



Plan & Analyze

Make Sense of the Problem

What is this problem asking me to do/solve?

CHECK FOR UNDERSTANDING; RESTATE THE PROBLEM		
UNDERSTAND	Definition	A strategy where mathematically proficient students explain the problem to themselves to check or monitor whether they understand its meaning.
	When to teach this strategy	<p>If you see students who . . .</p> <ul style="list-style-type: none"> • don't understand what the problem is asking • cannot find an entry point to solving the problem • read quickly without stopping to think about what the problem is asking them to do
PREPARE	Why we teach it	Mathematically proficient students need this strategy because making sense of a problem is at the core of finding an entry point to its solution. Often, too much emphasis is placed on learning and applying standard mathematical procedures without taking the time to think about what the problem is asking and constructing a plan for solving it.
	Secrets to success	For this strategy to work, you have to stop frequently and think about what the problem is asking. Have a conversation in your head. Ask, <i>What is the question that I need to answer?</i> and <i>Have I solved a problem like this one before?</i>
TEACH	How we teach it	<p>This vital strategy is not only one of the first we introduce, but also one we model throughout the school year.</p> <ul style="list-style-type: none"> • Modeling a think-aloud during the “I Do” Focus Lesson, we stop after reading through the problem and say, “Let me see if I understand what I just read. I am going to first restate this problem to myself. Then I am going to think about what this problem is asking me to solve.” • After modeling this strategy three or four times with several different types of math problems, we let students practice during the “We Do” Focus Lesson by using several more math problems and having them answer the question <i>What is this problem asking me to solve?</i>
		<p>Suggested Language</p> <ul style="list-style-type: none"> • Stop after reading the problem to check for understanding before you go any further. • What is the question that you need to solve? • Can you restate the problem? • What do you do if you do not understand?
SUPPORT	Instructional Pivots	<ul style="list-style-type: none"> • Give students a highlighter or colored pencil to highlight the question that needs to be solved as well as any additional important information in the math problem. Each student's highlighted work can be used as a launch point during individual conferences. • Provide students with a physical bookmark or graphic organizer that gives them the following questions to help guide their thinking: <i>What is the question I need to solve?</i> <i>What do I already know about this problem?</i> <i>What information do I still need?</i> <i>Have I solved a problem like this one before?</i>
	Partner Strategies	<p>These strategies may provide support before, during, and after teaching this strategy:</p> <ul style="list-style-type: none"> • Look for entry points to a solution. • Use manipulatives. • Look for key words, symbols, or patterns to help you break down the problem. • Make a connection. • Draw a picture or make a mental image.