



*Training for the New Georgia Performance Standards
Day 2: Unpacking Standards for Unit Development*

Mathematics 6th Grade Content Facilitator's Guide

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.

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

Module Rationale This training extends and builds upon day one of training.

The first purpose of day one of training was to introduce participants to the applicable standards. For 2004-2005, these include:

1. K-3 ELA
2. 4-8 ELA
3. 9-12 ELA
4. 6 Mathematics
5. 6-7 Science
6. 9-12 Life Science
7. 9-12 Physical Science

The second purpose of day one of training was to introduce the standards-based education approach and to assist teachers in using this “backward design” approach to develop assessments and instruction in support of the new curriculum standards. During day one of the training, the emphasis was on the model itself—what it is, why it is important, and how it can be used so that the new GPS have a profound impact at the classroom level.

The purpose of day two of the training is to delve deeper into stage 1 of the backward design process, helping participants to gain proficiency in unpacking standards.

One of the most important principles of professional development is that people seldom gain expertise from a “one shot” workshop. Instead, we need multiple opportunities for practice and feedback with a variety of examples and in a collaborative environment. This is why day two is so essential, even though very little new content is presented. In day one, participants were introduced to backward design and the new standards, but they had very limited time to apply their new knowledge. In day two, they have multiple opportunities to unpack standards, resulting in deeper knowledge of both the standards and the processes, sharing of ideas, and greater fluency.

**Module
Description**

This module includes preparation (an assignment to unpack a standard that was given at the end of day one), an instructor-led one-day session composed of several large and small group demonstrations and practice activities, and follow up. The prior preparation helps participants to jump into meaningful discussions quickly, and the follow up serves as a bridge to day three of training.

Module Goal

Demonstrate a deep understanding of the new Georgia Performance Standards for mathematics and the standards-based education approach, through thoughtful curriculum planning..

Key words from the goal:

- Deep understanding
- Georgia Performance Standards (GPS)
- Standards-based education

**Module Two
Objectives**

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

1. Define the rationale for and describe the process of identifying big ideas, enduring understandings, essential questions, and skills and knowledge for a standard.
2. Develop, for a given standard, the big ideas, enduring understandings, essential questions, and skills and knowledge (unpack the standard).
3. Unpack multiple standards to create cohesive units of study.

Module Sequence Prior Preparation-
Unpack an assigned standard (assigned at end of day one)

Introduction (60 minutes)

- Gallery Walk
- Overview of the Module
- Review of Day One Content
- Discussion of Day One Follow Up Assignment

Large Group Demonstration (1 hour, 35 minutes)

- Identifying Big Ideas
- Transforming Big Ideas into Enduring Understandings
- Developing Essential Questions
- Identifying Skills and Knowledge

Unpacking a Single Standard (1 hour, 30 minutes)

- Small Group Activity
- Large Group Discussion

Unpacking a Multiple Standards (1 hour)

- Small Group Activity
- Large Group Discussion

Summary and Follow Up Work (20 minutes)

- Action Planning
- Follow-up Assignment
- Summary

Leader Roles and Responsibilities This workshop will require of you a different set of skills than most other instructor-led training programs. There is less presentation and lecture; instead, you will have to use demonstration, questioning, and facilitation skills. This guide includes the basic questions you should ask the participants, but throughout the workshop, you will have to add additional probing questions to get the participants to question their assumptions and continue to refine their understanding of what standards-based teaching is and how it can make a difference.

Target Population

The target populations for this training are teachers of English Language Arts at all grade levels; teachers of 6th grade mathematics; and teachers of 6th grade, 7th grade, and high school science. **This includes teachers of this content in special education, gifted, and supplemental/alternative positions who need to be knowledgeable of the general curriculum in order to provide accommodations, modifications, and/or support so that students with special needs have access to, and progress in, that curriculum. Also included in the target population are others in leadership positions for these portions of the curriculum (e.g., literacy coaches, curriculum specialists).**

Teachers will be trained locally, in groups corresponding to the following modules:

1. K-3 ELA*
2. 4-8 ELA*
3. 9-12 ELA*
4. 6 Mathematics*
5. 6-7 Science*
6. 9-12 Life Science*
7. 9-12 Physical Science*

* This includes regular education, special education, gifted education, and supplemental/alternative teachers.

Module Preparation

Preparation is critical to a successful training session. Listed below are some tips that will help you prepare for your session.

1. Participate in a Train-the-Trainer session.
2. Gather all the required articles, texts, and other materials listed in the "Module Materials" list on page 13. A set of books is provided to each school, as listed on page 13. Become very familiar with these materials and the materials in the *Recommended Readings* list.

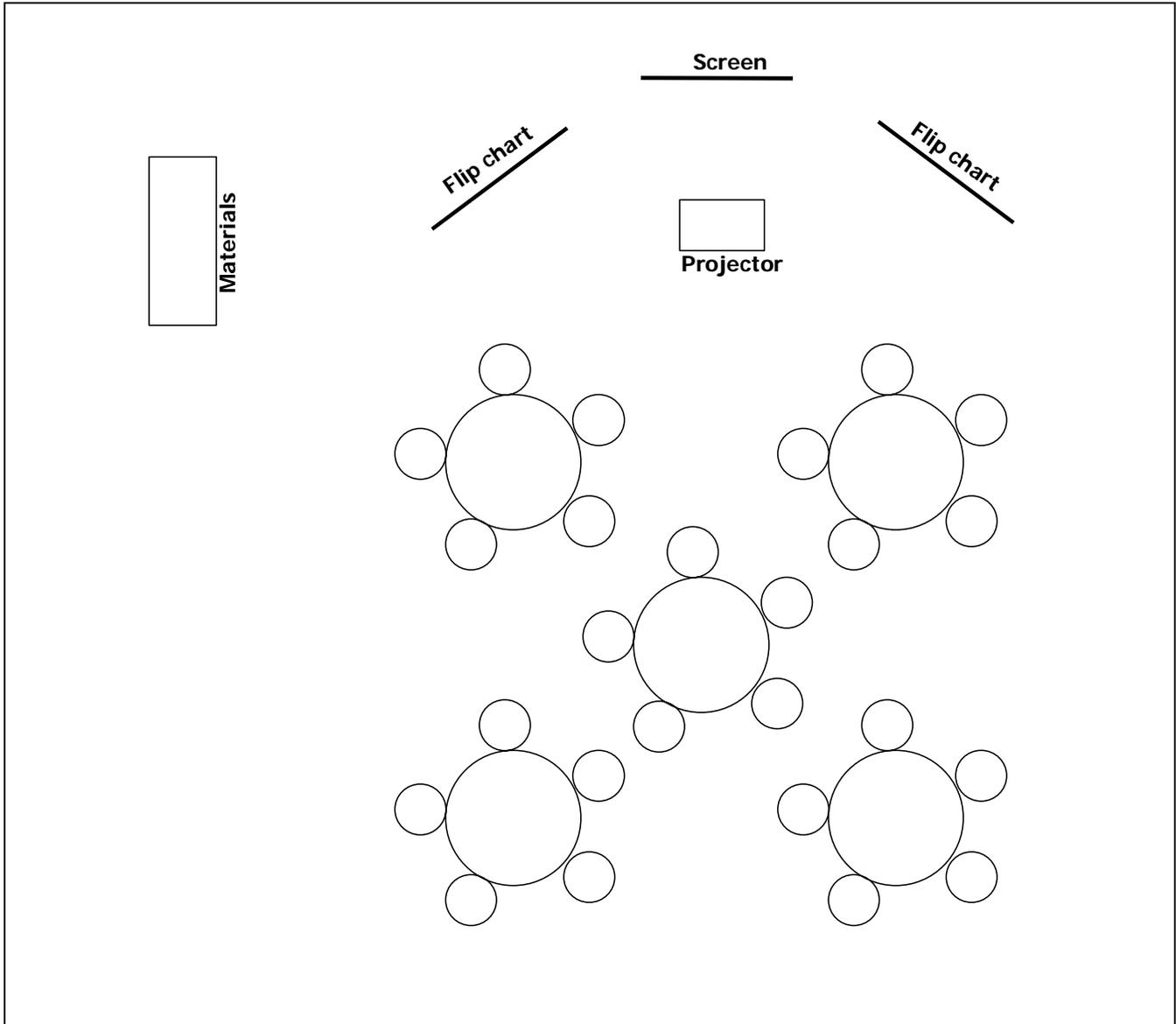
3. Ensure that school administrators understand the preparation and follow up requirements of the course and that the GPS curriculum changes have evolved from a very open public process that included public input from responses sought by the DOE. Current GPS were developed taking into consideration all input from all respondents.
4. Ensure the participants who are enrolled in your training sessions have the preparation materials (also known as the day one follow up assignment) and realize it is an absolute requisite to attending the training. The best way to ensure compliance is to have multiple contacts with the participants and their administrators. During these contacts, whether by mail, phone, or e-mail (preferably a combination), ensure that participants understand the assignment and are committed to arriving prepared. Anything you can do to establish a relationship with participants will help reduce stress and ensure a meaningful and successful training experience. If the participants start the training unprepared, they may never catch up.
5. Identify a date, times, and location for this training. This may vary from one setting to the next, as you work with local schools and districts to arrange a customized delivery schedule. Prepare a handout with this information and photocopy it for the participants. You can use the agenda on page 20 to guide you.

6. Determine how course follow-up will be handled. It is very important that professional development be an on-going, job-embedded process, with the training sessions being part of a cohesive plan to help teachers increase skills and knowledge. Here are some questions you must answer before conducting the workshop:
 - Will there be any follow-up conference calls or a list serve to discuss progress and provide an information-sharing and networking forum? If so, who will lead them? When? How?
 - How will we ensure that participants complete the follow-up assignments? Who will follow up with reminders? How will we make sure this effort is supported locally?
 - Will there be grade level meetings? Department meetings?

7. Gather information about your training site:
 - Mailing address, contact person with phone number (Participant materials need to be shipped to a specific location and someone needs to receive the materials.)
 - Size of room and space to work in small groups
 - Audio visual equipment
 - Projection system
 - Two flipcharts with pads
 - Table and chairs: One table for leader (in front), one for materials, enough tables for the number of participants to sit in groups of about four
 - Wall space for your posters and flipcharts
 - Determine plans and payment for refreshments as desired/needed.
 - Review the graphic of the ideal site setup on page 12.
 - Set up your training room the night before the training. If you have never seen the room, this is especially important.
 - Test all equipment and make sure you have all of your materials organized for efficient distribution.

8. Go through the entire Content Facilitator's Guide.
 - Prepare an agenda. (You may also want to mark key times with Post-Its put in your guide.)
 - Use margins to note key points you plan to emphasize.
 - Walk through all activities.
 - Prepare any flipcharts.
 - Make sure your materials are organized according to when you will need them.
 - Make any adjustments that are needed to the activities, room layout, audio-visuals, etc., based on the number of participants.

Recommended Training Setup



**Module Materials
for Day Two 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)

Other materials needed:

- Name tags
- Easel chart page for each participant (These will be posted in easily accessible locations around the room.)
- Extra easel chart paper and stand
- Masking tape to post chart pages
- Highlighter markers, one per participant
- Flipchart markers
- One set of 26 matching cards for each table (see page 47 for cards). Cards should be photocopied, cut out, and distributed in sets

Equipment:

- Overhead projector or computer and LCD projector
- Videotape player

Provided Texts

Each school will receive one copy of each book listed below, and ten copies of the *Understanding by Design* book.

Hayes Jacobs, Heidi. *Mapping the Big Pictures: Integrating Curriculum and Assessment K-12*. Alexandria, VA: Association for Supervision and Curriculum Development. 1997

Marzano, Robert J. *What Works in Schools: Translating Research into Action*. Alexandria, VA: Association for Supervision and Curriculum Development. 2003.

Robert J. Marzano, Debra Pickering, and Jay McTighe. *Assessing Student Outcomes: Performance Assessment Using the Dimensions of Learning Model*. Alexandria, VA: Association for Supervision and Curriculum Development. 1993.

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

Marzano, Robert J, Jana Marzano, & Debra Pickering. *Classroom Management That Works: Research-Based Strategies for Every Teacher*. Alexandria, VA: Association for Supervision and Curriculum Development. 2003.

Strong, Richard W., Harvey F. Silver, and Matthew J. Perini. *Teaching What Matters Most: Standards and Strategies for Raising Student Achievement*. Alexandria, VA: Association for Supervision and Curriculum Development. 2001.

Tomlinson, Carol Ann. *How to Differentiate Instruction in Mixed-Ability Classrooms, 2nd edition*. Alexandria, VA: Association for Supervision and Curriculum Development. 2001.

Wiggins, Grant and Jay McTighe. *Understanding by Design*. Alexandria, VA: Association for Supervision and Curriculum Development. 1998. *

Wiggins, Grant and Jay McTighe. *Understanding by Design Study Guide*. Alexandria, VA: Association for Supervision and Curriculum Development. 2000.

* Note: Each school may request ten copies of this book with a study guide by asking your system curriculum specialist to email Robin Gower at rogower@doe.k12.ga.us . These sets are available on a first come/first served basis.

**Day One Follow
Up/Day Two
Preparation**

Remind participants to complete the day one follow up assignment as preparation for day two. They will be using this assignment during the class session.

Recommended Readings

Books

Dufour, R., & Eaker, R. (1998). *Professional Learning Communities at Work*. Bloomington, IN: National Educational Service.

The authors use Adlai Stevenson High School as the case study of how principals can create learning communities where student learning and achievement are center stage. The book lays out the school improvement process. No failing schools would exist if every school became a learning community modeled after DuFour's school. The book contains an extensive bibliography.

Hayes Jacobs, Heidi. *Mapping the Big Pictures: Integrating Curriculum and Assessment K-12*. Alexandria, VA: Association for Supervision and Curriculum Development. 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 12. Southern Regional Education Board, 2004. Publication Orders Department, 592 10th St. N.W., Atlanta, GA 30318-5790, Fax: (404) 872-1477 (03V63, \$10 each/\$6.50 each for 10 or more.) <http://www.sreb.org/main/Publications/catalog/howtoorder.asp>.

This volume is essential for state, district, and school leaders who plan to implement schoolwide 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: Association for Supervision and Curriculum Development. 2001.

Using a meta-analysis of thousands of research studies, Marzano 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., Norford, J., Paynter, D., Pickering, D., & Gaddy, B. (2001). *A Handbook for Classroom Instruction That Works*. Alexandria, VA: Association for Supervision and Curriculum Development.

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 strategy with students.

Marzano, Robert J. *Classroom Management That Works: Research-Based Strategies for Every Teacher*. Alexandria, VA: Association for Supervision and Curriculum Development. 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.

Marzano, Robert J. *Transforming Classroom Grading*. Alexandria, VA: Association for Supervision and Curriculum Development. 2000.

Grading has the *potential* for being a valuable learning tool that helps both students and teachers clearly see how they can improve; however, this potential is seldom realized. In this book, Marzano presents viable alternatives to traditional assessment that are grounded in research and practical at the same time.

Strong, R., Silver, H., & Perini, M.. *Teaching What Matters Most: Standards and Strategies for Raising Student Achievement*. Alexandria, VA: Association for Supervision and Curriculum Development. 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.

Tomlinson, C. *The Differentiated Classroom: Responding to the Needs of All Learners*. Alexandria, VA: Association for Supervision and Curriculum Development. 1999.

Tomlinson explains the elements of differentiated instruction and the importance of differentiated instruction within the classroom. The book also serves as an instructional guide for educational leaders and instructors as differentiated strategies are implemented.

Tomlinson, C. *How to Differentiate Instruction in Mixed-Ability Classrooms*. Alexandria, VA: Association for Supervision and Curriculum Development. 2001.

This excellent resource includes concrete examples of instructional strategies matched to the readiness, interests, and talents of all students. Strategies include learning-centered, hands-on activities; contracts; and investigative projects. The author also offers lesson-planning strategies to provide scaffolding of the content, procedures used in learning, and products of learning.

Wiggins, Grant and Jay McTighe. *Understanding by Design*. Alexandria, VA: Association for Supervision and Curriculum Development. 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: Association for Supervision and Curriculum Development. 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: Association for Supervision and Curriculum Development. 2004.

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

Professional Organizations

NAGC – <http://www.nagc.org/>
NCTM – <http://www.nctm.org/>
NCTE - <http://www.ncte.org/>
GCTE - <http://www.gcte.org/>
IRA - <http://www.reading.org/>
GRA - <http://www.georgiareading.org/>

Web Sites

Read-Write-Think. NCTE/IRA. <http://www.readwritethink.org/>.

This site contains lessons, web resources, standards, and student materials. It provides quality practices and resources in reading and language arts instruction.

Illinois School Improvement Division. http://206.166.105.86/knowledge/standards_resources.asp.

This site provides Illinois Learning Standards Resources, including benchmark indicators, sample learning activities, and sample student work.

Units (incorporating Learning Focused components). Connected Learning. <http://www.title3.org/>.

BOCES is a cooperative service organization that helps school districts save money by pooling resources and sharing costs.

Special Education Resources

Access, Participation, & Progress in the General K-12 Curriculum. National Center on Accessing the General Curriculum (ncaog.org).

Approximately 70 general and special educators and parents attended the National Capacity Building Institute on Access, Participation, and Progress in the General Curriculum, held on July 10, in Arlington, VA. The article includes the proceedings from the Institute.

Aligning Special Education with NCLB. www.idonline.org.

The No Child Left Behind Act (NCLB) is a standards-based reform movement. This movement emphasizes standards and the alignment of curriculum and assessment to those standards. States established what is to be taught. The goal of standards is to increase academic achievement levels. A related goal is to close the achievement gap for students who have traditionally been at-risk for academic failure or lack of success. This group includes students with disabilities.

Thompson, S., Thurlow, M., Quenemoen, R.F., & Esler, A. (2001). *Addressing Standards And Assessments On State IEP Forms*, National Center on Educational Outcomes (NCEO Synthesis Report 38)

This article summarizes data on each State's use of standards in developing Individualized Education Programs (IEP) for students with disabilities. All fifty states were asked to send their IEP forms and to indicate whether the forms were required, recommended, or simply sample forms. Out of the 41 states with IEP forms, only 5 states specifically addressed the general curriculum on their forms. Recommendations for IEP forms that provide decision-making guidance involving access to the general curriculum are summarized.

Writing Standards-based IEPs. Colorado Department of Education. www.cde.org.

The Colorado Department of Education provides information for teachers on developing standards-driven IEPs. The summary includes a definition of standards-driven IEPs, characteristics of standards-driven IEPs, and a rationale for standards-driven IEPs.

Resources for Differentiation

Association for Supervision and Curriculum Development. *At Work in the Differentiated Classroom*. Alexandria, VA. Author. (video staff development set). 2001.

Chapman C. & Gregory, G. *Differentiated Instruction Strategies For Writing In The Content Areas*. Thousand Oaks, CA: Corwin Press. 2003.

Coil, C. *Standards-Based Activities And Assessments For The Differentiated Classroom*. Marion, IL: Pieces of Learning. 2004.

Tomlinson, C. *Fulfilling The Promise Of The Differentiated Classroom: Strategies And Tools For Responsive Teaching*. Alexandria, VA: Association for Supervision and Curriculum Development. 2003.

Winebrenner, S. *Teaching Gifted Kids In The Regular Classroom*. Minneapolis, MN: Free Spirit. 1992.

Agenda

This is a one-day course, with approximately 5 1/2 hours of instructional time.

Introduction 60 minutes

- Gallery Walk
- Overview of the Module
- Review of Day One Content
- Discussion of Day One Follow Up Assignment

Large Group Demonstration 1 hour, 35 minutes

- Identifying Big Ideas
- Transforming Big Ideas into Enduring Understandings
- Developing Essential Questions
- Identifying Skills and Knowledge

Unpacking a Single Standard 1 hour, 30 minutes

- Small Group Activity
- Large Group Discussion

Unpacking Multiple Standards 1 hour

- Small Group Activity
- Large Group Discussion

Summary and Follow Up Work 30 minutes

- Follow-up Assignment
- Summary

Introduction

Time 60 minutes

Overview In the introduction, the participants complete a gallery walk in which they examine each others' work from the day one follow-up assignment. After a brief presentation of the day's agenda and objectives, participants complete a matching game reviewing day one content and create a graphic organizer of the backward design process and GPS. Finally, they discuss the work from the gallery walk.

Objectives ➤ To review concepts and understandings from Day 1 training

Activities

- Gallery Walk (10 minutes)
- Overview of the Module (5 minutes)
- Review of Day One Content (30 minutes)
- Discussion of Day One Follow Up Assignment (15 minutes)

Materials

- Overhead projector or computer and LCD projector
- Transparencies or PowerPoint presentation
- Participant's Guide
- Easel chart pages for each participant (these should be posted in easily accessible locations around the room)
- Flipchart markers
- Extra easel chart pages to supplement above
- Tape to post easel charts
- Scratch paper
- One set of 26 matching cards for each table (see page 47 for cards). Cards should be photocopied, cut out, and distributed in sets

→

- Prepared flipcharts: *GPS and SBE (Standards-Based Education) as a Tree in a Field* and *GPS and SBE as a Three-legged Stool*. (Note: Models for these flipcharts are on page 36 in the book *The Understanding by Design Handbook*.) You may want to customize these drawings to your audience. Do not include the text labels that are in the book; you just want to give the participants the idea of how they can create this type of graphic organizer.

Gallery Walk (10 minutes)

Markers

1. Before participants begin to arrive, complete the following:

Slide 1

- Display slide 1, *Welcome: Gallery Walk*.
- Place chart paper and markers at the entrance to the room or in another obvious location.

2. As participants arrive, direct their attention to the slide, the easel charts, and the markers and ask them to begin work immediately (do not wait until everyone has arrived).
3. Encourage participants to view others' work.

Slide 2

4. Show slide 2, which is the title slide.
5. When all participants have arrived and have written their work on the charts (if some are still finishing up, that is fine), ask:

How many of us would say that we are experts in unpacking the standards, and that we are fluent enough to skillfully unpack all the new GPS standards? (Expect few if any to respond.)

6. Present:
 - **One of the most important principles of professional development is that people seldom gain expertise from a "one shot" workshop. Instead, we need multiple opportunities for practice and feedback with a variety of examples and in a collaborative environment.**
 - **In day one, you were introduced to backward design and the new standards, but you had very limited time to apply the new knowledge. Today, we will experience multiple opportunities to unpack standards, resulting in deeper knowledge of both the standards and the processes, sharing of ideas, and greater fluency.**

- **There will be very little “new content” presented today; we will review the content from day one. However, even though we might not “cover” much new material, you will grow in skill, fluency, and confidence as you work with your colleagues to unpack additional standards. This will serve you well as you work toward implementing the GPS.**

Overview of the Module: Presentation (5 minutes)

Slide 3

1. Show slide 3, *Module Overview: Day Two*.
2. Present:
 - **The introduction will include a review of day one information and the follow up assignment.**
 - **The next three sections are repeated practice opportunities, first working together as a large group and then working in small groups, so that you can unpack multiple standards. In the last of these activities, we will work at unpacking multiple standards that would be involved in a single unit of study.**
 - **In the summary, you will create an action plan for unpacking the remainder of the standards.**

PG-4 and 5

3. Present: **The agenda is presented on page 4 of your Participant's Guide. The goal and today's objectives are listed on page 5 of your Participant's Guide.**

Slide 4

4. Show slide 4, *Day Two Objectives*. Explain:
 - **There are only three objectives for today's training, and they are all related.**
 - **We will practice, reflect, collaborate, and receive feedback on each of these objectives.**
5. Present: **Because we have only one day together at this time, it might be helpful to talk about some ways that we can all work together.**

Slide 5

6. Show slide 5, *Group Norms and Housekeeping*. Ask participants if they would like to add to or change the group norms. Record any needed changes on a flipchart. Then, ask participants to agree to these norms.



7. Go over housekeeping rules (phone, breaks, etc.) as appropriate to your schedule and location.
8. Ask: **What questions can I answer about today's agenda before we continue?**

Review of Day One Content (30 minutes)

1. Present: **Let's start with a review of the content from day one. We'll first complete a short matching game, to refresh our memory of key terms/concepts, then we will construct a graphic organizer that ties all these concepts together.**

Cards, one set per table (see page 47)

2. Distribute one set of cards to each table team (teams should be 4-6 individuals) and instruct them not to look at the cards yet.

Slide 6

3. Show slide 6, *Matching Game*. Read the instructions.
4. Direct the teams to begin and to let you know when they think they have all matches correct. Check each group's work as needed until a winner can be declared. (This should proceed fairly quickly.)

Two prepared flipcharts: *GPS and SBE as a Tree in a Field* and *GPS and SBE as a Three-legged Stool*

5. Present: Now that we can recall the definitions of these concepts, let's discuss how they are related.
6. Refer participants to the two wordless pictures on the flipchart. Explain: When we are talking about the GPS and standards-based education, we may want to use a metaphor. One such metaphor might be a tree in a field.
7. Discuss: **How might the different terms on your cards be represented on this picture?**

Trainer's Note: Encourage participants to suggest labels for the various parts of the picture. Also, encourage them to use other appropriate terms besides those on the cards. Do this quickly.

8. Refer participants to the three-legged stool. Present: **This is another representation that we could have used, and you may be able to think of additional ones, such as a building.**
9. Ask participants to work in small groups to create their own graphic organizer. Allow ten minutes. Ask participants to post their work for whole group viewing.
10. Ask participants to identify common themes that represent enduring understandings related to GPS and SBE.
11. Transition: **Let's now return to look again at the Gallery Walk you created when you entered this room.**

Discussion of Day One Follow Up Assignment (15 minutes)

Slide 8

1. Show slide 8, *Day One Follow Up Assignment*.
2. Ask participants to work in small groups to answer each of the questions on the slide.
3. Allow about 8 minutes. Tell participants when two minutes remain.
4. Ask volunteers to share key similarities and differences.
5. Ask each group to report out their questions/concerns. Write these on a blank easel chart.

Easel chart:
Questions and
Concerns

Trainer's Note: Post the questions/concerns and let participants know that you will address all of them by the end of the day. Throughout the days training, refer to this chart to clear up questions and concerns as appropriate to the topic being discussed.

Large Group Demonstration

Time	1 hour, 35 minutes
Overview	In this section, the trainer leads participants through the process of unpacking a standard, taking time to make sure that participants understand how and why to complete each step.
Objective	<ul style="list-style-type: none">➤ Define and describe the rationale for identifying big ideas, enduring understandings, essential questions, and skills and knowledge for a standard.
Activities	<ul style="list-style-type: none">➤ Identifying Big Ideas (10 minutes)➤ Transforming Big Ideas into Enduring Understandings (20 minutes)➤ Developing Essential Questions (25 minutes)➤ Identifying Skills and Knowledge (25 minutes)➤ Summary (20 minutes)➤ Bright Ideas (15 minutes)
Materials	<ul style="list-style-type: none">➤ Copy of standards➤ Chart paper➤ Highlighter markers➤ Participant's Guide➤ Overhead projector or computer and LCD projector➤ Transparencies or PowerPoint presentation➤ Easel chart with GPS standard written on it: M6N1. Students will understand the meaning of the four arithmetic operations as related to positive rational numbers and percents using concepts to solve problems.

Identifying Big Ideas (10 minutes)

- Slide 9
1. Show slide 9, *Essential Question 1*. Present: **We are going to be exploring this question first.**
- Slide 10
2. Show slide 10, *The Process of Backward Design*. Continue: **In Day One Training, together we unpacked a geometry standard. Today we will continue to study unpacking standards by going through the process with a different standard. This will help us get a deeper understanding of how each of the steps in this process (big ideas, enduring understandings, essential questions, and skills and knowledge) help us design better instruction. This process will help students master the standards.**
 3. Present: **The first thing we will do is identify big ideas.**
 4. Refer to Design Template on page 13 in the UbD Workbook. Ask: **Why are “big ideas” not included in the design template that we used at Day One Training?** (They are just a way to get to enduring understandings, which are on the template; finding the big ideas is an intermediate step.)
- Slide 11
5. Show slide 11, *Big Ideas*. Present: **When you think about big ideas, the question you should ask yourself is, “What are the big ideas and core processes at the heart of this standard? What do I want to concentrate on and emphasize in this unit?”**
- PG-6
Highlighter markers
6. Refer participants to page 6 in the Participant's Guide.
 7. Ask participants to read the page silently and then go through it again and highlight the big ideas within the passage, or the “Big Idea big ideas.”
 8. Allow a few minutes for reading and highlighting.

9. Ask participants if they have any questions or comments about page 6.
- Easel chart with standard-M6N1
10. Refer participants to the easel chart printed with the new standard to be unpacked during the demonstration. Ask: What big ideas should we underline here? Suggested answers include:
- ...understand the meaning
 - four arithmetic operations
 - positive rational number
 - percent
11. Discuss: **Do you think it is better to go through this activity as a group or to do it individually (not necessarily here in training, but back at school)?**
- PG-Learning Journal
12. Refer participants to the learning journal pages at the back of their Participant's Guides and ask them to write down reflections on what they have learned about identifying big ideas.

Transforming Big Ideas into Enduring Understandings (20 minutes)

Slide 12

1. Present: **The next step in the process is to transform the big ideas into “enduring understandings.** Refer participants to *An Enduring Understanding* on page 7 in the Participant's Guide. Suggest that they highlight as they read.
2. Activity: **One of your sixth grade teammates has commented that she sees “no need for enduring understandings”. Your principal has asked you to meet with the teacher. Write at least one reason that you will give her for doing enduring understandings.** (Allow time for answers.) Then tell participants to walk around the room and find as many other people as they can who wrote the same response. After a few minutes, bring the group back together and ask if anyone found at least one who wrote the same response. Ask those who raised their hand to share their response.
3. Show Slide 12 *Enduring Understandings* and discuss as time permits.
4. Present: **Turning big ideas into enduring understandings can be tricky. Poorly defined enduring understandings are not much better than having none at all. Let’s look at an example.**

Slide 13

5. Show slide 13, *Enduring Understandings: Bad to Best*. Emphasize:
 - **Vague statements, such as the first one, do not clarify what the students should understand about the topic.**
 - **The middle statement is better in that it narrows the focus of the topic, but it still does not specify exactly what insights into cause and effect the teacher wants students to leave with.**
 - **The last proposition is best because it is an important generalization and it provides a focus to the study—a sharper target for teaching and assessing.**

Slide 14

6. Show slide 14, *Enduring Understandings: Format*. Present: **It is recommended that you use the format, “Students will understand that...” because this tends to lead us to better statements of enduring understanding. Simply restating the topic or saying “Students will understand” more often leads us to statements that are vague. Note that “Students will understand that” does not necessarily have to be written out each time—it may be implied, but the statement should read well if that phrase were inserted.**

Trainer's Note: On a blank flipchart, write, “Enduring Understandings” and “Students will understand that...” to emphasize this point.

Slide 15

7. Show slide 15, *Enduring Understandings-Math Examples*. Present: **This shows two examples of enduring understandings that relate to the first geometry standard.**

Easel chart with standard-M6N1

8. Refer participants to the easel chart printed with the new standard to be unpacked during the demonstration. Ask: **What are the enduring understandings here?** Ask participants first to write down their ideas independently, then to share them. Suggested answers include:
- Students will understand that we gain meaning of the four arithmetic operations by solving problems.
 - Students will understand that the four arithmetic operations can solve problems involving positive rational numbers and percents.

PG-Learning Journal

9. Refer participants to the learning journal pages at the back of their Participant's Guides and ask them to write down reflections on what they have learned about identifying enduring understandings.

Developing Essential Questions (25 minutes)

1. Ask: **What is the next step after identifying enduring understandings?** (Developing essential questions)
2. Discuss: What are essential questions, and why are they important? Suggested points to bring out include:
 - When knowledge is developed in the first place, it is often because of someone pondering and exploring a question. What makes a great story? Why were these artifacts found in this location? How might it feel if your home and land were destroyed by people in your country? Can everything be quantified? In what way is the human body a system? Many great theorists, inventors, writers, etc. started with questions such as these.
 - These “essential questions” not only lead to the development of new knowledge, but they can also be used by students and teachers to guide inquiry into existing knowledge.
 - Such questions make a unit design more coherent, make a student’s role more inquisitive, and help focus a teacher’s priorities. An important learning principle is at work here—key ideas must be questioned, played with, and discovered to be useful and deeply understood.
 - As a practical matter, developing essential questions that are strongly rooted in the enduring understandings of the standard creates a guidepost for the development of assessments and instruction. Assessments should test whether students can answer the essential question, and instruction should help them explore the question. Thus, essential questions link teacher and student activities to the standard.
3. Refer participants to page 8, *Essential Questions*, in the Participant’s Guide. Suggest that they highlight as they read. Show slide 16, *Developing Essential Questions*. Go over the practical tips on the slide.

Slide 16
PG-8

Slide 17

4. Show slide 17, *From Understandings to Questions*. Present: **Let's practice with two of the enduring understandings from the previous slides.** Ask participants to suggest possible essential questions for these understandings. Possible answers include:
 - Why is it important to understand symmetry?
 - To what extent do professionals use scale to analyze extremely large or small objects?

Gallery
Slide 18

5. Show Slide 18. Discuss the difference between an overarching essential question and other types of essential questions.
6. Refer participants to the gallery they created during the introduction.
7. Present: **Let's look at the information on page 8 in your Participant's Guide as we try to self assess and, if possible, improve upon the essential questions that you identified as part of your homework.**
8. Facilitate participants in identifying the strongest essential questions on the gallery standard, and in improving the statements to meet the criteria that have been discussed.

Easel chart with
standard

9. Refer participants to the easel chart printed with the new standard to be unpacked during the demonstration. Ask: **What are some appropriate essential questions?** Ask participants first to write down their ideas independently, then to share them. Suggested answers include:
 - What is a number?
 - Why do we have positive rational numbers?
 - How do we use positive rational numbers everyday?
10. Discuss: **How could essential questions help you develop better assessments and instruction?**

PG-Learning Journal

11. Refer participants to the learning journal pages at the back of their Participant's Guides and ask them to write down reflections on what they have learned about developing essential questions.

Identifying Skills and Knowledge (25 minutes)

PG-9

1. Refer participants to the diagram *GPS and the Backward Design Process* on page 9 in the Participant's Guide.

Present:

- **This diagram is a repeat of the one that you received on day one of the training.**
- **You can see that we have been working on Stage 1, *Identify Desired Results*. What information from the GPS have we used so far to identify big ideas, enduring understandings, and essential questions?** (The content standard with its elements.)
- **What information do we need to identify skills and knowledge?** (The elements of the standard)
- **Why do we look at skills and knowledge only after identifying big ideas, enduring understandings, and essential questions?** (to make sure that the skills and knowledge are directly supporting the enduring understandings of the standard)

Slide 19

2. Show Slide 19, *Skills and Knowledge* and ask participants to define the difference between skills and knowledge. (In a nutshell, knowledge is something you can say; a skill is something you can do.)
3. Discuss: **Let's take a look at an essential question and develop some skill and knowledge statements.**

PG-10
Gallery

4. Refer participants to *Essential Questions* on page 10 in the Participant's Guide and to the gallery they created during the introduction.
5. Present: **Let's look at the information on page 10 in your Participant's Guide as we try to self assess and if possible improve upon the skills and knowledge statements that you identified as part of your homework.**
6. Facilitate participants in identifying the strongest essential skill and knowledge statements on the gallery standard, and in improving the statements so that they cover a wide range of *necessary* skills and knowledge using verbs similar to the ones near the bottom of page 10 in the Participant's Guide.

Easel chart with
standard

7. Refer participants to the easel chart printed with the new standard to be unpacked during the demonstration. Ask: **What are some appropriate skill and knowledge statements?** Ask participants first to write down their ideas independently, then to share them. Suggested answers include:
 - Knowledge: Students will know ...
a positive rational number is a positive number that can be expressed as a ratio of two whole numbers.
 - Skill: Students will be able to ...
compute positive rational numbers using the four arithmetic operations.
8. Discuss: How could good skills and knowledge statements help you to better choose instructional materials and strategies?

PG-Learning Journal

9. Refer participants to the learning journal pages at the back of their Participant's Guides and ask them to write down reflections on what they have learned about developing essential questions.

Summary (15 minutes)

Easel chart:
Questions and
Concerns (from
introduction)

1. Refer to the easel chart of "Questions and Concerns" developed at the end of the introduction. Address any questions or concerns related to the content of the demonstration by first asking participants to identify any items that have been discussed. Have the participants offer suggestions before adding any additional information.

Graphic organizers

2. Ask participants to revisit the graphic organizers that they created during the introduction and work in small groups to enrich them.
3. Transition: **In the next section, we are going to basically repeat this unpacking process, but without all the extra discussion about the backward design process, and without my direct guidance.**

Slide 20
PG-Learning Journal

4. Show slide 20, *Essential Question 1*. Ask participants to consider this question and make notes in the Learning Journal at the back of their Participant's Guides.

5. Bright Ideas (15 minutes)

Unpacking a Single Standard

Time	1 hour, 30 minutes
Overview	In this section, participants will work in small groups to unpack a single standard. Then they will present their work to the large group, which will serve as a “critical friends” group and provide constructive feedback.
Objective	<ul style="list-style-type: none">➤ Develop, for a given standard, the big ideas, enduring understandings, essential questions, and skills and knowledge (unpack the standard).
Activities	<ul style="list-style-type: none">➤ Small Group Activity (45 minutes)➤ Large Group Discussion (45 minutes)
Materials	<ul style="list-style-type: none">➤ Chart paper➤ Flipchart Markers➤ Participant's Guide➤ Overhead projector or computer and LCD projector➤ Transparencies or PowerPoint presentation

Small Group Activity (45 minutes)

Slide 21

5. Show slide 21, *Essential Question 2*. Present: **We are going to be exploring this question next.**
6. Present: **Standards and elements should not be taught in isolation; however, we want to make sure that you get more comfortable with unpacking a standard before you tackle more than one. Therefore, you will start by working in small groups to unpack a single standard. Remember to include some of the process standards in all units. In the next section, you'll work on unpacking multiple standards for unit development.**

PG-11

7. Refer participants to page 11 in their Participant's Guide, *Unpacking a Standard*. Present: **This is a template that you can use for this activity. If you prefer to use scratch paper or another template, that's fine, but it should have all the same components.**
8. Present: **You are going to have 45 minutes to complete this activity, but we are going to take a pause in the middle to share our thinking.**
9. Have participants number off in such a way as to form groups of 3. (Divide number of participants by 3 to determine what number to count to.) Randomly, assign one of the twelve 6th grade standards to each of the individual groups. If you do not have enough groups, do not assign M6N1 or M6G1.
10. Ask groups to begin working.
11. At a suitable time (about 20 minutes into the activity), ask participants to pause in their work.
12. Ask each group to give a one-minute summary of what work they've accomplished, what insights they've had, and what they're struggling with. Ask other groups to provide constructive feedback.

Chart paper
Markers
UbD Workbook
PG 243-245

13. Have groups continue to work on their units and to read about peer review in the UbD workbook, pages 243-245.
14. At the end of 40 minutes, ask each group to work on summarizing their work into an easel chart. Also, ask them to create a list of questions based on feedback they'd like from the group, such as, "We are worried that this enduring understanding is too vague and not really targeted to the standard. What do you think?"
15. Allow five minutes for preparation.

Large Group Discussion (45 minutes)

1. In a systematic way, have each group give their unit to another group. Have each group send one group member to the reviewing group and provide a brief overview of the unit and state any issues that should be highlighted in the feedback session.
2. Allow 10 minutes for each group to review and assess strengths of the design of the unit, then weaknesses.
3. Post all the easel charts that participants have presented, so that everyone can see everyone else's work.
4. Give 35 minutes for each unit to be presented by design group and commented on by the review group.
5. Transition: Now that we've seen each other's work on a single standard, let's work in small groups on multiple standards.

Unpacking Multiple Standards

Time 1 hour

Overview In this section, participants will work in small groups to unpack multiple standards for a single unit, then they will present their work to the large group, which will serve as a “critical friends” group and provide constructive feedback.

Objective ➤ Unpack multiple standards to create cohesive units of study.

Activities ➤ Small Group Activity (40 minutes)
➤ Large Group Discussion (20 minutes)

Materials ➤ Chart paper
➤ Flipchart Markers
➤ Participant's Guide
➤ Overhead projector or computer and LCD projector
➤ Transparencies or PowerPoint presentation

Small Group Activity (40 minutes)

Easel charts from
previous exercise

1. Ask participants to work in the same groups as the previous exercise.
2. Present:
 - Around you, on these easel charts, you see several unpacked standards.
 - In the next exercise, I'd like you to complete Stage 1 of backward design (as shown on page 9 of your Participant's Guide) for one unit of study. This may be a unit that students complete in one week or six weeks—whatever amount of time is appropriate.
 - Choose the standards that apply to your unit from those on these charts. You may also pull additional standards from the GPS as needed, even if they are from other subject areas.
 - Complete the unpacking process for all the standards as a cohesive group. You may pull from work that groups have already done.
 - Do not plan assessment and instruction yet; just complete Stage 1.

PG-12

3. Refer participants to page 12 in their Participant's Guide, *Unpacking Multiple Standards*. Present: **This is a template that you can use for this activity. If you prefer to use scratch paper or another template, that's fine, but it should have all the same components.**
4. Present: **You are going to have 40 minutes to complete this activity.**
5. Ask groups to begin working.

Chart paper
Markers

6. At the end of 35 minutes, ask each group to work on summarizing their work onto an easel chart. Also, ask them to create a list of questions based on feedback they'd like from the group, such as, "We are worried that this enduring understanding is too vague and not really targeted to the standard. What do you think?"
7. Allow five minutes for preparation.

Large Group Discussion (20 minutes)

1. Post all the easel charts that participants have presented, so that everyone can see everyone else's work.
2. Ask each group to present stage 1 of their unit plan. Ask training participants to serve as a "Critical Friends" group, listening to each other's work and give feedback.
 - One group presents their unpacked standards.
 - Observers from other groups ask clarifying questions.
 - Presenting group asks observers questions about their work, such as, "We'd like your feedback on which of these essential questions you think are most critical for this s."
 - Observers provide warm and cool feedback, while presenting group remains silent.
 - Open discussion.

Slide 22

3. Show slide 22, *Essential Question 2*, and ask participants to suggest answers to this question.
4. Transition: **We hope that you will continue to work on unpacking standards after this session is over. For now, though, we are going to give you a follow-up assignment that will serve as a preview for days three and four of training, which deal with assessment.**

Follow Up Assignment, Summary, and Evaluations

Time	20 minutes
Overview	Participants work on a cooperative learning activity to summarize what was learned in Day 2.
Objectives	Summarize and share what participants learned in Day 2.
Activities	<ul style="list-style-type: none">➤ Inside/Outside Circle Activity (10 minutes)➤ Follow-Up Assignment (5 minutes)➤ Evaluations (5 minutes)
Materials	<ul style="list-style-type: none">➤ Chart paper➤ Flipchart Markers➤ Participant's Guide➤ Overhead projector or computer and LCD projector➤ Transparencies or PowerPoint presentation

Summary (10 minutes)

1. Ask each person to think of the two most important concepts that they learned today.
2. Divide the participants into 2 groups – Inside Circle and Outside Circle.
3. Have participants share what they learned using the Inside Circle/Outside Circle cooperative learning strategy.

Follow-Up Assignment (5 minutes)

PG-13

PG-14

PG-15

1. Present: **During our next two sessions we will be dealing with balanced assessment. To prepare for this training, please read 142 and take the inventory on page 143 in your UbD workbook. Bring with you to our next training meeting any resource books or materials that you have that deal with formative assessment. Also, complete the bright ideas form after you have Day 2 redelivery. Bring this form to our next session.**
2. **Fill out the evaluation.**

Reflections on the Day

Please take a few minutes and share your thoughts on the following four areas.

Important things I've learned or had reaffirmed. . .

Today's experiences have left me feeling. . .

Questions I want answered now. . .

What I will do when I return to my workplace. . .

/// Cards for Matching Activity

Content Standards

These state the purpose and direction the content is to take, and generally include elements. They define what students are expected to know, understand, and be able to do.

Elements

These are part of the content standards that identify specific learning goals associated with the standard.

Performance Standards

They define specific expectations of what students should know and be able to do and how well students must perform to achieve or exceed the standard. Georgia's are composed of four components: content standards, tasks, student work, and teacher commentary.

Student Work

Examples of these are included in the GPS to specify what it takes to meet the standard and to enable both teachers and students to see what meeting the standard "looks like."

Tasks

Keyed to the relevant standards, these provide a sample performance that demonstrates to teachers what students should know and be able to do during or by the end of the course. Some can serve as activities that will help students achieve the learning goals of the standard, while others can be used to assess student learning; many serve both purposes. Although the Georgia Performance Standards include these, teachers may develop their own.

Teacher Commentary

This is meant to open the pathways of communication between students and the classroom teacher as well as within faculty in order to ensure consistency within assessment and expectations. It shows students why they did or did not meet a standard and enables them to take ownership of their own learning.

Enduring Understandings

Stated as full-sentence statements, these specify what we want students to come to understand about the big ideas.

Big Ideas

These abstractions provide a “conceptual lens” for organizing content and connecting important facts, skills, and actions. They are derived directly from the standard.

Essential Questions

These open-ended provocative questions are designed to guide student inquiry and focus instruction for “uncovering” the important ideas of the content.

Skills and Knowledge Statements

These are the more discrete objectives that we want students to know and be able to do. They are derived from the essential questions and from the elements of the standard.

Stage One in Backward Design

Identify Desired Results: (Big Ideas) → Enduring Understandings →
Essential Questions → Skills and Knowledge

Stage Two in Backward Design

Determine Acceptable Evidence
(Design Balanced Assessments)

(To assess student progress toward desired results)

Stage Three in Backward Design

Plan Learning Experiences and Instruction

(to support student success on assessments, leading to desired results)