SET THE CONTEXT FOR STUDENT LEARNING

At first, the LAMPS strategy and steps should not be displayed.

1. SAY, *"I want to talk with you today about why it's important to add numbers by hand."* Discuss why it is important to be able to add by hand. Solicit specific instances when it is important to add without the use of a calculator. Ask for examples (e.g., for a test or quiz, doing homework, grocery store).
2. SAY, *"I am concerned that you may have a problem adding numbers by hand."* Hand out graph of last assignment (quiz) or other sources. Discuss the results and consequences (e.g., low grades on assignments or tests).
3. SAY, *"How many of you are happy with how well you can add numbers by hand? How many of you would like to do better? Today I am going to teach you about a strategy to help you add numbers by hand, including numbers with decimals. This strategy has been used with lots of kids just like you, and it really helped them get much better at adding numbers."*

The teacher begins by "selling" the importance of math and adding numbers by hand.

Note: These lessons begin with components from Stage 2 of the SRSD model: student buy-in and why math is important. Stage 1 (develop background knowledge) could be assessed before teaching LAMPS (e.g., determine whether students have the necessary skills to use LAMPS) or discussed after students "buy in" to the strategy.

DEVELOP THE STRATEGY AND SELF-REGULATION

Step 1: Develop Background Knowledge

1. SAY, *"The strategy is called LAMPS. Each letter stands for a different step we will take when adding up complicated numbers. It's easy to remember because when you get confused or feel like you are in the dark, all you have to do is turn on the LAMPS!"* Show the LAMPS poster.
2. Put out the mnemonic chart/poster so that only the heading "LAMPS" shows. Uncover each step of the strategy as you introduce and discuss it.

Material scaffolding (i.e., poster with strategy steps).

SAY, *"It's important for you to learn the steps really well. It will help you use the strategy more effectively and that will help you remember what you read. There are five steps to the LAMPS strategy. If you use the LAMPS strategy, it will make it much easier to add!"*

Step 2: Discuss LAMPS Steps

Note: The teacher explains the steps in detail, but this is not modeling.

1. *Line up the numbers you are going to add.*

   SAY, *"The first step in LAMPS is to look at the problem and line up the numbers so all the same-place values are on top of each other, and all the decimal points are on top of each other. We have to be careful to do that or we won't get the correct answer. So let's look at a quick*

example. If I had the problem '12 + 18,' I would want to start by lining up the numbers, which means I should stack these two numbers so that one number is on top of the other. Doing this makes it easier to add the numbers. When I line up the numbers, I am also going to look to see if there are any decimal points—and in this problem there are not. So, I should line up the numbers like this":

The teacher includes metacognitive knowledge for each step.

```
 12
+18
```

2. *Add up the numbers.*

   SAY, *"When you are done lining up the numbers, you add up the numbers. You start with the farthest right column of numbers. It's important to remember that you start on the right because it is the opposite of reading where you start on the left. If we look at our sample problem, starting on the right means that we would add 2 and 8 first because they are in the right-hand column (the 1's column)."*

3. *More—did the numbers add up to more than 9?*

   SAY, *"Next, you need to ask yourself, did the numbers add up to more than 9? If the farthest right-hand column of numbers adds up to more than 9, then go to the next step, P. If the numbers don't add up to more than 9, you write down the number and then move to the next column and start back over with AMPS. We don't have to do the L step again because the problem is already lined up. Let's look at our sample problem again. If we add our right-hand column, 2 plus 8 is 10. Is that more than 9? Yes. So that means we can go to the next step in LAMPS, P."*

4. *Put the 1's below the column.*

   SAY, *"If the number is more than 9, we need to put the 1's below the column we just added. We got 10 when we added our 1's column, so I am going to write 0 below the 8 and 2 because I remember that the number 10 means that there is 1 ten and 0 ones."*

```
 12
+18
 0
```

5. *Send the 10's to the top of the next column.*

   SAY, *"After you place the 1's below the column. You send the 10's to the top of the next column by writing it on top of the next column. That means I have to take my 1 from my 10 and put it on top of the other two 1's in the problem:*

```
 1
 12
+18
 0
```

Once you finish, LAMPS for the farthest right-hand column, you start on the next column of numbers and begin again with AMPS until there are no more columns to add! I can see that this is my last column, so I'm almost done. So, if I use my A step again, I need to add up the numbers in this column. And I get 3 when I add 1, 1, and 1. Then the M step means I ask 'more than 9?'—and I know that 3 is less than 9. So I can go to my P step, which tells me to put the number below the column—so I will write 3. And I'm done!"

$$\begin{array}{r} 1 \\ 12 \\ +18 \\ \hline 30 \end{array}$$

Step 3: Review and Making Flash Cards

1. SAY, *"That's it! That's all it is; five easy steps that will make it so much easier for you to add complicated numbers by hand. Let's review. Who can tell me what the L stands for in LAMPS?"* Wait for 50% of hands to be raised and then call on a student. Continue this process for the rest of the letters.
2. SAY, *"Excellent job, everybody! You are on the right track to knowing LAMPS by heart. Now, can I have a volunteer to please hand out five note cards to each student?"* While the note cards are being handed out, explain that students will be making flash cards. Discuss how flash cards are a great tool to help memorize terms and facts.
3. SAY, *"We are all going to make out own set of flash cards, but we're going to do it together as a group. On your first note card write the first letter in LAMPS. Once you are done, hold up your note card for me to see."* Wait for students to write and hold up their cards.
4. SAY, *"Great! Now on the backside of that card, write what L stands for and then hold it up for me to see."* Continue this pattern for all of LAMPS. Check for student understanding. Make sure that students have the correct definition for each step.

Creating flash cards will help students commit strategy steps to memory.

Step 4: Practice Memorizing

1. SAY, *"I would like everybody to take their flash cards with them and find a partner. With your partner I want you to quiz each other on the steps in LAMPS."*
2. SAY, *"One person should hold up the letter side of the card and the other person will say the definition of that letter. Once you have gone through all the flash cards, switch jobs so that the other person is being quizzed. You should try to quiz each other at least twice."* Monitor students while they practice. Do not offer help unless a student(s) asks for it. Once students are done, give them a matching worksheet.

Step 5: Obtaining Commitment

1. SAY, *"Now that we've practiced memorizing our LAMPS strategy, I want your commitment to learn and use the strategy. I want you to try using the LAMPS strategy because it can help you add numbers by hand. If you learn the strategy and use it, you will start getting better grades on your assignments and quizzes or tests."*
2. SAY, *"The LAMPS strategy works, but it's going to require some effort and practice on your part. I will work with you and help you learn the strategy, but I need you to promise to learn the strategy and try your hardest."* Obtain students' commitment.

Note: Stage 4 (memorization) came before obtaining student commitment, which is part of Stage 2. Note also that the memorization activities will occur multiple times throughout these lessons.

Attribute success to effort and use of strategy.

Step 6: Set a Goal

1. Show graph (Figure 8.3). SAY, *"Each time we work problems using the LAMPS strategy, we will graph the results. This will show you how much better you are getting at solving math problems by hand. Let's set a goal for our next practice."* Discuss why goal setting is important and the reasons/situations for which we might set goals.
2. SAY, *"Look at your last score from your worksheet and decide what you want your goal to be. Then draw a line on the graph to show what your first goal will be."* Help students set realistic goals that are not too high and can easily be met with effort. Be sure all students are setting goals and writing their goals on the goal chart. It may be appropriate for the teacher to give an example of an appropriate goal (e.g., "somewhere between _____ and _____."). SAY, *"OK, I see a lot of very good goals, and if you use the LAMPS strategy, you are more likely to meet your goals. You might even go higher than your goal on the first day!"*

Goal setting, a self-regulation strategy, is a powerful way to motivate students to use the LAMPS strategy.

Step 7: Wrap-Up

SAY, *"For next time, I want you to be thinking about some situations in which you might use the LAMPS strategy. Think about the steps I taught you and how you can use the strategy. Tomorrow I am going to ask you for some situations in which you might use the strategy. Also, I am going to quiz you on the steps of LAMPS. I want you to be able to tell me the steps of LAMPS and what you do at each step."*

Asking students to think of situations in which to use the strategy helps them to generalize the strategy to other settings.

Lesson 2: Modeling LAMPS

Lesson Overview

In this lesson the teacher and students discuss the strategy, the teacher models its use, and students continue to work on memorizing the strategy.

Student Objectives

Students will be able to line up numbers and supporting decimals. Students will be able to state the steps of LAMPS and the actions at each step.

Materials

Poster board, markers of different colors; for each student provide worksheets with 20 addition problems and a goal chart.

SET THE CONTEXT FOR STUDENT LEARNING

Making a poster as a class is material scaffolding and it assists with memorization.

1. SAY, *"Who remembers the name of the trick we learned yesterday to help us add large numbers with decimals?* (Wait for 50% of hands and call on a student.) *Yes, it was called LAMPS. At the end of class yesterday you all worked so hard to memorize the steps of LAMPS. I don't know about you, but I even have a hard time remembering all the steps from day to day."*
2. SAY, *"What we're going to do this morning to review as a class is to make a poster that we can hang up in the room to remind us of the steps. Someone, tell me again the name of our trick."* As a class, make a LAMPS poster. See Figure 8.2 for an example.

DEVELOP THE STRATEGY AND SELF-REGULATION

Plan which math problem(s) will be modeled during the think-aloud.

Step 1: Think-Aloud: Model Use of LAMPS and Thought Process

1. Write the problem on the board: 7.0 + 13.8 + 21.6 + 3.0
2. SAY, *"Now I want to show you how I use the LAMPS strategy. I am going to use the strategy on the math problem I have written on the board and then I am going to ask you to try using the strategy."* Start by using some self-statements such as *"Wow, math always makes me nervous—but that's OK. I have my LAMPS strategy!"*

Notice the different types of self-statements: problem definition, approaching task, and coping.

3. SAY, *"LAMPS will help me set up my problem correctly and help me remember each step. Now what did L stand for again? L . . . L . . . oh, yeah, line! I have to line up the numbers so all the decimal points are on top of each other. OK, I can do that, that's easy."* Write the numbers in a vertical setup on the board.

$$\begin{array}{r} 7.0 \\ 13.8 \\ 21.6 \\ \underline{3.0} \end{array}$$

4. SAY, *"Hey, when I line up the decimals, all the place values are on top of each other. All the 1's are in a column, all the 10's are too, and so are the 10ths and 100ths. That's nice; it looks so neat and tidy now. This will make sure that I am adding the right*

all the place values are lined up with each other. OK, focus. I'm adding numbers and I lined them up. That was L.

5. SAY, *"So that means I have to do A next because it's the next letter in LAMPS. A is easy because it stands for add, which is what we're doing—how convenient! Do I start on the right or left column? Oh, I remember, I start with the right-hand column because it's the opposite of when you read. OK, so 8 and 6 are the only numbers in the far right column, and they equal 14 when you add them together. Man, that's so easy, a second grader could do that."*

6. SAY, *"Now I'm on a roll, so let's keep going. What's next? LAMPS, L-A- . . . M! What was M again? I remember it had something to do with 9. Hmmm . . . oh, yeah—more than 9. If it's more than 9, I have to keep going. 14 is more than 9, so I guess I have to keep going."*

Reinforcing self-statements.

7. SAY, *"OK, I need to focus so I will get all the steps in LAMPS. I just did M for more, so there's only two steps left. I can do this. Now I have 14, but I can't write it down as my answer yet. If I don't write it down soon, I'm going to forget it and have to start all over. OK, L . . . A . . . M . . . P—put! Because I have this sum of 14 floating around, I have to put the 4 from 14 below the column because it's in the 1's column of 14. I have to remember to put only one number down in the answer place for each column. Each column can only have a one-number answer below it. Yes! But wait, I have the 1 left still. What do I do with it, just throw it out? No, that can't be it because I still have one step left: S."*

The teacher might model a particular step or process that he or she knows students struggle with. In this case, knowing how to carry when adding might be an issue for students in the class.

8. SAY, *"Awesome, I'm already on the last step—that wasn't so hard. But I'm not done yet, just keep going, finish it out. S . . . OK, well I've already put something below, so now I have to send the 1 to the top to even it out. Put one number below, send the 1 to the top. All right, so now I have the 1 on top of the next column over. Sweet, that was LAMPS! That trick was pretty easy. And now I've got it down, so it's going to be easy to finish out this problem."*

9. SAY, *"Now I start back at A in LAMPS, so it's AMPS with the second column. A stands for add—this is too easy. I have to add the second column now: 7 + 3 + 3—and oh, yeah, I can't forget the 1 that I sent to the top. So that equals 14 again. I just did A so M is next. M is for more than 9. 14 is more than 9, so I have to keep going. I've added and now have this number and I have to write it down before I forget. Oh, shoot, what was next? Uhhh, I know . . . it starts with a P, but what was the trick? Oh, duh, it was put the 1's below and move the 10's to the top! But don't get ahead of yourself now, just do P. I put the 4 from the 1's place below, and I send the 1 from the 10's place to the top—that's the S. Sweet, so my answer so far is 4.4."*

Modeling confusion and/or frustration during the think-aloud can help students see that it's not the end of the world if they get confused.

10. SAY, *"One column left. I can see home base—I'm doing great! I finished AMPS with the second column, so now I start again with AMPS on the third column. A—add. I love this step; it's so quick and easy. 1 + 2 + the 1 I sent up from the last column. Easy! That equals 4. AMPS: so M is next. Is it more than 9? Nope it's not, so I'm done! All I have to do is write down the 4 below the column. My answer is 44.4. Yay! I did it without a calculator! Thank you, LAMPS!"*

Step 2: Review

After the students have watched the teacher model the strategy for a few problems, he or she should involve the students by reviewing the modeled problems.

1. SAY, *"See how useful LAMPS can be! All right, let's go back through the same problem I just worked with all of you as a class. What do I do first with LAMPS?"* Wait for 50% of hands and call on a student. Students should be very accurate at this point. If errors occur, stop and review the steps in LAMPS. *"Right! We line up the numbers using the decimal points."*
2. SAY, *"What's next?"* Wait for hands. *"Yes, we add the right-hand column."* While going through the steps, point to the problem you worked on the board, emphasizing each step.
3. SAY, *"Next is M. What did I do at that step?"* Wait for hands. *"Remember, M means you ask yourself, more than 9? 8 + 6 equals 14, so you're right—that is more than 9 so we move to the next step. Someone explain to me what I did next."* Wait for hands. *"I put the 4 below the column, not above. Remember, the 1's place goes below the column. What did I do next?"* Wait for hands. *"Good! I sent the 1 to the top of the next column. Good work, class!"*

Step 3: Guided Practice and Monitoring

Note: Transfer of strategy ownership (Stage 5) should begin after the think-aloud.

1. SAY, *"Now that you have seen me use the LAMPS strategy, it's your turn to try using it. Let's work on some problems together on the board."*
2. Write a two-digit by two-digit addition problem on the board horizontally. Call on a student and have him or her come to the board.
3. SAY, *"What should we do first?"* The student should be able to give the step and write the problem in a vertical format. Go through each of the steps in LAMPS. Call on different students for each step. If a student is confused, allow the other students to help or provide the answer and briefly reteach the step.

This is task scaffolding.

INDEPENDENT PRACTICE

1. SAY, *"Great job, class! Now I want to see how well you can use the strategy on your own. I am going to hand out a worksheet with five problems on it."* Ask for volunteers to hand out the worksheet.
2. SAY, *"You will see that I have already completed four of the math problems for you! But, I may have made some mistakes. I want you to look at my answers and circle the problems that I answered correctly. If you get stuck, you can look at the poster we made for a hint."*
3. SAY, *"For an extra challenge, solve the fifth problem on your own!"*

This is content and task scaffolding. The students only need to complete one problem on their own—as students practice the strategy, they will complete more problems on their own.

4. Walk around the room, checking to see that students are using/checking the strategy steps. Do not help students unless they ask for it.
5. Once all students have completed the worksheet, go over the questions as a class.

WRAP-UP

SAY, *"Today we spent some time practicing the LAMPS strategy that will help us do better in math. Tonight, I want you to be thinking about some situations in which you might use the LAMPS strategy and I want you to think about the goal you set yesterday. Tomorrow we are going to see if we met our goals!"*

Lesson 3: Guided Practice

Lesson Overview

The purpose of this lesson is to provide guided practice for students and for the teacher to begin transfer of strategy ownership by gradually lessening support.

Student Objectives

The students will use LAMPS on two-digit math problems with teacher support.

Materials

Flash cards; for each student provide worksheet, graphs, marker boards, markers.

SET THE CONTEXT FOR STUDENT LEARNING

1. SAY, *"Hello, everybody! Have you been thinking about LAMPS all night? I sure have. You did great on your worksheets yesterday—I'm very impressed. Has anyone been quizzing themselves with their flash cards? We are all going to play a game using them as a warm-up today; this will get our minds focused on LAMPS again. I am going to split the class into two groups. Once I am done, I want group 1 students to bring their chairs and set them up in a circle on this side of the classroom. Group 2, do the same on the other side of the classroom."*
2. The groups should be split up based on grades from the worksheets from the previous lesson. The higher grades will all in one group and the lower grades in the other. This will ensure that all students will benefit from this activity and that a few students aren't continually winning.

Beginning each lesson with a quick memorization activity is an easy way to ensure that students are working toward memorizing the strategy.

3. SAY, *"Now that we're all set up, we're going to play Around the World with our flash cards."* Designate one student from each group to grab his or her flash cards.
4. A student in the higher grade group will be told that he or she is going to be the facilitator of the game for that group. This student will be the one with the highest grade on the worksheet from yesterday. The teacher is the facilitator of the lower-grade group. Designate one student from each group to begin standing behind the chairs. Play Around the World for approximately 5 minutes.

SUPPORT THE STRATEGY AND SELF-REGULATION

Student performance on this worksheet will be used to monitor progress toward the goals set in Lesson 1.

Step 1: Guided Practice

1. SAY, *"Today I am going to give you a worksheet with 20 math problems. I want you to use your LAMPS strategy to solve all of the problems. While you are working on this worksheet, I want you to be thinking about the goal that you set a few days ago."*
2. SAY, *"Everyone should take out your graphs and look to see what your goal is. If you use the LAMPS strategy on every math problem, you will get more problems right and you will be closer to your goal—you might even do better than your goal!"*
3. Hand out the worksheet. Walk around the room and guide students through strategy use as needed. It is best to intervene only if students are struggling.
4. As students finish, check their work and show them how to graph their performance.
5. Ask students if they met their goals. Praise them and remind them that using the LAMPS strategy will make them better at math and help them to continue meeting their goals.
6. Students who exceeded their goals can set new goals. You may want to check on students who did not meet their goals to make sure the goals they set were realistic; help them to lower their goals if necessary.

Remember: A good goal is specific, proximal, and challenging.

Step 2: Modeling and Generalization

1. SAY, *"Yesterday and today we've been practicing adding numbers with only two digits—and many of you already saw how much LAMPS can help you because you met your goals! Today we are going to add numbers with three or four digits. LAMPS can help us add larger numbers, and it will be just as easy as adding smaller numbers. LAMPS helps us organize our numbers and then walks us through each step. So as long as we follow the steps, we'll be fine."*
2. SAY, *"Let's start with just two numbers with three digits each: 10.5 + 27.9."*
3. Write the numbers on the board. As you work through this

This is task scaffolding and generalization. The teacher is helping students to generalize the LAMPS strategy to larger numbers.

problem, continue to show your work on the board so everyone can see. Prompt students to suggest each step of the strategy (e.g., "What's the first step? What's next?")

5. After completing the strategy once (i.e., the first right-hand column), spend a little time discussing what comes next. Say, "We made it all the way through LAMPS for the first column. We have to start back over for the next column—but, remember, we start at A instead of L. A for add up the numbers is where we will start for the next column."

6. Continue on through the problem. Say, "We are going to add 1 + 1 + 7. Remember, we always have to add the numbers we move to the top of the column, so don't forget about it once you send it to the top. 1 + 1 + 7 equals 9. That was A for add, so now we move to the next step, M. What do we ask ourselves? We ask ourselves, more than 9? 9 is not more than 9, so do not go on with the rest of the steps in LAMPS. This is because we do not have a number to send to the top of the next column. 9 is only a one-digit number, you see. So all we do with the 9 is put it below the sum line."

The teacher briefly models a problem.

7. Say, "Our answer so far is 9.6, but we're not done yet; we still have one more column to add. Where do we start at now? We don't start at L because we already have our numbers lined up. We start at A again. Remember, after the first column we are always start at A—A for add—so in our final column we are adding 1 + 2, which equals 3. What do we ask ourselves next? We ask ourselves, more than 9? Is 3 more than 9? No, it is not, so we do not have to continue with the rest of our steps. We just place 3 below the sum line and we are done because we have no more columns to add. Our answer is 39.6. Good work, everybody, we just used LAMPS to help us add three-digit numbers!"

Step 3: Guided Practice

After the teacher models how to use LAMPS on larger numbers, students should practice as soon as possible, while the modeling is still fresh in their minds.

1. Say, "Now I want us to practice using LAMPS on larger numbers because tomorrow we will try to meet our goals again. Practicing our strategy will make us better at math and more likely to meet our goals!"

2. Pass out marker boards and markers to each student (or small groups of students).

3. Say, "I want you all to add these numbers: 34.98 + 643.1. I want you all to do the L step of LAMPS and hold up your board when you are done." If students are correct, praise them. If they are incorrect, ask them to try again. If they still get it wrong the second time, model it for them. "Excellent, everyone was able to line the numbers up by the decimals. Now, everybody do the A step of LAMPS." Continue with this process all the way through the problem. Make sure to keep complimenting, correcting, and modeling as needed. Repeat with several problems. The problems should have multiple digits and decimal places.

Note that the complexity was increased.

Here the two addends have a different number of decimal places.

WRAP-UP

SAY, *"Today we spent more time practicing the LAMPS strategy that will help us do better in math. Tonight, I want you to be thinking about some situations in which you might use the LAMPS strategy and I want you to think about your goals. Tomorrow I am going to challenge you with all different types of addition problems—some with only two digits and some with four digits! I bet if you practice and use your LAMPS strategy, you will continue to meet your goals!"*

Lesson 4: Independent Practice

Lesson Overview

The teacher provides the students with independent practice in using LAMPS.

Student Objective

The students will use LAMPS independently.

Materials

Small ball, sales flyer from a local business; for each student provide worksheet and graphs.

SET THE CONTEXT FOR STUDENT LEARNING

This lesson begins with another memorization activity (Stage 4).

1. SAY, *"Good morning, class! Has anyone been reminded of our LAMPS trick when they've turned on a light at home? I sure have—I started whispering the steps to myself last night when I turned on my reading lamp! To start today, we are going to play a little game to review the steps of LAMPS. Everybody stand in a circle over in our reading area."* As students move around the room, grab the ball from your desk. *"We are going to softly toss this ball around the circle. When you catch the ball, you have to say the next step in LAMPS or what it stands for. You can't toss the ball to someone who has already had it. Toss it to a new person. Ready, I'll start. The first step in LAMPS is L for line."*
2. Toss the ball to a student. Hopefully, he or she will say that L means to line up all the decimals points. If the student does not say this, prompt him or her toward the right answer. After you have gone through the strategy once, time students the second time and on the third time, motivate them to beat their previous time. Make sure that all the students get the ball at least twice.

GUIDED PRACTICE AND GENERALIZATION

This is task and content scaffolding and generalization.

1. SAY, *"We've been using LAMPS the last couple days to help us add large numbers with decimals points. But we don't only add large numbers at school or on worksheets. When you buy items at a store, their prices have three or more numbers, and they always have decimals points! If you only have so much money you can spend, you need to add up your purchases so you don't spend more than you have. I bet LAMPS can help us with that!"* Turn the Elmo on, projecting it on the board, and place a grocery store ad on the Elmo.
2. SAY, *"I need to choose five items from this ad to buy. The only problem is, I only have $25 to spend. Can I have five volunteers to come up and circle items for us to buy?"* Call on five students and have each circle an item.
3. SAY, *"Interesting choices! So now we need to add all these prices up and see if we are under $25."*
4. Write down all your work for the students to see. However, have the students walk *you* through the steps. Prompt for each step. SAY, *"What do I do first when using the LAMPS strategy?"* or, *"Now that I have put a number below the sum line, that is a cue for me to do what?"* Check for understanding by having the students walk you through the problem by using the strategy.
5. Once you have gone through all the steps and have your answer, SAY *"Good work, you guys made that look like a breeze, you told me all the right steps to do. Now we have our answer. Did we stay under $25?"* If it is under $25, congratulate the students on being frugal. If you are over $25, tell the students, *"We'll have to switch out some items so that we do stay under our budget."* Once the items to be removed are selected, have the students walk you through LAMPS again.

SUPPORT THE STRATEGY AND SELF-REGULATION

Note that, again, the difficultly level is increased gradually. Results from this worksheet will be used to graph progress toward goals.

1. SAY, *"Now that we have spent some time getting better at using our LAMPS strategy in other situations, today I have another worksheet with 20 math problems on it. This time you will notice that it's not just two-digit math problems. This time there are two-, three-, and four-digit problems all mixed up. Your job is to use your LAMPS strategy to solve all these math problems and meet your goal."*
2. Have students take out their goal sheets and remind themselves of their goal.
3. Pass out worksheets and walk around the room. Assist and intervene only if students are struggling.

4. As students finish, have them check their work (or allow a peer to check their work) and graph the results.
5. Ask students if they met their goals. Praise them and remind them that using the LAMPS strategy will make them better at math and help them to continue meeting their goals. Students who exceeded their goals can set new ones.

WRAP-UP

SAY, *"Can somebody raise your hand and tell me why LAMPS is an important strategy to know?"* Call on students and make sure they state these points: organization, less mistakes, and don't forget steps. *"Good job. When else will we use LAMPS other than when we're in math class?"* Call on students and look for answers such as planning budgets for trips, balancing checkbooks, when adding scores to figure out your average, etc. *"Those are all great examples. We can use LAMPS with lots of things in life. So remember, if you ever feel in the dark when adding, just remember to turn on the LAMPS!"*

The teacher is helping students with some of the metacognitive knowledge important to using strategies—specifically, why and where to use the LAMPS strategy.

Note: This lesson can be repeated until students have the strategy memorized and can successfully use the LAMPS strategy to solve multiple types of problems (e.g., two-digit, four-digit) on their own. After teaching the strategy once, it may be helpful to create a checklist to follow. See Figure 8.1 for an example of a checklist.

PARS LESSONS

Lesson 1: Introducing PARS

Lesson Overview

The purpose of the first lesson is to introduce and describe the strategy, discuss current performance, obtain student(s) commitment to learn the strategy, and set performance goals.

Student Objectives

The students will commit to learn the PARS strategy, set goals for using PARS, and work on memorizing the strategy.

Materials

Poster/presentation with PARS steps (Figure 8.4), previous quizzes/tests for each student, blank graph (Figure 8.5).

Preview	Preview the material to identify main ideas by scanning the chapter/passage and surveying: • The title • The introductory statement • Headings • Graphic aids • Chapter summary
Ask	Ask questions that relate to the main ideas discovered when surveying the chapter.
Read	Read the chapter to answer the questions developed.
Summarize	Summarize the main ideas in the chapter.

FIGURE 8.4. PARS poster.

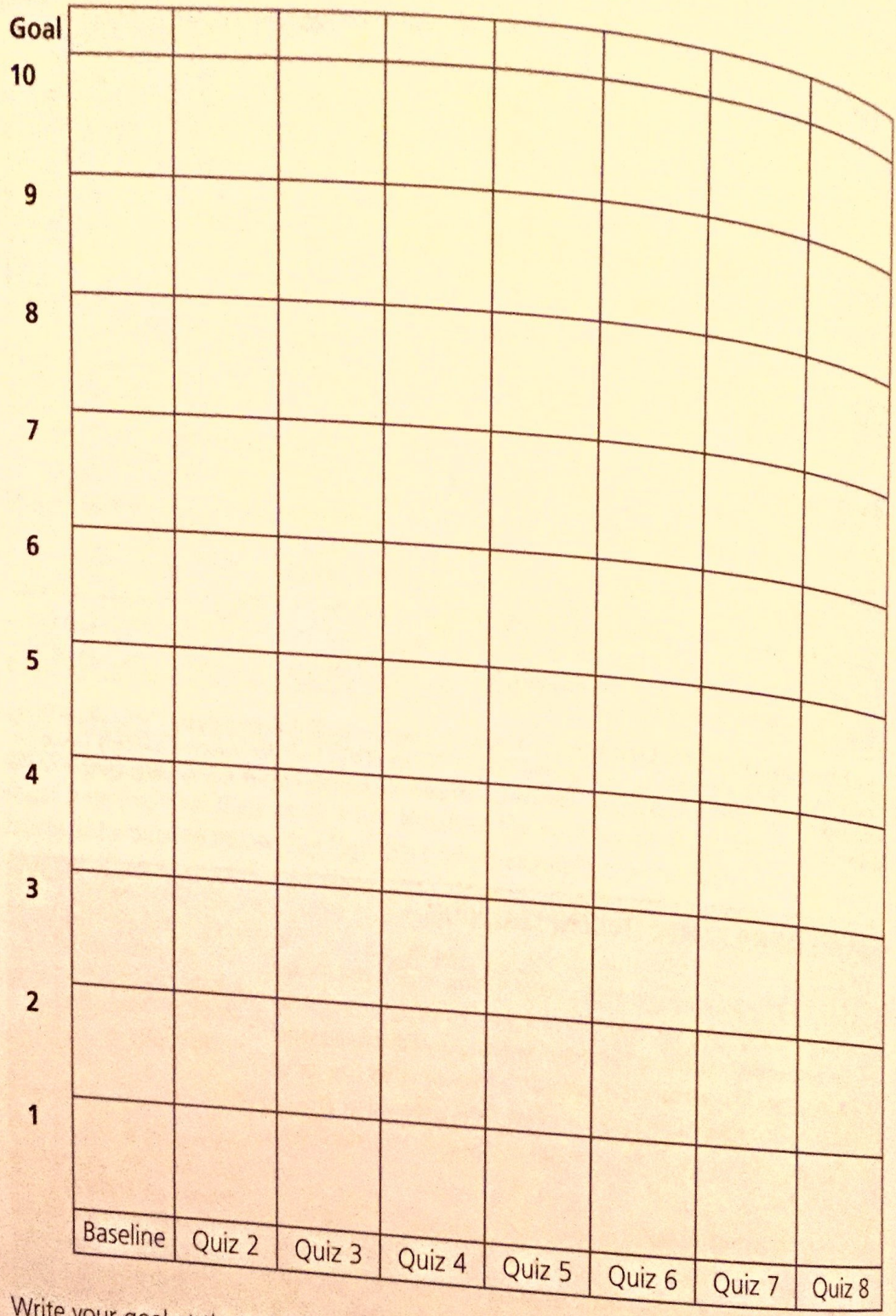
SET THE CONTEXT FOR STUDENT LEARNING

Note: These lessons begin with Stage 2 of the SRSD model: "selling" the strategy and why it is important to understand what you read.

Prerequisite knowledge for using the PARS strategy includes the ability to read independently and fluently, a basic understanding of different types of text (e.g., textbooks vs. novels) and the structures of textbooks (e.g., headings, graphics).

1. SAY, *"Today we are going to talk about reading your textbooks and understanding what you read. The first thing I want to do is come up with situations where it is important for you to read and understand information in a textbook. Let's do a little brainstorming. I am going to write our ideas on the board as we go. Does anyone have an idea of a time when it would be important to read and understand your textbooks?"*
   - Studying for tests
2. SAY, *"Great! This is a perfect example of when it is really important for us to read our textbooks and understand what we're reading. Why is that important? Because the better you understand what you're reading, the better you will remember it, and the better you will do on tests! When else is it important to understand texts?"*
   - Quizzes, completing assignments, to gain information, to be able to get homework done more quickly so you can do something fun, making an informed decision
3. SAY, *"These are all great ideas of when it is important for you to read and understand your textbooks. I think two very important times to understand what you are reading is when you're reading for tests and*

How much can I remember?



Write your goal at the top. Draw a line to show your goal.

After you read, fill in your chart to show how much you remembered.

FIGURE 8.5. PARS goal sheet.