Common Core teachers will ask students to think about questions and to question answers.

Meaningful Math

Common Core STANDARDS FOR MATHEMATICAL PRACTICE

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

What do those practice standards mean? That finding an answer is not the destination—it’s how you get there and the patterns you find as you solve a problem.
Strategic Problem Solvers Apply the Common Core Math Practice Standards

It’s about thinking clearly. Two of the standards are essential every time students solve any problem, so they are outside the boxes. The standards in the boxes are important, but students need to move into the standards progressively, making one standard a continuing habit and then gaining fluency with another.

MAKE SENSE OF PROBLEMS AND PERSEVERE IN SOLVING THEM (1)

Think Clearly
• Reason abstractly and quantitatively (2)
• Construct viable arguments and critique the reasoning of others (3)

Use Models and Tools Strategically
• Model with mathematics (4)
• Use appropriate tools strategically (5)

Recognize and Use Patterns and Structure
• Look for and make use of structure (7)
• Look for and express regularity in repeated reasoning. (8)

ATTEND TO PRECISION (6)

This diagram by the Center for Urban Education is based on “Grouping the SMPs” (McCallum 2011), Supporting Student Success, the Indiana Department of Education.
The Connected Classroom--Learn who your learners are.

Math Interest Survey
1. What is an important math skill?
2. What is a good way to learn math?
3. What kind of math is difficult?
4. What kind of math is easy?
5. What do you like about math?
6. What don’t you like about math?

Put your answers in the boxes. Your teacher can organize this as a project—your class can make a bar graph if you cut the boxes and sort them with other students.
# MATH GLOSSARY

<table>
<thead>
<tr>
<th>Term or Symbol</th>
<th>What It Means</th>
<th>My Example</th>
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<tbody>
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Use words from your glossary to explain a math topic.
MATH ASSESSMENT CONTENT DEFINITIONS—EXAMPLE
You can set up this assessment with terms that your students learn or use it as a pre-assessment. This is an example of a comprehensive pre-assessment to start the school year.

<table>
<thead>
<tr>
<th>Word</th>
<th>What It Means—explain in your own words or put an example.</th>
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</thead>
<tbody>
<tr>
<td>perimeter</td>
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<tr>
<td>parallel lines</td>
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<td>congruent shapes</td>
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<tr>
<td>symmetrical</td>
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</tbody>
</table>
I know my numbers from __________ to __________.

CCSS Math Practice Standard 2. Reason abstractly and quantitatively. 
This Graphic Organizer can be used to assess if completed independently, or as a learning guide.

Directions: Teachers tell students which numbers to write on the chart. It can be individualized based on different levels of student knowledge of numbers. Then students write those numbers and their names and draw circles to show them. It can be used to check on knowledge of number patterns such as adding by 10s or even, odd. For larger numbers students use different symbols. For example, circle stands for 10s, line stands for 1s.

<table>
<thead>
<tr>
<th>Number</th>
<th>Word</th>
<th>Draw symbols to show how many this number means.</th>
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Exceed: Write a sentence using one of these numbers.
Math Path
I can investigate, represent and solve problems using number facts, operations

PROBLEM:

Solve the problem on the left side of the arrow.
Explain your steps on the right side of the arrow.

Why I solved it this way.
I can solve a word problem strategically!

Common Core Math Practice Standard 1: Make sense of problems and persevere in solving them.

Note to Teachers: This organizer is designed to guide a student. It also is an instant assessment. If students cannot complete steps 1, 2, or 3, the teacher learns what the kinds of help the student needs to comprehend a word problem and decide which strategies and skills to use.

What is the question asking me to figure out?

How will I solve it?

What information do I need to solve it?

Your teacher will tell you how to take the next step.

You may complete it by yourself or...

pair and share—work together with another student to solve it

or

pair to compare—solve it yourself then compare your work with another student’s
Math Problem Solver

The Problem—What will you figure out?

Your Strategy

The Solution

Answer:
**MATH SCAFFOLD**

*Common Core Math Practice Standard 1: Make sense of problems and solve them persistently.*

1. **What are you going to figure out?**

2. **How** will you solve the problem?

3. **What information** will you use?

4. Solve it here. If you need more space use the back of the page.

5. **What is your answer?**

6. **How did you get it? Tell what you did.**

7. **Tell why you solved it this way.**

*This guide was developed through funding from the Institute for Education Sciences, US Department of Education*
This Week’s Math
This graphic organizer applies to all math standards and is designed to guide students’ clarifying of what they learn in math each week.

Topic: ____________________________________________________________
(Write what the focus of the work this week was.)

What are some important words to know when thinking about this math topic? There are three columns. If the word also can be shown as a symbol, put that symbol in the third column.

<table>
<thead>
<tr>
<th>Word</th>
<th>What It Means</th>
<th>Symbol</th>
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What’s important to know about this math topic?

____________________________________________________________________

____________________________________________________________________

____________________________________________________________________