

**Training for the New Georgia  
Performance Standards**  
Days 4 and 5: Making Instructional Decisions

**Content Facilitator's Guide  
Science**

*We will lead the nation in improving student achievement.*

## *Acknowledgements*

This training program was developed by the Georgia Department of Education as part of a series of professional development opportunities to help teachers increase student achievement through the use of the Georgia Performance Standards.

For more information on this or other GPS training, contact Robin Gower at (404) 463-1933 or [rogower@doe.k12.ga.us](mailto:rogower@doe.k12.ga.us).

## *Use of This Guide*

The module materials, including a Content Facilitator's Guide, Participant's Guide, PowerPoint Presentation, and supplementary materials, are available to designated trainers throughout the state of Georgia who have successfully completed a Train-the-Trainer course offered through the Georgia Department of Education.

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## *Overview*

### **Days Four and Five Objectives**

By the end of day five of training, participants will be able to:

1. Explain why designing instruction is stage three in the standards-based education process
2. Describe the WHERETO method of identifying the purpose of instructional strategies.
3. Identify a variety of instructional strategies for different achievement targets.
4. Evaluate a unit plan, focusing on the instructional plan detailed on the unit calendar, and develop a balanced plan for instruction, one that includes strategies appropriate to achievement targets and content.
5. Describe how to use a structured, collaborative process for examining student work.
6. Demonstrate how to use teacher commentary to increase student learning.
7. Explain different ways of curriculum mapping.

**Module  
Sequence**

## Prior Preparation—Participants

- Unpack several standards to create Stages One and Two for a unit of study

## Introduction to Stage Three (2 hours)

- Quotation Hook
- Review of Stages One and Two
- Overview of Stage Three
- Matching Strategies to Achievement Targets

## Designing an Instructional Unit (6 hours)

- Hook Activity
- Evaluating and Instructional Plan
- Selecting Appropriate and Balanced Instructional Strategies for a Unit

## Examining Student Work (2 hours)

- Collaborating to Improve the Quality of Student Work
- Developing Useful Teacher Commentary

## Curriculum Mapping (1 hour)

- Basic Principles for Curriculum Mapping
- Creating a Sample Map

**Module  
Materials for  
Days Four and  
Five of Training****Content Facilitator's Kit contents:**

- Content Facilitator's Guide (one for each leader)
- Complete set of slide transparencies (PowerPoint)
- Participant's Guide (one per participant and one per leader)
- Sample unit plan that includes unpacked standards, assessment plan with timeline, sample assessment tasks/assessment items, student work, and teacher commentary

## Other materials needed:

- Name tags
- Easel chart paper and stand
- Chart paper and stand
- A number of colored markers for flipchart
- Post-it Notes
- Masking tape to post flipcharts
- Highlighter markers, one per participants

## Equipment:

- Overhead projector or computer and LCD projector

**Resources:** Each participant should have the following resource materials in their Participant's Guides.

- A. Sample unit plan (in the Participant's Guide)
- B. Wiggins, Grant, and Jay McTighe. *Understanding by Design Professional Development Workbook*. Association for Supervision and Curriculum Development. 2004. Pages 214 – 225. (Participants should bring this resource to the training.)
- C. Sample teacher assignment and student work
- D. Sample Curriculum Maps

**Day Three Follow-Up/Days Four and Five Preparation**

Remind participants to complete the day three follow-up assignment as preparation for days four and five. Also remind participants to bring the *Understanding by Design* workbook, as well as their notebooks from Days 1 through 3 of training.

## *Recommended Readings/Viewings: Instruction*

**Note:** A more general list of resources for the standards-based education process is contained in the materials for Day one of training.

Examining Student Work. Alexandria, VA: ASCD, 2002.

This excellent resource includes four VHS tapes and a Facilitator's Guide that thoroughly illustrate a number of collaboration protocols for examining student work in order to improve student achievement. One set of these materials is being sent to each local system.

Hayes Jacobs, Heidi. *Mapping the Big Picture: Integrating Curriculum and Assessment K-12*. Alexandria, VA: ASCD, 1997.

In this step-by-step description of the process for creating and working with curriculum maps from data collection to ongoing curriculum review, Jacobs discusses the importance of "essential questions," as well as assessment design that reflects what teachers know about the students they teach. The benefits of this kind of mapping are obvious for integrating curriculum. Through the development of curriculum maps, educators can see not only where subjects already come together but also any gaps that may be present.

*Literacy Across the Curriculum: Setting and Implementing Goals for Grades Six through Twelve*. SREB, 2004.

This volume is essential for state, district, and school leaders who plan to implement school wide literacy programs. It provides concrete, research-based steps not only to raise reading and writing achievement but also to help students learn more in every class by using literacy skills. The guide focuses on five literacy goals: reading 25 books across the curriculum; writing weekly in all classes; using reading and writing strategies; writing research papers; and taking rigorous language arts classes.

Marzano, Robert J., Debra J. Pickering, and Jane E. Pollock. *Classroom Instruction That Works: Research-Based Strategies for Increasing Student Achievement*. Alexandria, VA: ASCD, 2001.

Using a meta-analysis of thousands of research studies, Marzano, et al., clearly answer the question, "Which instructional techniques are *proven* to work?" They provide 13 proven strategies that all teachers can use, and they explain the research in a clear, practical manner.

Marzano, R., et al. *A Handbook for Classroom Instruction That Works*. Alexandria, VA: ASCD, 2001.

A perfect resource for self-help or school study groups, this handbook makes it much easier to apply the teaching practices outlined in *Classroom Instruction That Works*. The authors guide the reader through the nine categories of instructional strategies that are most likely to maximize student achievement and provide everything needed to use the strategies quickly in classrooms. The book includes the following: exercises to check understanding; brief questionnaires to reflect on current beliefs and practices; tips and recommendations to implement the strategies; samples, worksheets, and other tools to help plan classroom activities; and rubrics to assess the effectiveness of the strategies with students.

Marzano, Robert J. *Classroom Management That Works: Research-Based Strategies for Every Teacher*. Alexandria, VA: ASCD, 2003.

The authors analyze research from more than 100 studies on classroom management to answer the questions, "How does classroom management affect student achievement?" and "What techniques do teachers find most effective?" The authors provide action steps, along with real stories of teachers and students, to guide teachers in implementing the research findings.

Strong, R., H. Silver, and M. Perini. *Teaching What Matters Most: Standards and Strategies for Raising Student Achievement*. Alexandria, VA: ASCD, 2001.

This practical book about the responsibility educators have to teach what matters most includes many examples of educators throughout the nation who have been successful in increasing student performance on state and national assessments. The authors also explore three changes that must take place to achieve this goal: responsible standards, responsible strategies, and responsible assessment practices.

Wiggins, Grant, and Jay McTighe. *Understanding by Design*. Alexandria, VA: ASCD, 1998.

This book explains the “backward design” process that is the backbone of standards based education. The book explains both the underlying principles and the process teachers can use to put them into practice.

Wiggins, Grant, and Jay McTighe. *Understanding by Design Study Guide*. Alexandria, VA: ASCD, 2000.

This companion book to *Understanding by Design* provides discussion questions, graphic organizers, and summaries to support faculty study groups that are exploring *Understanding by Design*.

Wiggins, Grant, and Jay McTighe. *Understanding by Design Professional Development Workbook*. Alexandria, VA: ASCD, 2004.

This companion book to *Understanding by Design* is chock-full of templates and examples to help teachers put the process into place.

## *Suggested Web Sites for Instruction*

<http://ims.ode.state.oh.us/ODE/IMS/Lessons/Default.asp>

This web site, created by the Ohio Department of Education, provides guidelines for planning standards-based instruction and for designing standards-based units and lessons.

<http://pareonline.net>

*Practical Assessment, Research and Evaluation* (PARE) is an on-line journal supported, in part, by the Department of Measurement, Statistics, and Evaluation at the University of Maryland. Its purpose is to provide education professionals access to refereed articles that can have a positive impact on assessment, research, evaluation, and teaching practice.

[http://users.edte.utwente.nl/lanzing/cm\\_home.htm](http://users.edte.utwente.nl/lanzing/cm_home.htm)

This web site provides an overview of concept mapping that might be useful for determining those concepts and processes that fit together for units of instruction.

<http://www.greece.k12.ny.us/instruction/ela/6-12/BackwardDesign/Overview.htm>

This page on the Greece Central School District of New York web site offers multiple resources related to instructional planning using the Standards-Based Education process.

<http://www.greece.k12.ny.us/instruction/ela/6-12/Curriculum%20Mapping/Index.htm>

This page on the Greece Central School District of New York web site offers multiple templates that can be modified and used to assist in mapping concepts into units of instruction.

[http://www.lkwash.wednet.edu/lwsd/html/programs/curriculum/modelunits\\_t.asp](http://www.lkwash.wednet.edu/lwsd/html/programs/curriculum/modelunits_t.asp)

This web site published by the Lake Washington School District includes a sample planning guide, a unit planning template, and several sample unit plans. GPS need to be unpacked through stages 1 and 2 before employing these templates.

<http://www.learn-line.nrw.de/angebote/greenline/lernen/downloads/nine.pdf>

This article lists, explains, and provides examples of nine instructional strategies, identified by Marzano, Pickering, and Pollock, that improve student achievement across all content areas and grade levels.

<http://www.pbs.org/pbsyou/about.html>

This PBS web site provides information about free televised, adult education courses in everything from dramatic literature to cooking. Anyone teaching a new course or just wanting to revisit particular content topics might find this site useful.

<http://www.rmcdenver.com/useguide/lessons/examples.htm?>

This site provides sample lessons/units based on the Texas state standards.

<http://www.sasked.gov.sk.ca/docs/policy/approach/instrapp05.html>

This excellent article from Curriculum and Instruction Branch Saskatchewan Education, 2220 College Avenue, Regina, Saskatchewan, provides information teachers may find helpful about matching instructional strategies to desired learning goals.

<http://64.233.179.104/search?q=cache:FWPY3QS1C6wJ:www.pls.uni.edu/tws/rubricsamples/IDM2.pdf+Making+Instructional+Decisions&hl=en>

This web site provides two anecdotal examples of teachers using assessment of student learning to make instructional decisions.

<http://www.techtrekers.com/>

This site provides information about simulations, web quests, and other strategies and activities that can provide students with the opportunity to learn.

[www.pals.sri.com](http://www.pals.sri.com)

PALS is an on-line, standards-based, continually updated resource bank of science performance tasks indexed via the National Science Education Standards (NSES) and various other standards frameworks.

[www.teachersbridge.org](http://www.teachersbridge.org)

This excellent site, created by a consortium of Georgia educators and other professionals in education, provides teaching resources, online learning communities, and much more.

<http://www.sasked.gov.sk.ca/docs/policy/approach/instrapp02.html>

This article provides an overview of four foundations for instructional decision making, as well as information on appropriate teacher reflection about the practice of instructional decision making in the classroom.

## Agenda

This is a two-day course, with approximately 11 hours of instructional time.

### Prior Preparation—Participants

- Unpack several standards to create Stages One and Two for a unit of study

Introduction to Stage Three..... 2 hours

- Quotation Hook
- Review of Stages One and Two
- Overview of the Training
- Overview of Stage Three
- Matching Strategies to Achievement Targets

Designing an Instructional Unit ..... 6 hours

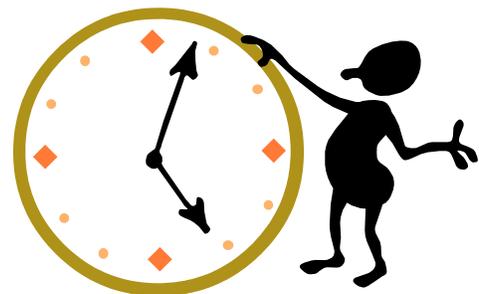
- Hook Activity
- Evaluating an Instructional Plan
- Selecting Appropriate and Balanced Instructional Strategies for a Unit

Examining Student Work ..... 2 hours

- Collaborating to Improve the Quality of Student Work
- Developing Useful Teacher Commentary

Curriculum Mapping .....1 hour

- Basic Principles of Curriculum Mapping
- Creating a Sample Map



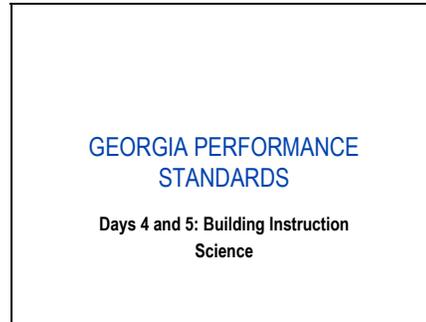
## *Introduction to Stage Three*

<b>Time</b>	2 hours
<b>Overview</b>	In the introduction, the participants review key points from stages one and two in the standards-based education process. Then, the group investigates the purpose of stage three and the WHERETO acronym, which describes the purposes of various instructional strategies.
<b>Objectives</b>	<ul style="list-style-type: none"><li>➤ Explain why instruction is stage three in the standards-based education process.</li><li>➤ Describe the WHERETO method of identifying the purposes and uses of instructional strategies.</li><li>➤ Identify a variety of instructional strategies for different achievement targets</li></ul>
<b>Activities</b>	<ul style="list-style-type: none"><li>➤ Quotation Hook Activity</li><li>➤ Review of Stages One and Two</li><li>➤ Overview of the Training</li><li>➤ Overview of Stage Three</li><li>➤ Matching Strategies to Achievement Targets</li></ul>
<b>Materials</b>	<ul style="list-style-type: none"><li>➤ Overhead projector or computer and LCD projector</li><li>➤ Transparencies or PowerPoint presentation</li><li>➤ Participant's Guide</li><li>➤ Agenda flipchart (create before class)</li><li>➤ Parking Lot flipchart (create before class)</li><li>➤ Pages 214 – 225 in the UbD Professional Development Workbook</li></ul>

## Quotation Hook Activity

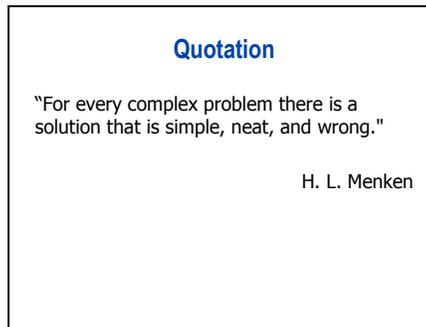
Title Slide

1. Show title slide and welcome participants to training.



Slide: *Quotation*

2. Show slide, *Quotation*.



3. Present:

- **This statement by writer and philosopher H. L. Menken was referenced the other day on an early morning radio program, but it seems *à propos* as we begin.**
- **Keeping this quotation in mind, take a minute or two in your table groups to reflect on the GPS training—from where we started in the fall to where we are today. How does Menken's aphorism relate to the implementation of the Georgia Performance Standards?**

4. Allow participants a couple of minutes to discuss at their tables, then ask: **What do you think? Does Menken provide any insights for us?** Expect (or work to solicit) comments such as:
  - The new GPS are very complex
  - Implementing the GPS is a complex process
  - We can't expect to accomplish this complex task without effort
  - There are no "quick fixes" to unpacking the GPS, developing assessments, or planning units of instruction.
  
5. Present: **In his discussion of *What Works in Schools*, Bob Marzano discusses two types of change that occurs in schools: First Order Change and Second Order Change. First Order Change involves those things that make our lives easier or make us feel better about ourselves, our schools, our jobs, etc. Eliminating those annoying interruptions during class time might be an example of a First Order Change. But Second Order Change is very different.**

Slide: *Second Order Change*

6. Show slide, *Second Order Change*. Reveal each bulleted point one at a time as you present the following information:

**Second Order Change**

- Shakes up the status quo
- Holds everyone's feet to the fire
- Proposes new and often revolutionary ideas
- Involves a change in mindset
- Causes moments of frustration
- Invites ambiguity and dissent
- Involves research and theory

- **Second Order Change isn't easily "implemented"—does that word sound familiar! Second Order Change necessitates a change in mindset; it takes time and effort and often causes periods of frustration. Second Order Change isn't easy, but as Marzano's work illustrates, it is Second Order Change that leads to improved student achievement, our goal in Georgia.**

- **We've all experienced moments of frustration as we've gone through this process leading up to the implementation of the GPS, and it's important to remember that we will have more of these moments. But achieving our goal of improving student achievement is worth it.**
- **To put everything back into the context of Menken's aphorism, implementing the GPS is a "complex" process. No "simple and neat" solution to this process exists; and if we attempt to address this "complex" process with "a simple and neat" solution, we run the risk of reducing the Second Order Change to a First Order Change, something that may make us feel better and/or alleviate our moments of frustration but at the potential cost of any real and substantive change; and that wouldn't be the right solution to this complex problem.**
- **Before we begin today, let's take a second and pat ourselves on the back. We've come a long way since Day 1 of GPS training. With each subsequent day of training, we've moved closer to our goal of implementing the Georgia Performance Standards in order to improve student achievement; and with each day of training we've all become less anxious and more confident about what we're doing. These feelings of increased confidence will continue in these final two days of training for this academic year, but we shouldn't become discouraged if we still have difficult moments. If there are no difficult moments, we aren't really attempting Second Order Change.**

- **As part of this training today and tomorrow, we will spend time discussing the importance of collaboration. The process of standards-based education does not end with the GPS training. Nor will it end as we implement the GPS next year. The second unit of instruction that we design will be better than the first. And we will become better and better at utilizing the standards-based education process and the Georgia Performance Standards each year. By supporting each other as we experience this Second Order Change, by working together and collaborating in our schools, our systems, our regions, and throughout the state, we can lead the nation in improving student achievement.**
7. Transition: **To begin today, we will briefly review the first two stages of the standards-based education process.**

### **Review of Stages One and Two**

1. Refer participants to *GPS and the Standards-Based Education Process*, on page 6 in their Participant's Guides. Say: **In our previous workshops, we worked extensively on understanding and applying Stages 1 and 2. In this workshop, we're going to focus on stage 3.**
2. Discuss: **We're going to discuss instruction shortly, but first, I'd like you to recall key points from stages 1 and 2.**

Slide: *Review of Stage 1*

3. Show slide, *Review of Stage 1*. Present: **The purpose of this activity is for you to think critically about stages 1 and 2 in the standards-based education process.**

**Review of Stage 1**

- Where do the Big Ideas and/or Established Goals originate?
- How are Enduring Understandings formed?
- Why do we need to formulate Essential Questions?
- Why do we need to identify Key Knowledge and Skills in Stage 1 of the SBE process?
- How might our unpacked standards be similar? How might they be different?

4. Ask each question on this slide and allow participants time to share responses before going on to the next question. Answers will vary, but expect and/or elicit such responses as
- “the Big Ideas/Established Goals are in the standards themselves”;
  - “enduring understandings are formed by grouping or relating core concepts and processes specified in the standards, either explicitly or implicitly; but these understandings specify the kinds of conceptual learning that students will retain beyond the unit and the course”;
  - “by using a variety of modalities to answer essential questions via different tasks, activities, and/or assessments, students will provide evidence of learning”;
  - “ the knowledge and skill statements specify what students need to know and be able to do in order to provide evidence of learning, so this helps teachers design appropriate assessments in Stage 2”;
  - “the core concepts and processes are consistent because they are specified in the standards, so our unpacked standards should be similar, if not identical in terms of the big ideas and established goals that we determine; however, because these core concepts and processes may be combined differently in different units, the standards we unpack for a unit may look different.”

Slide: *Review of Stage 2*

5. Show slide, *Review of Stage 2*. Ask each question on this slide and allow participants time to share responses before going on to the next question. Answers will vary, but expect and/or elicit such responses as:

**Review of Stage 2**

- Why should we develop an assessment plan before Stage 3, before we make instructional decisions?
- What questions might we want to consider as we develop an assessment plan?
- How can we tell if an assessment plan is balanced?
- Why is assessment for learning our goal?

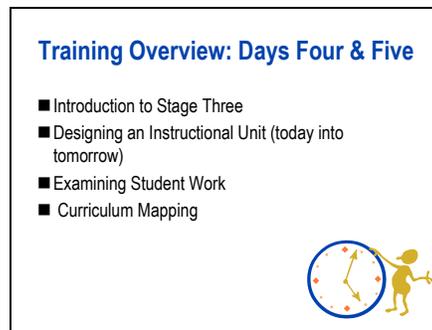
- We need to determine the assessments that will provide the best and most complete evidence of the desired learning goals from Stage 1 before we can plan the tasks and activities that will provide students with the best and most effective opportunities to learn.
- What learning goals have we determined for this unit? What are our achievement targets? Will this assessment generate evidence of learning appropriate to this achievement target? Is this the best assessment format for this achievement target? Will this assessment plan allow multiple opportunities for students to provide evidence of learning? Will students be able to use different modalities to provide evidence of learning?
- By predetermining a list of assessment formats to include throughout the course and using this list as a preparation guide, and by working collaboratively with other teachers to evaluate our assessment plans.
- Classroom assessment for learning allows us to use assessment to guide instruction and to obtain a complete and ongoing record of student growth so that we can intervene whenever necessary in order to provide students with more practice, remediation, extension, or alternate means of understanding.

## 6. Present: We also need to recall that:

- **The Georgia Performance Standards provide year-long learning goals.**
- **Units of study typically involve multiple standards and elements, and many standards and elements will be addressed throughout a grade or course.**
- Units of study often take weeks to complete.
- Transition: Now that we have recalled our prior knowledge, let's look at what this workshop holds for us.

**Overview of the Training**

Slide, *Training Overview: Days 4 and 5*

7. Show slide, *Training Overview: Days 4 and 5*. Present:

- **First, we're going to look at an overview of stage three and the WHERETO acronym, which address the purposes of various instructional strategies.**
- **The second section, *Designing an Instructional Unit*, forms the heart of this workshop, and will take the majority of our time. In it, we'll focus on how to select and design a balance of instructional activities, in much the same way as we looked at balanced assessment. In this section, you'll work on applying what you learn in order to design a unit of instruction.**
- **Tomorrow, we'll look at *Examining Student Work*, a process for improving both teaching and learning.**
- **We'll conclude with a discussion of some different ways of mapping curriculum.**

Slide, *Days 4 & 5 Objectives*

8. Show slide, *Days 4 & 5 Objectives*.

**Days 4 & 5 Objectives** 

1. Describe why instruction is stage three in standards-based education.
2. Describe the WHERETO method of identifying the purpose of instructional strategies.
3. Identify a variety of instructional strategies for different achievement targets.
4. Develop a balanced plan for instruction that include strategies appropriate to achievement targets and content.
5. Describe how to use a structured, collaborative process for examining student work.
6. Demonstrate how to use teacher commentary to increase student learning.
7. Demonstrate how to use mapping to calendarize units throughout the year.

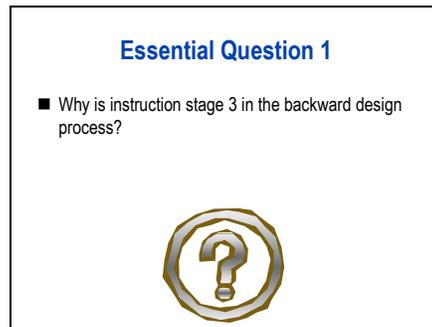
9. Ask participants to read the objectives (also contained on page 5 in their Participant's Guides) and jot down one specific thing that they hope to get from the workshop. Suggest that they refer back to this before leaving at the end of Day 5.

10. Ask: Are there any questions about the overview for Days 4 and 5?

## Previewing Stage Three

Slide, *Essential Question 1*

11. Show slide, *Essential Question 1*. Present: **This is the first question we'll be answering. You probably already have a good idea of the answer.**



12. Ask: **What is stage three in standards-based education?**

➤ Making instructional decisions

13. Ask: **Why does this stage follow unpacking and assessment?**

➤ By getting a clear picture of the standards/elements and the evidence required, we can better plan our instruction to ensure that every student is given the opportunity to achieve the learning goals.

14. Present: **As we work to implement the new GPS, teachers, administrators, and other stakeholders often want to know how they can manage to “get through everything.” Wiggins and McTighe acknowledge that teachers often worry about “covering” all the material, but they suggest that rather than thinking in terms of “covering” the material, we should focus on “uncovering.” What does this mean to you?**

Slide, *Uncovering vs. Covering*

- See slide, *Covering vs. Uncovering: What does it mean to “uncover”?* for sample answers.

**Covering vs. Uncovering:  
What does it mean to “uncover?”**

- Bringing the “big ideas” to life
- Focusing on learning, rather than teaching
- Helping students to understand, not just remember the understanding of others
- Incorporating a number of different teaching strategies that are driven by the achievement targets
- Teaching for breadth and depth

Slide, *Teaching for Breadth and Depth*

15. Ask: **Wiggins and McTighe also advocate teaching for depth and for breadth. What does this mean to you?**

P-7

- See slide, *Teaching for Breadth and Depth* for sample answers.
- Explain that more information on each of these points is contained on page 7 in the Participant's Guide.

**Teaching for Breadth and Depth**

<u>Depth</u>	<u>Breadth</u>
<ul style="list-style-type: none"> <li>■ Unearth it</li> <li>■ Analyze it</li> <li>■ Question it</li> <li>■ Prove it</li> <li>■ Generalize it</li> </ul>	<ul style="list-style-type: none"> <li>■ Connect it</li> <li>■ Picture it</li> <li>■ Extend it</li> </ul>

## Teaching for Breadth and Depth (PG-7)

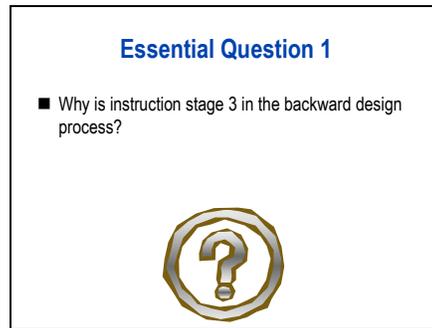
For Depth	Breadth
<p><i>Unearth it</i></p> <ul style="list-style-type: none"> <li>➤ Make assumptions explicit</li> <li>➤ Clarify points of view</li> <li>➤ Bring light to the subtle, the misunderstood, the not obvious, the controversial, the obscure, the problematic, the missing, and the lost.</li> </ul> <p><i>Analyze it</i></p> <ul style="list-style-type: none"> <li>➤ Separate into parts</li> <li>➤ Inspect and examine</li> <li>➤ Dissect, refine, and qualify</li> <li>➤ <i>Question</i></li> <li>➤ Test</li> <li>➤ Challenge</li> <li>➤ Doubt</li> <li>➤ Critique</li> </ul> <p><i>Prove it</i></p> <ul style="list-style-type: none"> <li>➤ Argue</li> <li>➤ Support</li> <li>➤ Verify</li> <li>➤ Justify</li> </ul> <p><i>Generalize it</i></p> <ul style="list-style-type: none"> <li>➤ Subsume specifics under a more encompassing idea</li> <li>➤ Compare and contrast</li> </ul>	<p><i>Connect it</i></p> <ul style="list-style-type: none"> <li>➤ Link discrete and diverse ideas, facts, and experiences</li> </ul> <p><i>Picture it</i></p> <ul style="list-style-type: none"> <li>➤ Make concrete and simple</li> <li>➤ Represent or model in different ways</li> </ul> <p><i>Extend it</i></p> <ul style="list-style-type: none"> <li>➤ Go beyond the given to implications</li> <li>➤ Imagine "what if?"</li> </ul>

Adapted from Wiggins, Grant, and Jay McTighe. *Understanding by Design*. ASCD. 1998. 102.

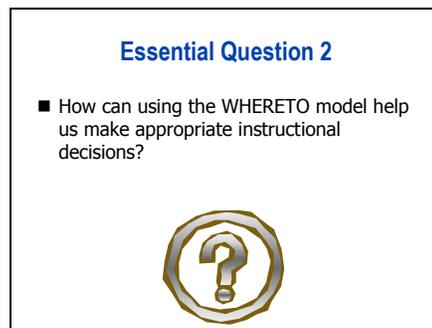
16. Present: **As you can see, designing instruction that allows students to “uncover” the depth of a topic or concept in order to reach understanding involves a number of different kinds of strategies.**

Slide, *Essential Question 1*

17. Show slide, *Essential Question 1*. Ask participants for any additional responses to this question.

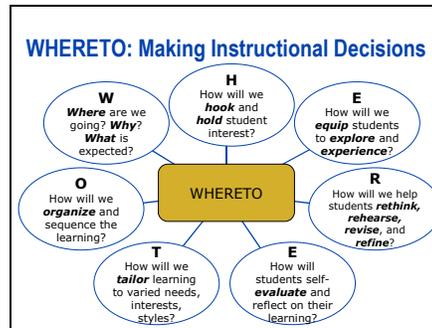


18. Show slide, *Essential Question 2*.



19. Present: **Let's consider one more model as we start to make decisions about instruction. This is the WHERETO model.**

20. Show slide, *WHERE TO: Making Instructional Decisions*. Present: **This model provides some questions that we can use as we begin to consider appropriate instructional strategies for a unit.**



21. Ask: **What is the value of using WHERE TO?**

- It keeps us mindful of the criteria we hope to address through various learning tasks and activities.
- It focuses on student learning and all that entails: engaging the students, designing instruction to meet the needs of the students, and encouraging students to become independent learners. In other words, even when the teacher is making the instructional decisions, the focus is on the student.

22. Present: **We're going to use a mini-jigsaw activity to explore the WHERE TO model. By "mini," I mean that both the readings and the time will be very short. I'd like you to get a better idea of what each of the letters in the WHERE TO model encompasses.**

23. Ask participants to count off by sevens and then form seven groups.

Slide, *Mini-Jigsaw*

24. Show slide, *Mini-Jigsaw*. Present: **Each group will focus on just one or two pages describing the WHERETO model. The pages assigned to each group are listed on this slide. I'd like you to take ten minutes to read and discuss the page or pages, and then present a one-minute summary of the information.**

**Mini-Jigsaw**

- Group 1: W: Pages 215 – 216
- Group 2: H: Page 217
- Group 3: E: Pages 218 – 219
- Group 4: R: Pages 221 – 222
- Group 5: E: Page 223
- Group 6: T: Page 224
- Group 7: O: Page 225

25. Ask each group to choose a recorder and a speaker.

Pages 214 – 225 of  
the UbD  
Professional  
Development  
Workbook

26. Ask the participants to turn to the designated pages in the UbD Professional Development Workbook.

27. Allow ten minutes for small group work. Provide two- and one-minute warnings.

28. Ask each group to present a one-minute summary.

Slide, *Essential Question 2*

29. Show slide, *Essential Question 2*, and ask participants to share their responses.

**Essential Question 2**

- How can using the WHERETO model help us make appropriate instructional decisions?



30. Transition: **The WHERETO model applies to all the various types of achievement targets (Knowledge/ Information, Skills/Processes, Thinking & Reasoning, and Communication) that we discussed in earlier workshops. However, additional questions need to be considered to ensure that the strategies you use are appropriate for the achievement targets.**

Slide, *Essential Question 3*

31. Show slide, *Essential Question 3*. Explain: **In Day 3 of training, we matched assessment formats to different achievement targets in order to determine the most effective means of obtaining appropriate and meaningful evidence of student learning. Today we will use a similar process to match instructional strategies to achievement targets.**

**Essential Question 3**

- What strategies are most appropriate for different types of achievement targets?



Slide, *Matching Strategies to Achievement Targets*

P-8

32. Show slide, *Matching Strategies to Achievement Targets*. Refer to the general types of strategies listed across the top of the chart and say:

- **This slide is very similar to the one we used to match assessment formats to achievement targets. As you can see, the achievement targets in the first column are exactly the same.**
- **If you look across the first row, however, you'll see five categories of instructional strategies listed.**
- **For our training purposes, we will be using five categories of instructional strategies—direct instruction, experiential learning, independent learning, indirect instruction, and interactive learning—but there's not single correct way of categorizing instructional strategies. You may choose to categorize differently in your school or system.**
- **Placing different instructional strategies into categories can, however, help ensure that we select the best types of strategies for particular achievement targets.**

Achievement Target	Direct Instruction	Experiential Learning	Independent Learning	Indirect Instruction	Interactive Instruction
Knowledge/Information					
Skills/Processes					
Thinking & Reasoning					
Communication					

P-8

33. Ask participants to turn to the chart on page 8 in the Participant's Guide.

## **General Categories of Instructional Strategies (PG-8)**

**Direct Instruction:** Instructional strategies that involve a high degree of teacher control.

Compare & Contrast	Explicit Teaching	Reinforcing Effort & Providing Recognition*
Cues, Questions, & Advance Organizers*	Graphic Organizers	Setting Objectives & Providing Feedback*
Demonstrations	Guides for Reading, Listening, Viewing	Summarizing & Note Taking*
Didactic Questions	Identifying Similarities and Differences*	Structured Overview
Drill and Practice	Mastery Lecture	

**Experiential Learning:** Instructional strategies where students learn by doing or experiencing authentic or simulated situations.

Conducting Experiments	Model Building	Role Playing
Field Observations	Surveys	Games
Field Trips	Modeling	Simulations
	Nonlinguistic Representations*	Synectics

**Independent Learning:** Instructional strategies during which students work independently, sometimes at their own rate on self-selected assignments or topics.

Assigned Questions	Graphic Organizers	Learning Contracts
Computer Assisted Instruction	Homework and Practice*	Reports
Correspondence Lessons	Learning Activity Package	Research Projects
Essays	Learning Centers	Summarizing and Note Taking*

**Indirect Instruction:** Instructional strategies where the teacher establishes the learning situation or task, but the students determine the direction and/or solution.

Case Studies	Cloze Procedures	Problem Solving
Concept Attainment	Generating & Testing Hypotheses*	Reading for Meaning
Concept Formation	Graphic Organizers	Reciprocal Teaching
Concept Mapping	Inquiry	Reflective Discussion

**Interactive Instruction:** Instructional strategies that involve students working with other students and/or the teacher to move toward the learning goals.

Brainstorming	Interviewing	Problem Solving
Circle of Knowledge	Laboratory Groups	Role Playing
Cooperative Learning*	Panels	Socratic Seminars
Debates	Peer Practice	Tutorial Groups

\* Marzano, Pickering, and Pollock note that incorporating these nine strategies into instruction can improve student achievement across all content areas and grade levels. <http://www.learn-line.nrw.de/angebote/greenline/lernen/downloads/nine.pdf>

34. Present:
- **As you read over the different categories with their lists of instructional strategies, mark those that you use frequently with a plus (+), those that you use sometimes with a checkmark (✓), and those that you use rarely or never with a minus (-).**
35. Allow participants a few minutes to read over the list of instructional strategies, then say:
- **Now look over your marked list. What does this tell you about your classroom practice?**
  - **How might you use this list as you make instructional decisions?**
36. Allow participants to share responses, then say:
- **It's not enough, though, merely to pick instructional strategies from a list; we need to make sure that we're using the best strategies for particular achievement targets.**
37. Ask participants to close their Participant's Guide.

***Trainer's Note:** The reason that the Participant's Guides should be closed is that key points in the discussion that follows are summarized in the Participant's Guide, and we want participants to think about and discuss them, rather than just reading from the guide.*

Four slides on matching strategies to achievement targets

38. Show the four slides that correspond to the five types of achievement targets. For each one, refer to the instructional strategy category and ask, "Would this type of strategy be appropriate for this achievement target?" After discussion, click on the slide to reveal the contents of each table cell in turn.

***Trainer's Note:** The slides are set up to reveal the contents of each cell in turn, upon a mouse click (or other method of slide advancement).*

39. Say: **Responses other than those on the chart may be just as appropriate, or perhaps even more appropriate to particular teaching and learning situations. Furthermore, different strategies within a particular category may be more or less appropriate to a given situation; but it's important that we always examine the appropriateness of the instructional strategies for particular achievement targets.**

Achievement Target: Knowledge and Information				
Direct Instruction	Experiential Learning	Independent Learning	Indirect Instruction	Interactive Instruction
Strategies such as direct instruction, graphic organizers, structured overview, etc., can convey facts or information to students.	Experiential strategies may be structured to allow students to arrive, inductively or deductively, at rules or principles.	Strategies such as assigned questions, learning activity packages or centers, reports, or research projects allow students to obtain facts, etc.	Strategies such as concept attainment or concept formation, reading for meaning, reciprocal teaching, and inquiry allow students to arrive at rules or principles.	Strategies such as discussion, interviewing, or tutorial groups can provide students with information or help them to review rules, etc.

Achievement Target: Skills/Processes				
Direct Instruction	Experiential Learning	Independent Learning	Indirect Instruction	Interactive Instruction
Modeling can introduce or demonstrate skills or processes, but other, more student-directed strategies are needed as well.	Modeling, games, conducting experiments, etc., can introduce skills/processes or provide practice.	Essays, learning activity packages or centers, or research projects, etc., can provide opportunities for application or practice.	Instructional strategies that involve problem solving often provide the opportunity to acquire skills or practice processes.	Cooperative learning groups, debates, role playing, or laboratory groups, etc., work well.

Achievement Target: Thinking and Reasoning				
Direct Instruction	Experiential Learning	Independent Learning	Indirect Instruction	Interactive Instruction
Modeling can introduce or demonstrate thinking and reasoning processes, but other, more student-directed strategies are needed as well.	Most experiential strategies work well here, especially role playing, games, experiments, and simulations.	Some, such as certain essay topics, learning activity packages or centers, or research projects, work better than others.	Strategies such as working with case studies, concept mapping, inquiry, problem solving, etc., work well with thinking and reasoning targets.	Most interactive instructional strategies work with these targets, but especially problem solving and Socratic Seminars.

Achievement Target: Communication				
Direct Instruction	Experiential Learning	Independent Learning	Indirect Instruction	Interactive Instruction
Not the best strategies for providing students with opportunities to acquire or practice communication skills.	Good when oral, written, or other forms of expression are included, such as reporting field observations, role playing, or simulations.	Again, essays or other strategies that involve oral, written, or other forms or expression can provide the opportunity to learn communication skills.	Reciprocal teaching, reflective discussion, or other strategies that involve oral, written, or other forms or expression work well.	By definition, interactive instructional strategies include opportunities to learn or practice communication skills.

## Matching Strategies to Achievement Targets

- Present: **We've looked at a range of issues related to choosing appropriate instructional strategies:**
  - **The learning goals and the types of evidence we want to obtain**
  - **The importance of WHERE TO (having a range of strategies for getting attention, focusing the learning, facilitating learning, differentiating instruction, and providing for practice and feedback)**
  - **The need to match strategies to different achievement targets**
- Show slide, *Essential Question 3*, and ask participants for any final reflections on this question.

**Essential Question 3**

■ What strategies are most appropriate for different types of achievement targets?



- Transition:
  - **In the next section of the training, we're going to look more in-depth at developing instructional strategies for a unit and put our learning to work by making some instructional decisions for particular units.**

## *Designing an Instructional Unit*

### **Time**

6 hours (extending to second day)

### **Overview**

In this section, participants focus on applying what they've learned in the first section. They evaluate an instructional plan and complete unit planning templates, including calendar templates for an instructional plan.

### **Objective**

- Evaluate a unit plan, focusing on the instructional plan detailed on the unit calendar, and develop a balanced plan for instruction, one that includes strategies appropriate to achievement targets and content.

### **Activities**

- Hook Activity
- Evaluating an Instructional Plan
- Selecting Appropriate and Balanced Instructional Strategies for a Unit

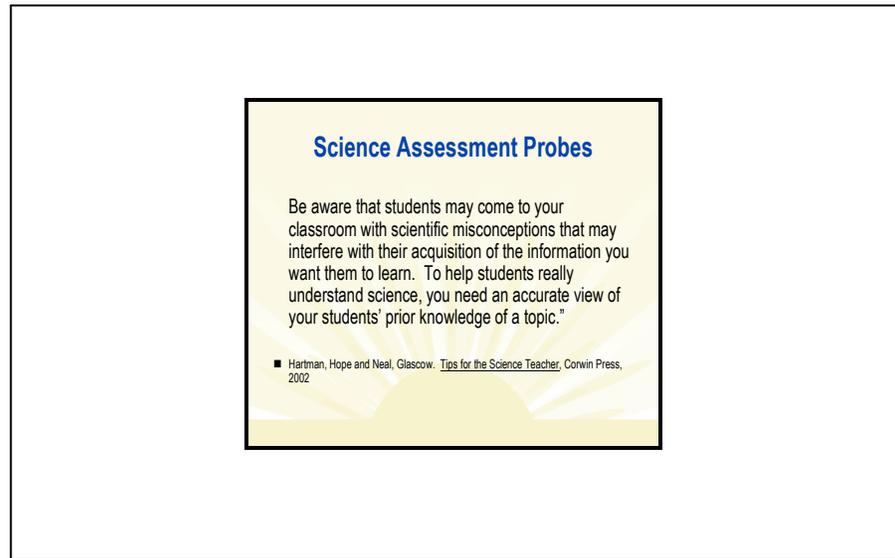
### **Materials**

- Chart paper
- Transparencies or PowerPoint presentation
- Highlighter markers

## Hook Activity

Strategy: Assessment Probes

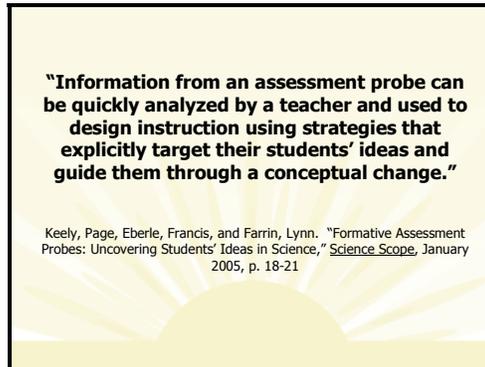
Show slide.



Say:

- **There has been a great deal of research in the study of "naïve theories," misinformation, preconceptions, or misconceptions about science topics that interfere with learning. Some of the information students bring is an emerging knowledge of the topic. This understanding is the foundation to build further learning.**
- **Misconceptions can result from limited experience, incorrect generalizations, oversimplified generalizations, misinterpretations, or out-of-date information.**
- **If the structure of knowledge is faulty, incomplete, or false, those parts must be revised or discarded.**
- **A critical component for conceptual change is to check for misunderstandings of the student's prior knowledge. Situations that stimulate student thinking can modify prior knowledge.**
- **You must first have an accurate idea of the students' prior knowledge as an instructional starting point.**

Show slide.



- Give students a scenario to write their explanation of what is happening as a pre-assessment of what they know and understand. Use their explanations as a screen for possible misconceptions.

Example of a Middle School Science Assessment Probe

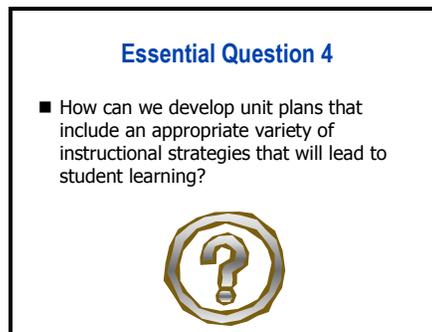
- **Dinosaurs no longer exist, but many fossil and skeletal remains have been discovered in odd locations around the world. How would geologists and biologists explain the existence of dinosaur fossils in the Arctic regions, where the hostile environment could not support such large animals?**

Example of a High School Physical Science Assessment Probe

- **Abigail asked the garage mechanic to fill her tires to the correct maximum pressure before she took a vacation to Boston in February. Explain what could happen if there is this much pressure in her tires in August in South Georgia. Does the pressure stay the same? Explain why or why not.**

## Evaluating an Instructional Plan

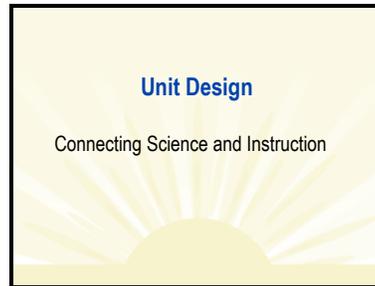
4. Show slide and present:
- **Here is our essential question for this entire section of the workshop. This question is deceptively simple; but planning instruction is a complex process, and as you'll recall from this morning, correct solutions to complex problems are never simple.**



- **Before we try our hand at developing an instructional plan for a unit, we're going to evaluate an already existing instructional plan.**
- **But before we can evaluate an instructional plan, we need to examine both the learning goals and the assessment plan that have been developed for this unit.**

## Unit Design

Connecting science and  
instruction



Show slide and say,

- **Stage 3 is a direct connection to Stage 1 and 2. The process has no short cuts or quick fixes as we discussed at the beginning of this session.**

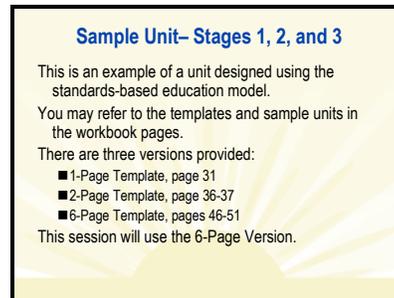
Show slide and say,

- **Even those who love to cook do not plan gourmet meals every evening. Applying this design to everything at once is not feasible.**
- **Let's begin with Unit 1, share our Unit 1's, and develop a wealth of delicious instruction. I'll go first.**



Show slide and say,

- **The workbook provides 3 versions of a unit design template.**



- **There are different versions of unit design templates. The workbook has template samples of 1, 2, and 6 page formats.**
- **Because of consistency in the training sessions, each content group is using pages 1-4 of the 6-page version. This is not a required template. This is a thorough template that sets the tone of the training session.**
- **If your school or system has developed a unit template, please use that one, but look for any additions or modifications that might add to the quality of the design.**

Facilitator's note: Here you will use the unit you have chosen as a sample for the training session. Go through the Stage 1 and 2 process by "thinking aloud." Remind participants that these are samples to be used for talking points and not necessarily as exemplars. Keep the dialogue moving, but allow participants to give input.

**Talking Points**

- Refer to the sample unit.
- Brainstorm a list of criteria we can use to ensure the quality of a unit when designing the instruction.
- We will post the chart on the wall to refer to as we design our own units.
- Please add other ideas or modify the ones on the chart as the work continues.

Give participants time to discuss the sample unit plan and develop a list of criteria to post on the wall.

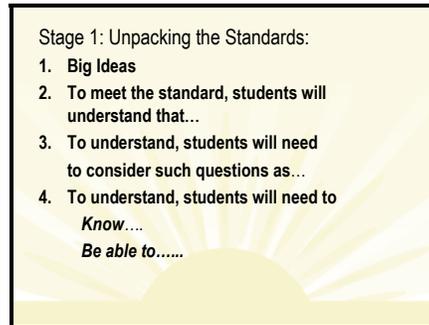
**Finding Order in the Chaos**  
**Identifying clear learning goals**

- Let's begin at the beginning: Big Ideas (goals)
- Choose the Big Idea that shows your strength as a teacher. Choose your favorite topic.
- Choose the Big Idea that is so dear to your instruction that you will revisit it, reteach it, and your students will catch your enthusiasm.

Say

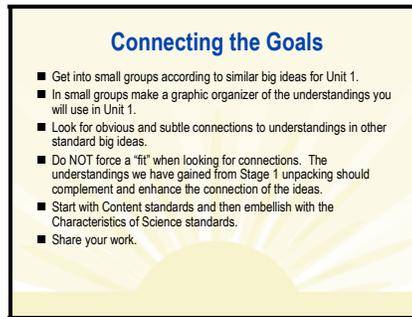
- **One of the difficult tasks in planning instruction is deciding sequence of Big Ideas/Learning Goals/Topics.**
- **We will focus on the first unit of the year today. Many of you have already designed units. If you brought those, you can get feedback and collaborate with your small group.**
- **We will divide into groups according to Grade Level and Topic chosen for the first unit of instruction.**
- **Let's brainstorm a list of topics each of you want to instruct first. Then we will break into groups according to similar topics.**
- **Make a "tent" label of the topic for your table so other groups will know who is working on what.**

## Stage One



Remind participants of the process of Stage 1 in the Standards-based Education model.

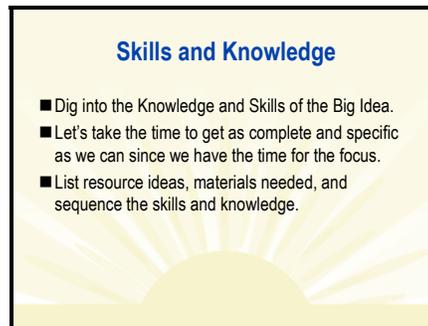
Refer participants to the templates in the Participant's Guide and have extras on hand for additional units. Give participants time to work on their stage 1 and share their ideas with each other.



Say

- **In your group, make a graphic organizer of the understandings you will use for Unit 1.**
- **You have become very familiar with unpacking a standard and finding connections.**
- **That is our starting point for unit design.**
- **We begin with the Big Ideas or goals of the unit.**
- **Remember that understandings are written specifically and in sentence form (Students will understand that....)**
- **Look for obvious and subtle connections to understandings in other standard big ideas.**
- **Do NOT force a "fit" when looking for connections. The understandings we have gained from Stage 1 unpacking should complement and enhance the connection of the ideas.**
- **Start with Content standards and then embellish with the Characteristics of Science standards.**
- **Share your work.**

- **Essential questions are different from key questions and daily questions. All of these questions are important and one is not better than the other. However the essential questions are more open-ended and thought provoking. The key and daily questions have answers to important points in the unit.**
- **Work with your group to write essential questions for the unit.**



- **The Skills and Knowledge statements tell what the students should know and be able to do.**
- **While participants list the skills and knowledge, help them also keep note of resources and materials needed for students to do and know these things.**
- **Have them choose what has to happen first, next, and last to begin to sequence the unit plan.**

### Stage 1: Unpacking the Standards

**Big Ideas:**

**To meet the standard, students will understand that...**

**To understand, students will need to consider such questions as**

**To understand, students will need to**

***Know....***

***Be able to.....***

- **Let's take a few minutes to look over this completed template.**
- **In your own words, what would you say are the overall conceptual learning goals for this unit?**
- **Allow participants time to respond.**

*Note: Responses may vary, but they should center on those things specified in the enduring understandings and the essential questions.*

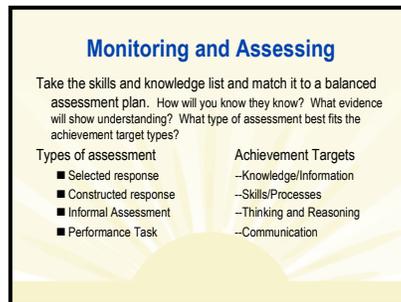
- **Now let's look closely at the knowledge and skill statements. Is there any other knowledge that students will need to answer the essential questions or to attain understanding of the concepts in this unit?**

*Allow participants time to respond.*

## Stage 2 of Unit Design

Bring the small group back to a whole group setting for the introduction to Stage 3. This is the next step in the process.

- **It's also necessary to examine the assessment plan prior to evaluating an instructional plan.**



**Monitoring and Assessing**

Take the skills and knowledge list and match it to a balanced assessment plan. How will you know they know? What evidence will show understanding? What type of assessment best fits the achievement target types?

Types of assessment	Achievement Targets
■ Selected response	--Knowledge/Information
■ Constructed response	--Skills/Processes
■ Informal Assessment	--Thinking and Reasoning
■ Performance Task	--Communication

The diagram features a sunburst graphic at the bottom, with rays extending upwards behind the text.

Review the match between types of assessment and achievement targets. Remind participants of the importance of a balanced assessment plan and refer to Day 3 materials if individuals need more direct information.

**G.R.A.S.P.S**

- Work on your Performance Task.
- Remember that it produces a product or performance so you would include a rubric.
- A culminating unit performance task will give students a glimpse of the goal and set the standard of expectations.

- **Remember that the Performance Assessment requires a product or performance. A rubric accompanies the GRASPS activity.**

**Assessment**

- Does the plan include assessments from all four of the assessment formats?
  - Selected Response
  - Constructed Response
  - Performance Tasks
  - Informal and Self-Assessment
- Will this assessment plan provide evidence of student learning for the predetermined learning goals for this unit?

- **Here is a chart for each type of Assessment. I am posting these to start our "Graffiti Assessment Wall."**
- **Post ideas of exemplary and creative assessment ideas you use and can share with others.**
- **You may use Post It notes, tape up paper, or write on the chart.**
- **Visit the wall to get ideas and add ideas.**

**Balanced Assessment**

Graffiti Assessment Wall

On these four charts (one for each type of assessment), write examples of exemplary assessment ideas you use and can share with others. (Questions, prompts, ideas, authentic assessments, etc.)

Visit the wall to get ideas if you get "writer's block" or need to "fill in the gaps."

*Refer to the assessment plan for the sample unit. Go over ideas for Stage 2.*

Present:

- **Let's take a few minutes to look over this completed template.**

Present:

- **Take 10 minutes in your table groups to examine this assessment plan.**
- **We don't have time for a complete evaluation of the plan, but consider the following two questions:**
- **Does the plan include assessments from all four of the assessment formats: Selected Response, Constructed Response, Performance Tasks, Informal and Self-Assessment?**
- **Will this assessment plan provide evidence of student learning for the predetermined learning goals for this unit?**

Allow participants 10 minutes, and then ask them to share their responses.

**Ask: Look back at the assessment plan again. What connections do you see between the assessment plan and instruction?**

*[Trainer's Note: Responses may vary, but they should indicate that many assessments are also tasks and activities that involve both assessment and instruction.]*

Say:

**This becomes even clearer when we take a more detailed look at the performance tasks that are listed in the assessment plan.**

**Performance Task Blueprint**

**What understandings and goals will be assessed through this task?**

**What criteria are implied in the standards and understanding regardless of the task specifics?  
What qualities must student work demonstrate to signify that standards were met?**

**Through what authentic performance task will students demonstrate understanding?**

**What student products and performances will provide evidence of desired understandings?**

### Sequencing Assessment

- We are ready to get back in our groups to work on the balanced assessment plans.
- After you have worked on creating some of your assessments, you must plan when they will occur.
- Remember that this is a plan and be flexible.
- Let's practice with the sample unit before we begin the process.

Refer to the sample unit assessment plan and model the process of using a calendar to put assessments in place.

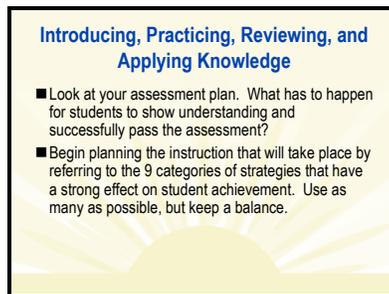
Have Post Its for each item on the sample unit assessment plan and a calendar template. Model the process of putting the sticky notes in place on the calendar until there is a good fit for all of them with enough room on the calendar for instruction between assessments. Talk out loud and ask for participant help with the process and answer questions.

### Calendar

- Get a calendar template and begin plotting your assessments. Do you give regular assessments?
- Write assessment ideas on a Post It and put it in a square.
- Look for the flow and find the balance.
- Share your plan with others in your group.
- Make refinements and pencil in the plan.

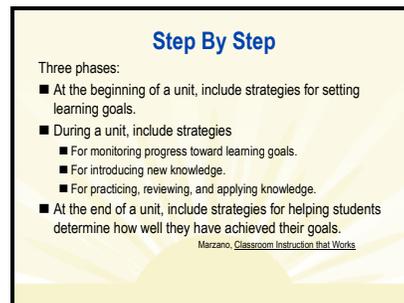
Return to small groups to work on the individual Units. Give participants time to work on their plans and have dialogue on the ideas. Remind participants to add ideas and get ideas from the Graffiti Assessment Wall.

When most groups have a workable assessment calendar, pull the group back together.



Say

- **Instruction should flow and connect to the goals of the unit plan.**



Say

- **Refer to the chart on Categories of Instructional Strategies That Affect Student Achievement.**
- **One of the goals of the McREL study was to identify strategies that have a high probability of enhancing student achievement for all students in all subject areas and at all grade levels.**
- **As you work on your unit design, look for a balance of instructional strategies.**

**Strategies that have a strong effect on student achievement**

- **Identifying similarities and differences**
- Summarizing and note taking
- Reinforcing effort and providing recognition
- Homework and practice
- Nonlinguistic representations
- Cooperative learning
- Setting objectives and providing feedback
- Generating and testing hypotheses
- Questions, cues, and advance organizers

Say:

- **As you work on the instruction plan of the Standards-based Education model, refer to this list of strategies.**

**If-Then Statements**

- Now plan the unit. You have all of the pieces. Fill in the timeline with narrative. Share activity ideas and suggest resources for each other. Polish and refine.
- If the student must know and be able to do, **then** this is what the instruction will look like.
- Timing is an issue to resolve. A plan must be flexible. What you expected to take a day, may actually take a week. What you expected to take a week, may actually take a day.
- Do units naturally end at grading period deadlines? Discuss the implications.

Say

- **Now work together to plan the units.**
- **Remember to be collaborative and flexible in your planning.**
- **Timing is an issue.**
- **Determine your plan for grading period deadlines.**

Give participants time to work in small groups on the instructional plan. Visit each group to ask and answer questions. Model sharing good ideas with the rest of the groups.

When most groups have a workable plan or have come to a stopping point, focus the groups on the lesson planners.

### Repetition, Revisiting, and Review

- Use the Lesson Planner to find other connections during the school year.
- If this was Unit 1, what is the logical flow into Unit 2?
- Is someone in the group developing that unit?
- How many units can your year comfortably hold?
- Have you used all of the Characteristics of Science Standards and all of the Content Standards?

Provide copies of the lesson planners for participants to use

- **Use the lesson planners to find other connection during the school year.**
- 6. Present: Now, we need to consider one last thing before we actually evaluate the instructional plan—the criteria we should consider when we evaluate an instructional plan.**

### Evaluating an Instructional Plan

Does the instructional plan:

- Focus on the learning goals for the unit?
- Address the questions posed in the WHERETO model?
- Provide a balanced range of strategies from the five categories?
- Match instructional strategies to the achievement targets for the unit?
- Offer students multiple opportunities to learn?
- Allow for students to learn using multiple modalities?

What other questions might we need to ask when evaluating an instructional plan?

Review the questions on the slide and list any additional questions on chart paper.

### Making Instructional Decisions

1. Complete the first two stages of the standards-based education process.
2. Prepare the blueprint for at least one performance task.
3. Apply the WHERETO model to begin your instructional plan.
4. Refer to the five categories of instructional strategies to ensure balance.
5. Match instructional strategies to unit achievement targets.
6. Use the calendar templates to plot your instructional plan (in pencil).
7. Provide multiple opportunities for students to learn using multiple modalities.
8. Check to ensure that the learning goals are the focus of the instructional plan.
9. Revise as needed to meet the needs of the students.

## 7. Present:

- **I've created a sample checklist to use as a guide for instructional planning, but you may wish to use a slightly different checklist from one of the books we've provided to your schools, or you may wish to create your own checklist for your department or your school.**
- **For most of the remainder of the 6 hours we have allotted for this section, you will be working on your instructional plan.**
- **Remember the importance of collaboration.**
- **I'll be walking around and listening to various groups as you plan, but don't hesitate to ask questions of me or one of your colleagues as you work through this task.**
- **About 15 minutes before we break for lunch, I'd like for you to begin posting your instructional plans around the room.**

### *Stage: 1: Unpacking the Standards*

Big Ideas:	
To meet the standard, students will understand that...	
To understand, students will need to consider such questions as...	
Unit:	
To understand, students will need to...	
Know...	Be able to...

## *Stage 2: Determining Acceptable Evidence*

**What evidence will show that students understand?**

**Performance Tasks:**

**Other evidence (quizzes, tests, prompts, observations, dialogues, work samples):**

**Students Self-Assessment and Reflection:**

## *Performance Task Blueprint*

**What understandings and goals will be assessed through this task?**

**What criteria are implied in the standards and understanding regardless of the task specifics?**

**What qualities must student work demonstrate to signify that standards were met?**

**Through what authentic performance task will students demonstrate understanding?**

**What student products and performances will provide evidence of desired understandings?**

**By what criteria will student products and performances be evaluated?**

### August 2005 (PG)

Mon	Tue	Wed	Thu	Fri
1	2	3	4	5
8	9	10	11	12
15	16	17	18	19
22	23	24	25	26
29	30	31		

**September 2005 (PG)**

<b>Mon</b>	<b>Tue</b>	<b>Wed</b>	<b>Thu</b>	<b>Fri</b>
	1	2	3	4
5	6	7	8	9
12	13	14	15	16
19	20	21	22	23
26	27	28	29	30

8. Keep participants informed regarding the time they have remaining for this task.
9. When approximately 15 minutes remain, say:
  - **If you'll remove your completed templates from your module notebook you can use the blue masking tape to display your instructional plans on the walls. You can take your instructional plans before you leave today and place them back in your notebook.**
  - **As the instructional plans are posted, please take time to examine those from the other groups and use the post-it notes to respond. You may wish to suggest additional or different strategies, suggest resources, or comment on something that has worked well for you.**
10. Transition: **We need to break for lunch now; but when you return, please continue to peruse these instructional plans until it's time to resume with the next section of the workshop on Examining Student Work.**

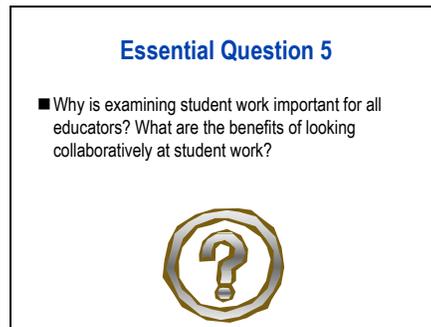
## *Examining Student Work*

<b>Time</b>	2 hours
<b>Overview</b>	Participants learn about different protocols for examining student work.
<b>Objective</b>	<ul style="list-style-type: none"><li>➤ Describe how to use a structured, collaborative process for examining student work.</li><li>➤ Demonstrate how to use teacher commentary to increase student learning.</li></ul>
<b>Activities</b>	<ul style="list-style-type: none"><li>➤ Collaborating to Improve the Quality of Student Work</li><li>➤ Developing Useful Teacher Commentary</li></ul>
<b>Materials</b>	<ul style="list-style-type: none"><li>➤ Chart paper</li><li>➤ Transparencies or PowerPoint presentation</li><li>➤ Flipchart markers</li><li>➤ Sample teacher assignment and student work</li></ul>

## Collaborating to Improve the Quality of Student Work

Slide, *Essential Question 5*

1. Show slide, *Essential Question 5*. Present: This is the essential question that we will attempt to answer next.



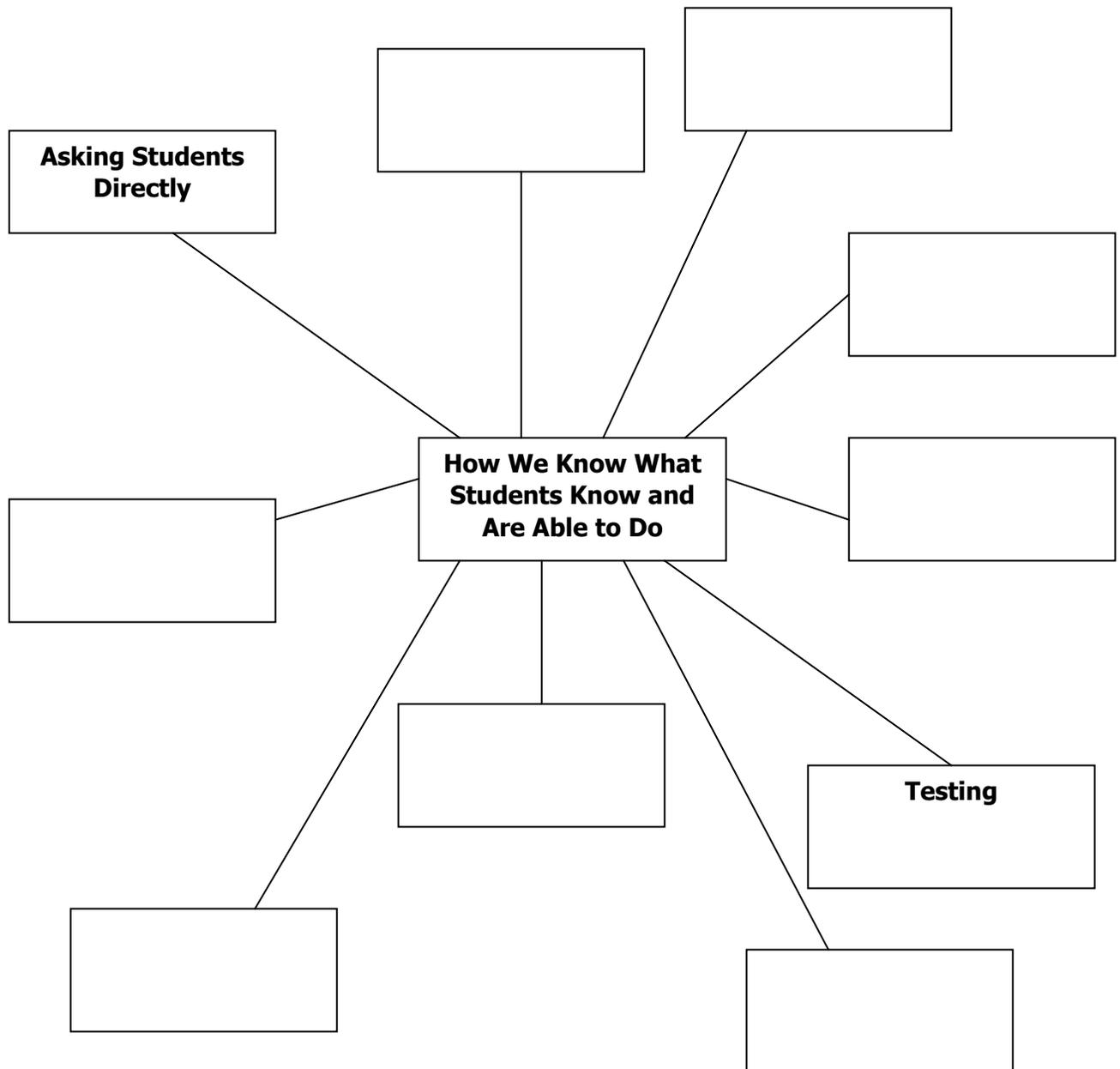
2. Refer participants to How We Know What Students Know and Are Able to Do in their Participant's Guides. (See next page.)
3. Ask participants to identify methods classroom teachers use to assess student knowledge and skills. Explain that the identified method should be placed on the map on the page to show a relationship between the methods listed. For example, asking students direct questions is not closely related to testing them, so these items should be separated by considerable space. However, various types of testing are closely related and should be put in closer proximity to each other. Explain that participants can draw additional lines and boxes on the organizer to include sub-topics.

Flipchart

4. Have groups share their work. Record the comments on a flipchart or overhead transparency.

## *How We Know What Students Know and Are Able to Do (PG-27)*

Identify ways we know what students know and are able to do. Use the map below to show relationships among the different methods.



From the Association for Supervision and Curriculum Development (ASCD)

5. Present: **For schools and leaders to be truly effective they must clearly understand what their students know and are able to do. We are going to discuss a method that may not be on your organizer: collaboratively examining student work.**

Slide: *Examining Student Work: What is it?*

6. Show slide, *Examining Student Work: What is it?* Present contents of slide.

**Examining Student Work: What is it?**

- Involves a group of educators committed to improving their practice and improving curriculum, instruction, assessment, and the learning environment for students
- Requires bringing real student work to the group to be examined
- Uses a formal process for examining that work
- Requires follow-up after student work is examined so that the resulting knowledge is not lost

7. Present:

- **In 1993 a group of 23 heart surgeons agreed to observe each other regularly in the operating room and to share their know-how, insights, and approaches. In the two years after their nine-month-long project, the death rate among their patients fell by an astonishing 25 percent. The study shows that merely by emphasizing teamwork and communication instead of functioning like solitary craftsmen, all the doctors brought about major changes in their individual and institutional practices.**
  
- **Teachers, like heart surgeons, have traditionally worked in isolation. A powerful lesson can be learned from this study. Many educators now emphatically believe that if our goal is to lower the “death rate” of young minds and see them thrive, we can do it better together than by working alone.**  
**[www.essentialschools.org](http://www.essentialschools.org)**

Slide: Examining Student Work: Why do it

8. Show slide, Examining Student Work: Why do it?

**Examining Student Work: Why do it?**

- To improve teaching and student learning
- To ensure learning activities and strategies align with standards
- To allow teachers to calibrate their understanding of what quality looks like
- To encourage appropriate rigor in learning activities
- To inform instructional decision-making
- To help identify trends

9. Present:

- **Working collaboratively to examine student work, educators can learn not only what their students know and are able to do but also how to help them move forward through improved classroom instruction.**
- **Educators also desire and need quality professional development experiences that reduce the isolation they often feel. While outside experts often share wisdom and inspiration, their messages, by themselves, seldom result in substantive change. Good job-embedded professional development can be more effective in bringing about change in the classroom when it arises from the classroom, when educators contribute their personal teaching experiences to discussions with their colleagues, and when educators begin to make changes with their colleagues' support.**

10. Present: To improve teaching and student learning:

- **Teachers share responsibility among themselves for improved practice and for improved student achievement.**

**11. Present: To inform instructional decision-making:**

- **Instead of disappearing into a book bag or trash can, student work becomes a valuable piece of evidence of the effectiveness of a school's practice.**
- **Unlike standardized test results, the evidence provided by examining student work speaks about what teachers do and what students learn.**

**12. Present:**

**To ensure learning activities and strategies align with standards:**

- **We need to make sure that our assignments and expectations are aligned with the GPS, and we can do this by looking collaboratively at student work.**
- **We need to be continually questioning ourselves about the expectations at each grade level. In many cases, we may have misconceptions about what proficient work looks like. We may think that our expectations match those of others only to be surprised when our students do not do well on a statewide criterion-reference test, an AP exam, or an EOCT. Clearly, if our students are meeting our expectations, but not doing well on standardized exams, then our expectations are too low. Research has shown that when expectations are raised (and appropriate supports are put in place), student achievement rises.**

**13. Present: When considering appropriate rigor in learning activities:**

- **Do you ever wonder whether the demands that you place on your students are rigorous enough?**
- **Do you ever worry that you are assigning work that is below the grade level expectations that are stated in the GPS?**
- **Do you ever wonder whether others who teach the same subject at the same grade have the same level of rigor?**
- **How often do you work collaboratively with other teachers to make sure that the assignments, and the ways you score them, really meet the standards?**

Slide: Why Use Protocols?

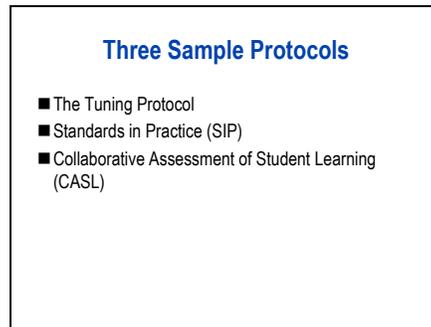
14. Show slide, Why Use Protocols? Present:

- **Many organizations have developed strategies for examining student work. Many different protocols have been developed. Many have specific assessment purposes but all have, at the heart of the strategy, the goal of creating a safe place for teachers to share the work of their students, a place that encourages honest exchange among the teacher participants.**
- **Protocols have been developed for different purposes. Each emphasizes a different aspect of evaluation.**

**Why Use Protocols?**

- To provide agreed upon guidelines for a conversation
- To build the skills and culture necessary for collaborative work
- To allow groups to build trust doing substantive work together
- To create a structure that makes it safe to ask challenging questions
- To ensure equity and parity in terms of how each person's issues are attended to
- To give a license to listen without having to respond continuously
- To help make the most of the time available

Slide: Three Sample Protocols    **15.** Show slide, Three Sample Protocols. Present: **We are going to look at three protocols today:**



- **The Tuning Protocol emphasizes evaluative feedback from participants. It is a collaborative process that helps participants “fine tune” their instruction (which will lead to more “tuned” student work) using a definite protocol or process. Participants and presenters take turns both talking and listening to each other trying to answer the questions the presenter of the student work is asking.**
- **Standards in Practice (SIP) is a process that works to ensure that student work is aligned with the standards. Developed by the Education Trust, a non-profit organization that advocates for the high achievement of all students in kindergarten through college, it helps schools improve student achievement by monitoring the effectiveness of instruction. SIP looks at teacher work through the dual lenses of classroom assignments and students’ performance on assignments. The purpose of SIP is to increase the rigor of teachers’ assignments by aligning them with standards so that student achievement rises to meet the standards.**
- **The Collaborative Assessment of Student Learning (CASL) works to help teachers identify and evaluate learning strategies for students. CASL focuses on accomplishing a particular learning target linked to a specific standard. A teacher does this by identifying and focusing on the progress of a student over time. This helps deepen a teachers’ understanding of how children come to make meaning of and master a particular concept or skill.**

16. Present: **It is very important that you select the protocol that best fits the culture of your school. We have included information on these three protocols in your Participant's Guides. You may get more information at the website Looking at Student Work ([www.lasw.org](http://www.lasw.org)) maintained by the Annenberg Institute for School Reform. This web site includes a synopsis of approximately a dozen different strategies for examining student work as well as links to learn more about each of them.**

17. Present:

- **All these processes work with many types of groups – job-alike, grade level, administrators, combined grade-levels, mixed groups, etc.**
- **It is important, no matter how the groups are determined, that the same groups work together regularly. The more regularly the same people meet, the more beneficial the process.**
- **The number of people in a group may vary. Most groups average six to eight members.**
- **The ideal amount of time varies from one to three hours, depending on the process. All protocols can be modified to use time available!**
- **Having a time keeper is very important. This can help ensure that the process is accomplished in the allotted time.**
- **These processes can take place anywhere. The optimal setting is a table where all participants can see one another as they work.**
- **When possible, any group meeting for the first time should have a facilitator who is familiar with the process.**
- **As with all professional learning activities, follow-up is a key component. Examining student work is important, but taking action as a result of the process is even more important.**

Sample Student  
Work  
PG

18. Transition: Let's use a jigsaw activity to explore these three protocols.

19. Show slide Jigsaw Directions and facilitate activity:

- Ask participants to count off by threes.
- Assign protocols as shown on slide.
- Refer participants to correct pages in Participant's Guide.
- Ask them to concentrate on the three questions on the slide.
- Distribute sample work for jigsaw. Explain that they can look at this work and discuss how using the protocol might be helpful.

**Jigsaw Directions**

- Form groups:
  1. Tuning Protocol (pages 28-31)
  2. SIP (pages 32-41)
  3. CASL (pages 42-44)
- Read the materials and be prepared to present:
  - Why use this protocol?
  - When would it be most helpful?
  - What are some key guidelines for making the most from this protocol?

20. Allow 25 minutes for small group work.

21. Ask each group to report out.

**22. Discuss: How can you get started using one or more of these protocols in your schools?**

Slide, Essential  
Question 5

23. Show slide, Essential Question 5, and ask participants to share their observations.

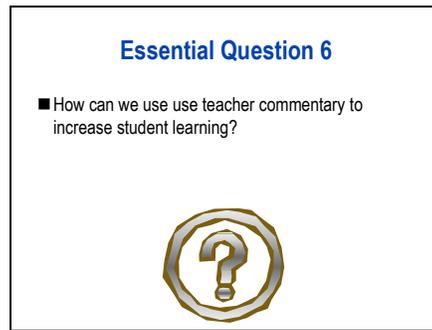
**Essential Question 5**

- Why is examining student work important for all educators? What are the benefits of looking collaboratively at student work?



## Developing Useful Teacher Commentary

1. Show slide, Essential Question 6. Present:  
**Related to the process of examining student work is the task of writing teacher commentary. Let's look at that.**



2. Ask: **What is teacher commentary?** Allow for responses, but be sure to include:
  - Feedback to students that lets them know how the students' "evidence" matches up against the expectations expressed in the standards. It may be oral or in writing, and both are suggested.
  - Teacher commentary is formative in nature; it tells the student how to improve (and assumes that s/he will have opportunities to do so!)
3. Ask: **What is the purpose of teacher commentary?** Allow for responses, but be sure to include:
  - To correct knowledge gaps or skill deficits
  - To provide feedback that is specific and helpful to the student
  - To encourage the student to continue trying
  - To guide learning by letting the student know where s/he needs to focus.
  - To keep a written record of student progress.

4. Ask: **How often should one provide teacher commentary on student work?** Allow for responses, but be sure to include:
  - There are no hard-and-fast rules about how often you should include teacher commentary in your feedback to students. Common sense says that it is impractical to expect that every piece of work would have detailed commentary; on the other hand, if teacher commentary is only provided at the end of a unit/course, it doesn't offer much opportunity for the student to learn and improve! Here are some general guidelines.
  - Often enough to document progress throughout a unit/course
  - Often enough so that students can make adjustments and learn and then demonstrate new learning.
  - Often enough so that students can see patterns in their work and in the commentary their work elicits.
  
5. Ask: **What are some guidelines for providing good teacher commentary?** Allow for responses, but be sure to include:
  - First, review the standards and elements so that you have expectations clearly in your mind, and so that you can refer to them (in terms students understand) in your commentary.
  - Center your comments around the standards and elements. If the teacher commentary is in writing, think of it as a "written conference."
  - Be very specific; this helps students know exactly what they're doing right and/or wrong.
  
6. Refer participants to a summary of the above information in their Participant's Guides.

PG

## *Teacher Commentary (PG-45)*

<b>What</b>	<p>Feedback to students that lets them know how the student's "evidence" matches up against the expectations expressed in the standards. It may be oral or in writing, and both are suggested.</p> <p>Teacher commentary is formative in nature; it tells the student how to improve (and assumes that s/he will have opportunities to do so!)</p>
<b>Why</b>	<ul style="list-style-type: none"> <li>➤ To correct knowledge gaps or skill deficits</li> <li>➤ To provide feedback that is specific and helpful to the student</li> <li>➤ To encourage the student to continue trying</li> <li>➤ To guide learning by letting the student know where s/he needs to focus.</li> <li>➤ To keep a written record of student progress.</li> </ul>
<b>When</b>	<p>There are no hard-and-fast rules about how often you should include teacher commentary in your feedback to students. Common sense says that it is impractical to expect that every piece of work would have detailed commentary; on the other hand, if teacher commentary is only provided at the end of a unit/course, it doesn't offer much opportunity for the student to learn and improve! Here are some general guidelines.</p> <ul style="list-style-type: none"> <li>➤ Often enough to document progress throughout a unit</li> <li>➤ Often enough so that students can make adjustments and learn and then demonstrate new learning.</li> <li>➤ Often enough so that students can see patterns in their work and in the commentary their work elicits.</li> </ul>
<b>How</b>	<p>First, review the standards and elements so that you have expectations clearly in your mind, and so that you can refer to them (in terms students understand) in your commentary.</p> <p>Center your comments around the standards and elements. If the teacher commentary is in writing, think of it as a "written conference."</p> <p>Be very specific; this helps students know exactly what they are doing right and/or wrong.</p>

<b>Sample student work</b>	<p>7. Refer participants to the student work that they saw in the previous exercise and ask them to independently develop teacher commentary for one piece of work.</p> <p>8. Allow ten minutes.</p> <p>9. Ask participants to share their commentary with a partner. Ask partners to provide "commentary on the commentary."</p> <p>10. Allow five minutes.</p>
	<p>11. Ask volunteers to offer one thing each that they could do immediately to improve their practice in the area of teacher commentary.</p>
<b>Slide, Essential Question 6</b>	<p>12. Show slide, Essential Question 6, and ask participants to share their observations.</p> <div data-bbox="721 844 1154 1171" style="border: 1px solid black; padding: 10px; margin: 10px auto; width: fit-content;"> <p style="text-align: center; color: blue;"><b>Essential Question 6</b></p> <ul style="list-style-type: none"> <li>■ How can we use use teacher commentary to increase student learning?</li> </ul> <div style="text-align: center; margin-top: 10px;">  </div> </div>
	<p><b>13. Transition: Now that we've taken a look at student work and teacher commentary, we're going to move on to a brief discussion of curriculum mapping.</b></p>

## **Curriculum Mapping**

**Time** 1 hour

**Overview** In this brief section, participants begin to think about the formats and processes that they would like to use to map out their instructional units throughout the school year.

**Objective** ➤ Explain different ways to map curricula.

**Activities** ➤ Basic Principles of Curriculum Mapping  
➤ Creating a Sample Map

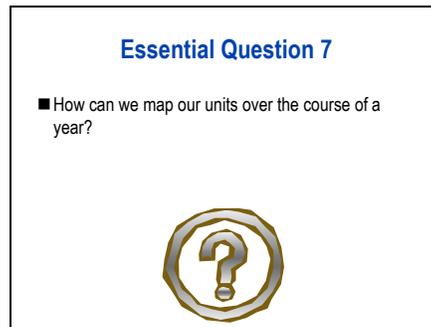
**Materials** ➤ Chart paper  
➤ Transparencies or PowerPoint presentation  
➤ Sample maps

***Trainer's Note:*** *The Heidi Hayes Jacobs book, Mapping the Big Picture, contains 17 sample curriculum maps in the appendix. You should choose a sample from those, or from others that you have, to show the participants. Because different types of maps might appeal differently to teachers in various subjects and at various grade levels, we are not prescribing a specific set of samples for you to use, but the Hayes Jacobs book is a great starting point. Also, you should provide a variety of maps to show the many ways that they can be used.*

**25 min.****Basic Principles for Curriculum Mapping**

Slide, *Essential Question 7*

1. Show slide, *Essential Question 7*.



2. Ask: **How is mapping like planning a group tour for 100 people in Europe? Jot down your thoughts, and then share with your table partners.**
3. Lead a discussion of the similarities. Make the following points if they do not come from the participants:
  - **You need a master itinerary that shows where everyone will be at all times.**
  - **You want everyone to see the really important sites.**
  - **Without a plan, many group members could wander off on side trips or stay too long in "favorite places."**
  - **You need a way to communicate all the events to the tour group members.**
  - **You need some flexibility to allow for special needs and interests.**
  - **If you are to have a common assessment at the end of the trip [CRCT, EOCT, GHSQT], you need a common itinerary.**
4. Present: **Teachers often work in isolation, or in what we have come to refer to as "private practice," to plan the scope and sequence of their instructional units. Mapping, by contrast, is a collegial or collaborative approach.**

Slide, What Mapping Does

5. Show slide, What Mapping Does, and go over the following points, revealing each bullet on the slide to correspond with the discussion points below:

**What Mapping Does**

- Provides a road map
- Gives teachers a picture of students' long-term experiences
- Serves as a communication tool
- Shows potential links
- Provides timeline for new teachers

The above statements are only true if the maps are living documents that people use!

- **Maps work just like itineraries or road maps to show teachers where they are in a particular scope and sequence, what their students have been learning, and where their students need to be by the end of the unit, year, or grade level. They simply show where students have been and where they are going. Teachers need each other's maps to see the bigger, K-12 curriculum perspective.**
- **Individual teachers use maps to get a picture of what students experience from grade to grade. Though teachers work in the same building, they may have sketchy knowledge about what goes on in other classrooms. If gaps exist among teachers within buildings, there are chasms among buildings in a district. When this is true, transient students experience a happenstance curriculum.**
- **There may be gaps between a standard and what is actually taught. These curriculum gaps negatively impact student learning. Maps may indicate missing pieces in vertical and horizontal articulation.**
- **Maps may also reveal repetitions. Too often teachers assume that they are introducing a concept, or even a book, for the first time, and students are subjected to repetitious instruction.**
- **Maps provide a calendar-based timeline for teachers. This is most helpful for new teachers not experienced in planning for an entire course.**

- 6. Present: **The map should be viewed as a "living" document that plays an integral part in teacher planning each day. For that reason, many of our schools need to redo old maps, especially if they do not reflect the new GPS.**

Sample Maps

- 7. Distribute sample maps or refer participants to sample maps in Mapping the Big Picture.

Trainer’s Note: You should have chosen several from the Heidi Hayes Jacob book (or from your own files). See note on previous page.

- 8. Discuss the maps, pointing out that they are not free from error but represent efforts by these schools/systems.

Slides (2), Grade Level Content Maps

- 9. Show slide with sample maps, Grade Level Content Maps. Explain that these are just two types of examples.

**Grade Level Content Map 1**

Grade		Subject Area			
Aug	Sep	Oct	Nov	Dec	

**Grade Level Content Map 2**

Grade	Subject Area		
	Content	Skills	Assessment
Aug			
Sep			
Oct			
Nov			
Dec			

**10. Present: The samples you have may differ, and the variations on the curriculum maps are limited only by your imagination. As we've discussed, you can:**

- **Use them to map out textbooks, technology, and other resources to units.**
- **Use them to show relationships from subject to subject (horizontal) or from year to year in the same subject (vertical).**
- **Create them on large butcher paper, index cards, standard 8½ X 11 sheets of paper, or on a computer.**
- **Organize them by the months of the school year down the side or across the top.**
- **Create both "macro" level maps that show the high level curriculum throughout the K-12 experience and "micro" level maps that explain in detail what happens in one subject in one grade level in one year, and various combinations of the two.**

Slide, What types of maps would serve you well?

11. Show slide, *What types of maps would serve you well?*

12. Read the directions.

**What types of maps would serve you well?**

- Work in small groups.
- Generate some possible map formats.
- For each one:
  - Identify its purpose and audience
  - Tell what type of information it would contain
  - Identify the relative level of detail (high, medium, low)
  - Show what it might look like
  - Create a one-page description and thumbnail drawing to post on the wall.
  - Put any new units that you have created into the map.



Chart paper  
Markers

13. Divide the class into groups of 3 – 5. Provide each group with chart paper and markers to display each idea they have. Encourage creativity.

14. Allow 15 minutes for small group work.

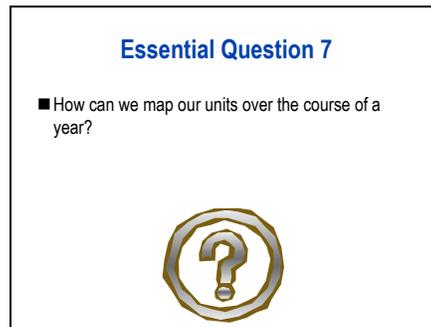
15. Ask each group to post their work. Invite all participants to walk around the room and see what each team has developed.

Trainer's Note: Ask participants to remain standing for the next activity.

**16. Debrief: Were there any “Aha’s--revelations” during this activity? What were they?**

Slide, Essential Question 7

17. Show slide, Essential Question 7, and ask participants to share their observations.

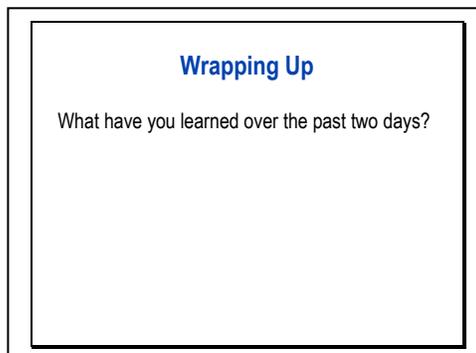


18. Summarize the workshop: Ask participants to volunteer one immediate and one long-term “to do” related to instruction.

Slide: Wrapping Up

19. Show slide, Wrapping Up. Present:

- **At the beginning of this workshop, I asked you to think of one specific thing you hoped to get out of this training. I’d like for you to return to that at this time.**
- **Did you learn what you hoped to learn?**
- **Is there anything you still need to know before you leave today?**



**20. Present: This has been a challenging year for all of us, but I’m confident that you’re ready to begin implementing the GPS. Please remember that the system curriculum**

**personnel and the curriculum specialists at the DOE are available to answer questions or provide assistance.**