it possible for you to see if the needed elements are in the final drawing.



Reminders and Tips

- Some students have difficulties with spatial relations.
 - Anytime those students can use graph paper, grid paper, or notebook paper that is helpful.
 - You will need to guide your students in how to order the blank space in their workbook.
 - Train the students to meet your expectations.
 - With the comparison models, use a vertical line to start building.
- **Math Notebook Tips**
 - Photocopy the extra textbook math problems and cut them out to paste them into the math notebook so that students can mark the problems without marking the text.
 - In fifth grade, the students cut the strips out of the photocopied page and paste them into the notebooks.
 - You could print the problems onto labels.
- Train the students to draw brackets, and possibly use tent brackets.
- Remember to integrate grammar skills in writing sensible sentences.
 - There should be quality in the sentence even in math class.
- Give students a bar model and ask them to make a word problem to go with the bar model.
- Sometimes you will need to write word problems. *Write holiday and seasonally themed word problems. Write word problems with your literature characters. Find places of inspiration. Students love word problems with their names in them.*



- Have a poster in your room with steps of the process of drawing bar models and using the bar models as a problem solving strategies. For older and new students, having a visual of the process is helpful.
- Work out the bar model problems before class. Look for different ways to do the problem.

Rubrics for Assessing Bar Models

- Assessing Model-Drawing (adapted from SMARTTraining, LLC)

Bar Model	_/1
Question Mark	_/1
Computation	_/1
Complete sentence	_/1
Total	_/4

- If you are giving an assessment that included computation, you are not going to want to put more than two or three word problems. Too many bar model word problems will cause assessing to be too cumbersome. Be careful to choose the best bar model problems.
- Assessing Model-Drawing

Neat, orderly work	_/1
Rewrites the question as a complete sentence, leaving space for the answer.	_/1
Identifies the “Who” or the “What”.	_/1
Draws a bar showing the parts and whole.	_/1
Proportions the bars to match the information. Fills in the question mark.	_/3
Computes and solves problem correctly.	_/2
Write the answer in the sentence.	_/1
Total	_/10

- The rubrics helps the students know what you are looking for.
- You could copy the rubric right onto the bottom of the page of the word problem. This provides an extra check for the students.
- Remember you are teaching the students a problem solving strategy. You are giving students a tool.
- Work within your grade level and grammar school to establish consistency. Spell out expectations together.
- Assess the process along with the write answer.