

PROBLEM SOLVING TALK

Inspired by Student Achievement Division of Ontario Schools. Produced by Natasha Hutchins at www.prodivame.com

<p>Show Describe Demonstrate Represent</p>	<p>How have you shown your thinking (e.g., picture, model, number, sentence)? Which way (e.g., picture, model, number, sentence) best shows what you know? How have you used math words to describe your experience? How did you show it? How would you explain _____ to a student aged ____? (a year lower than the one the student is in)</p>
<p>Questions To Help Students SHARE THEIR REPRESENTATIONS</p>	<p>I decided to use a... A graph (table, T-chart, picture) shows this the best because ... I could make this clearer by using a ... The math words that help someone understand what I did are ...</p>

<p>Contrast Show Test Sort Apply</p>	<p>Classify Analyse Compare Model Survey</p> <p>What mathematics were you investigating? What questions arose as you worked? What were you thinking when you made decisions or selected strategies to solve the problem? What changes did you have to make to solve the problem? What was the most challenging part of the task? And why? How do you know? How does knowing _____ help you to answer the questions _____?</p>
<p>Questions To Help Students REFLECT ON THEIR WORK</p>	<p>A question I had was ... I was feeling really ... I decided to _____, I was thinking ... I found _____ challenging because ... The most important thing I learned in math today is ...</p>

<p>Connect Relate Refer Imagine Describe or Compare</p>	<p>What does this make you think of? What other math can you connect with this? When do you use this math at home? At school? In other places? Where do you see _____ at school? At home? Outside? How is this like something you have done before?</p>
<p>Questions To Help Students MAKE CONNECTIONS</p>	<p>This new math idea is like... I thought of ... I did something like this before when ... We do this at home when we ... I remember when we ...</p>

<p>Share Reflect Describe Compare Tell</p>	<p>What else would you like to find out about _____ ? How do you feel about mathematics? How do you feel about _____ ? What does the math remind you of? How can you describe math?</p>
<p>Questions To Help Students SHARE THEIR FEELINGS AND ATTITUDES OR BELIEFS ABOUT MATHEMATICS</p>	<p>The thing I like best about mathematics is ... The hardest part of this unit on _____ is ... I need help with _____ because ... Write to tell a friend how you feel about what we are doing in mathematics. Mathematics is like _____ because ... Today, I felt ...</p>

<p>TELL LIST RECITE NAME FIND</p>	<p>DESCRIBE EXPLAIN ILLUSTRATE SUMMARISE</p> <p>How did you solve the problem? What did you do? What strategy did you use? What math words did you use or learn? What were the steps involved? What did you learn today? What do(es) _____ mean to you?</p>
<p>Questions To Help Students RETELL</p>	<p>I solved the problem by ... The math words I used were ... The steps I followed were ... My strategy was successful because ... Explain to a young child or someone that wasn't involved ... Draw a picture to show how you solved the problem.</p>

<p>CREATE PLAN DESIGN PREDICT IMAGINE</p>	<p>DEVISE DECIDE DEFEND SOLVE DEBATE</p> <p>What would happen if ...? How are adding and multiplying the same? How else might you have solved the problem? How is this pattern like addition? What things in the classroom have these same shapes? What decisions can you make from the pattern that you discovered? What would you measure it with? Why? Will it be the same if we use different numbers?</p>
<p>Questions To Help Students PREDICT, INVENT OR PROBLEM SOLVE</p>	<p>Prove that there is only one possible answer to this problem. Convince me! Tell me what is the same? What is different? How do you know?</p>