Step 1: Collect and Chart Data

Teachers' names	# students who took assessment	# students proficient and higher	% students proficient and higher	# students not proficient	# and names of students likely to be proficient at end of instructional time— students already close	# and names of students likely to be proficient at end of instructional time— students who have far to go	# and names of students not likely to be proficient— intervention group in need of extensive support
Betty	25	19	76%	6			
Tom	27	15	55%	12			
Susan	25	12	48%	13			
Diane	26	16	61%	10			
Totals	103	62	60%	41			

Example: Team meeting examining pre-assessment data prior to focused teaching

Teachers must come prepared for the 60-90 minute meeting, complete with:

- Student papers
- Scoring guide or measurement scale
- Papers arranged from most proficient to least proficient
- Ideas about students who are proficient and higher (strengths)
- Ideas about students who are not proficient (what are their obstacles, misconceptions?)

Data Team leader will:

• Provide table or graph with submitted data entered, complete with team totals, %

Steps for entering data:

- Enter names
- Enter # of students who participated in assessment
- Enter # of students who are proficient and higher
- Enter % of students who are proficient and higher
- Compute totals

Data Team leader will ask the following questions:

- What is the total percentage of [grade 6] students who are proficient and higher? (60%)
- What is the total percentage of [grade 6] students who are not proficient? (40%)
- Convert the 40% to actual number of students. (41)

Step 1: Collect and Chart Data (Continued)

Teachers' names	# students who took assessment	# students proficient and higher	% students proficient and higher	# students not proficient	# and names of students likely to be proficient at end of instructional time— students already close	# and names of students likely to be proficient at end of instructional time— students who have far to go	# and names of students not likely to be proficient— intervention group in need of extensive support
	ĺ						
Totals							

Enter data points:

 Percentage of group proficient and higher 	
• Percentage of group not proficient	
• Actual number of students proficient and higher	

Actual number of students not proficient

Step 2: Analyze Strengths and Obstacles

Example:

Strengths	Obstacles	
Clearly articulated steps	Inability to organize ideas and steps	
Multiple problem-solving strategies used	Inability to write and verify choice of problem-solving strategies	
Vocabulary/math terms concise	Lack of vocabulary/math terms	
	Confusion about problem-solving strategies	

Examine student work that is proficient and higher. Consider:

- Strengths
- Consistent skills
- Anything that stands out

Examine student work that is not proficient. Consider:

- Weaknesses
- Inconsistent skills
- Trends, patterns of failure to apply certain skills
- Misconceptions about problem-solving processes
- Issues related to certain subgroups, such as ELL, gender, ethnicity
- Students consistently rated not proficient

List findings on T-chart.

Examine student work to identify strengths and obstacles.

- List strengths of students who were proficient and higher by examining student work.
- List <u>obstacles</u> or reasons why students did not achieve proficiency. Where were there errors? Is there a trend? Are there common errors? What is preventing these students from becoming proficient? Are there misconceptions about concepts or skills?

Strengths	Obstacles

Step 3: Establish Goals: Set, Review, Revise

Example:

Goal Statement: The percentage of grade 6 students proficient and higher in math problem solving will increase from 32% to 75% as measured by a math performance assessment focusing on short-constructed response, administered on February 15 or 16.

Goal percent	75%
Current results	68%

At this point, the goal has been set.

- What are the ramifications if the goal is changed to reflect a higher or lower outcome?
- Is the goal still relevant and necessary?
- Is this skill still considered very important?
- Are there other urgent needs to focus on?
- Is it possible to reset the goal higher? If so, is it achievable?
- Is the time frame too short, just right, or too long?
- Which students are consistently not proficient?

SMART Goal Statement:

Percentage of [<u>student group</u>] scoring proficient and higher in [<u>content area</u>] will increase from [<u>current reality %</u>] to [<u>goal %</u>] by the end of [<u>month or quarter</u>] as measured by [assessment tool] administered on [specific date—two consecutive days].

Example:

Percentage of **grade 6** students scoring proficient and higher in **writing** will increase from **13%** to **58%** by **October 30** as measured by a **teacher-created writing prompt assessment** administered on **October 30 or 31**.

SMART Goal #1:

Percentage of _______ scoring proficient and higher in ______ will increase from _____% to _____% by _____ as measured by ______ administered on ______.

Step 3: Establish Goals: Set, Review, Revise (Continued)

Percentage of	scoring proficient and higher in		
will increase from% to	% by the end of		
as measured by	_ administered on		
A new goal is set only if the original goal	s were not met.		
Met Goal: Yes No			
If the goal was not met, record margin short of goal =			

Ask questions:

- What are the ramifications if the goal is changed to reflect a higher or lower outcome?
- Is the goal still relevant and necessary?
- Is this skill still considered very important?
- Are there other urgent needs to focus on?
- Is it possible to reset the goal higher? If so, is it achievable?
- Is the time frame too short, just right, or too long?
- Which students are consistently not proficient?

Step 4: Select Instructional Strategies

Example:

Possible Instructional Strategies

X Teachers will use a <u>graphic organizer</u> to help students show how to solve a multistep word problem using computation and graphic representation.

Post the performance assessment scoring guide in the classroom.

X Teachers will help students improve their ability to solve multistep word problems by having them practice at home the processes they learn in school.

X Break the steps down into smaller steps and focus on each small step. Reinforce this as <u>focused</u> <u>practice in class and plan homework</u> that will require students to focus on brevity and specificity of correct response.

X <u>Compare</u> other problem-solving strategies step by step to identify the critical point or points at which the written responses are similar or different.

Present each math problem-solving strategy to students (one at a time) and have them write about each strategy.

X = Instructional strategy selected by Data Team

Brainstorm and discuss possible strategies using this process:

- Team members brainstorm and examine effective teaching strategies and techniques (experience- and research-based) and determine which techniques, when implemented appropriately, will have the desired outcome.
- Refer to the list of effective teaching techniques (Marzano's *Classroom Instruction That Works*), to be selected from on the basis of meeting specific objectives related to student understanding of concepts and application of skills.
- Analyze each possible or suggested strategy in terms of impact on student learning.
- Consider what other teachers are implementing to cause a high degree of success; replicate effective practices.
- Only select strategies that teachers are responsible for.
- Avoid considering strategies outside your sphere of influence or immediate accountability, such as "Parent needs to become more involved" or "Students will be enrolled in after-school program."

Agreement:

- Have team members collaborate on choosing the one or two strategies that they all agree to implement during the next teaching period.
- Mark the chosen strategies with an X and give team members copies of those strategies.
- Model *all* strategies that the team has agreed upon. So that the task of modeling does not always fall to the Data Team leader, ask other team members to demonstrate a particular strategy. What will the teacher do as he or she uses this strategy?

Step 4: Select Instructional Strategies (Continued)

Possible Instructional Strategies				

Brainstorm and discuss possible strategies:

- Analyze each possible or suggested strategy in terms of impact on student learning.
- Consider what other teachers are implementing to cause a high degree of success; replicate effective practices.
- Only select strategies that teachers are responsible for.
- Avoid considering strategies outside your sphere of influence or immediate accountability, such as "Parent needs to become more involved" or "Students will be enrolled in after-school program."

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Effective Instructional Strategies

Category:	Achievement Gain (Percentiles):		
1. Identifying similarities and differences	45		
2. Summarizing and note-taking	34		
3. Reinforcing effort and providing recognition	29		
4. Homework and practice	28		
5. Nonlinguistic representations	27		
6. Cooperative learning	27		
7. Setting objectives and providing feedback	23		
8. Generating and testing hypotheses	23		
9. Questions, cues, and advance organizers	22		

Source: Marzano, Pickering, & Pollock, Classroom Instruction That Works (2001).

Effective Professional Practices

- More writing, thinking, analysis, and reading in every content area
- More frequent feedback (associated with improved student work ethic, motivation, and performance)
- Collaborative structures for analysis of data
- Creation and use of data teams
- Discussion of, review of, and focus on actual student work (helps close the learning gap for all cohort groups)

Source: White, Show Me the Proof! (2005b), p. 3.

Step 5: Determine Results Indicators

Results indicators complete the statement: "When this strategy or these strategies are implemented, we expect to see the following evidence . . . and students will be able to . . ." OR "If we do ______, then we expect to see ______ in student achievement."

When establishing the results indicators for the chosen strategies, keep in mind:

- 1. Whether the strategy is actually being implemented.
- **2.** If the strategy is having the intended effect on student learning and improved performance.

Examples:

Selected instructional strategies from step 4:

- X Teachers will use a <u>graphic organizer</u> to help students show how to solve a multistep word problem using computation and graphic representation.
- X Teachers will help students improve their ability to solve multistep word problems by having students <u>practice at home</u> the processes they learn in school.

Suggested results indicators for these strategies:

- More students will be proficient/meet instructional goal.
- More students will understand how to solve a multistep word problem.
- More students will be able to write a short-constructed-response that includes correct process steps and a correct explanation.
- Planning for math instruction includes a daily modeling step.
- Modeling of short-constructed responses in mathematics, using graphic organizers, is done on a daily basis by each team teacher.
- Students are able to recite each of the steps in writing a short-constructed response.
- Students apply a graphic organizer to short-constructed responses on independent work.
- Students are able to write each of the steps in a short-constructed response.

Suggested results indicators—Other content-area/grade-level examples:

- % increase of students appropriately applying reading comprehension skills
- Addition of reading intervention program for K-2 students
- Time devoted to math instruction increased by 15 minutes per day
- Students responsible for completing one science performance assessment per semester
- At least 10% increase in the total number of grade 7 students proficient and higher as measured by a state writing assessment

Step 5: Determine Results Indicators (Continued)

Results indicators complete the statement: "When this strategy is implemented, we expect to see the following evidence"

Strategy selected in step 4:

Results indicators (what your team expects to see as a result of implementing the chosen strategy; two or three are suggested):

Strategy selected in step 4:

Results indicators (what your team expects to see as a result of implementing the chosen strategy; two or three are suggested):