



# Benchmark Exam Data Analysis

*Action Learning Systems, Inc.*



W W W . A C T I O N L E A R N I N G S Y S T E M S . C O M

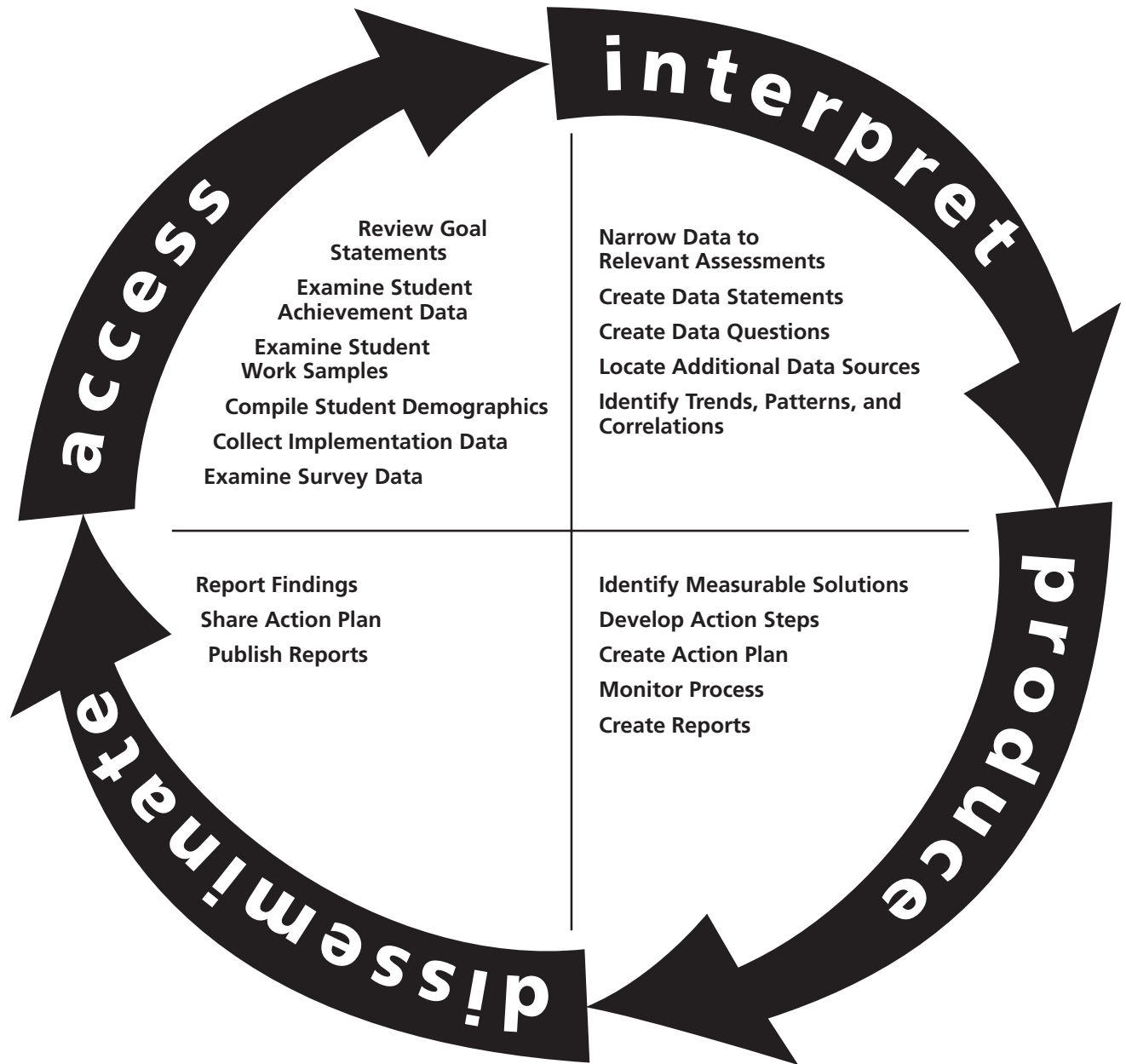
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# Data-Driven Decision Making



# Understanding the Purpose of Benchmark Assessments

- Formative assessments that are mapped to the California Content Standards
- Assess student mastery of Focus Standards using a test that is correlated to the California Standards Test
- Guide a district and school-wide focus on the California Content Standards
- Provide teachers with data to focus curriculum and instruction on student needs
  - Where are the students in the process of mastering the standards?
  - How effective was the instruction?
- Provide district and schools with the data needed to help target curriculum and instruction and determine needed professional development.



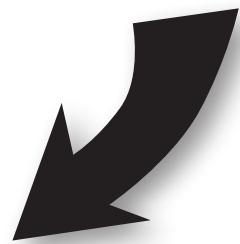
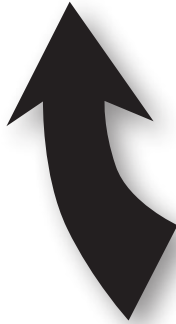
**Increased  
Student  
Achievement!**

**Instructional  
Change**

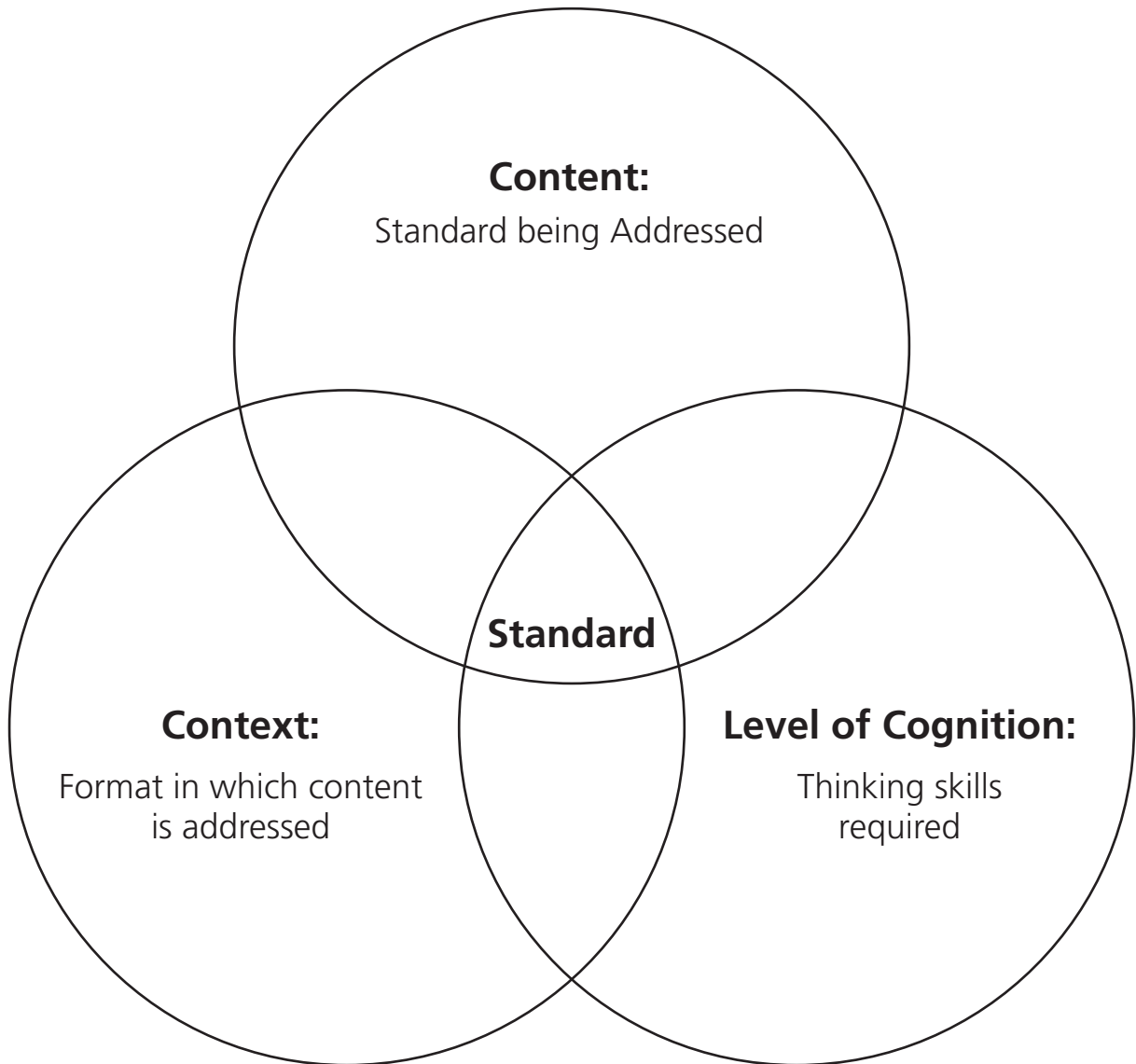
**Student  
Data**

**Lesson  
Plan**

**Action  
Plan**



# Standards Deconstruction



# Bloom's Taxonomy

## Cognitive Domain for Teaching

It is critical as educators to address all cognitive levels of the students through our instruction, challenging ourselves to challenge them in their thinking and their production. A way to “check ourselves” to see that we are reaching each of these cognitive levels, is to build in appropriate performance tasks for them in our lessons. Consider the use of Bloom's Taxonomy to assist in the development of lesson plans. Listed below are the six levels of cognition that Bloom has addressed, an explanation of each, and a suggested list of “verbs” to use in the directions for the performance task you are giving the students.

**KNOWLEDGE**—represents the lowest level of objectives. The definition of knowledge for this level is remembering previously learned material. The requirement is simple recall. The range of information may vary from simple facts to complex theories, but regardless of the complexity, knowledge is the cognitive level being utilized by the brain.

Examples of verbs or phrases to use to direct the desired learning task include: define, fill in the blank, identify, label, list, locate, match, memorize, name, spell, state, tell, and underline.

**COMPREHENSION**—is the first step beyond simple recall. It is the first level at which we see demonstration and understanding of information. It is the ability to apprehend, grasp, and interpret the meaning of material.

Examples of verbs or phrases to use to direct the desired learning task include: convert, describe, explain, interpret, paraphrase, put in order, restate, retell in your own words, rewrite, and summarize.

**APPLICATION**—is the ability to show the pertinence of principles to different situations. At this level, students may apply concepts or methods to actual concrete problems. This thinking skill tells you that a student can transfer selected information to a life problem or a new task with a minimum of direction.

Examples of verbs or phrases to use to direct the desired learning task include: compute, conclude, construct, demonstrate, determine, draw, give an example, illustrate, make, show, and solve.

**ANALYSIS**—requires more than knowledge, comprehension, and application. It also requires an understanding of the underlying structure of the material. Analysis is the ability to break down material to its functional elements for better understanding of the organization. Analysis may include identifying parts and clarifying relationships among parts. This thinking skill tells you that a student can examine, take apart, classify, predict, and draw conclusions.



# Bloom's Taxonomy

Cognitive Domain for Teaching (continued)

Examples of verbs or phrases to use to direct the desired learning task include: categorize, classify, compare, contrast, debate, deduct, determine the factors, diagnose, diagram, examine, and specify.

**SYNTHESIS**—requires the formulation of new understandings. If analysis stresses the parts, synthesis stresses the whole. Components of concepts may be reorganized into new patterns and new wholes. A student can originate, combine, and integrate parts of prior knowledge into a new product, plan, or proposal.

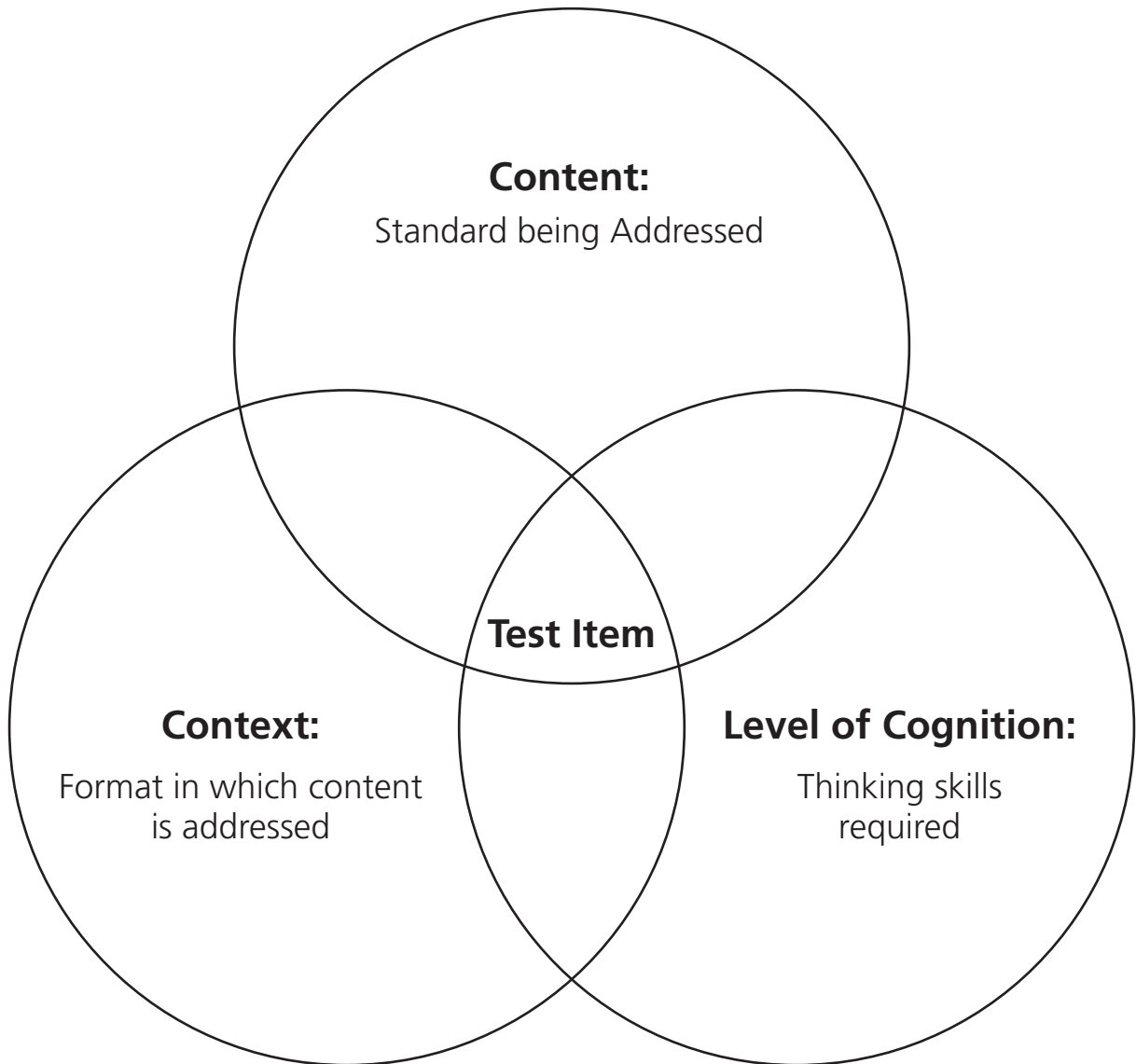
Examples of verbs or phrases to use to direct the desired learning task include: change, combine, compose, construct, create, design, find an unusual way, formulate, generate, invent, predict, produce, pretend, rearrange, reorganize, suggest, and visualize.

**EVALUATION**—is the highest level of learning results in the hierarchy. It includes all the other levels plus the ability to make judgment, assess, or criticize based on evidence and clearly defined criteria.

Examples of verbs or phrases to use to direct the desired learning task include: appraise, choose, compare, conclude, decide, defend, evaluate, give your opinion, judge, justify, prioritize, rank, rate, select, support, and value.



# Test Item Analysis





# Deconstructing the Standard/Item

|                                                                            |  |
|----------------------------------------------------------------------------|--|
| <b>Item</b>                                                                |  |
| <b>Standard</b>                                                            |  |
| <b>Content</b>                                                             |  |
| <b>Cognition</b>                                                           |  |
| <b>Context</b>                                                             |  |
| <b>Implications for Instruction:</b><br>What supporting skills are needed? |  |

|                                                                            |  |
|----------------------------------------------------------------------------|--|
| <b>Item</b>                                                                |  |
| <b>Standard</b>                                                            |  |
| <b>Content</b>                                                             |  |
| <b>Cognition</b>                                                           |  |
| <b>Context</b>                                                             |  |
| <b>Implications for Instruction:</b><br>What supporting skills are needed? |  |

# Benchmark Analysis Protocol

## Norms and Expectations

- Individually review Benchmark results prior to course-alike meeting.
- Participate in analysis and discussion.
- Be open to discussion.
- Suspend judgment long enough to carefully and closely examine what is in the results rather than what we hope to see in the results.
- Focus discussion on factors that the school has direct control over.



# Benchmark Analysis Protocol

## Short Form

### ACCESS

#### Setting Context

1. Determine which standards were explicitly taught and assessed.
2. Clarify the purpose and ask a data question.
3. Assemble appropriate curriculum, instructional planning materials, assessments, and data.
4. Understand the roles, responsibilities, and expectations for all stakeholders.

#### Data Examination

1. Determine on which standards were students more successful and create On-The-Surface (O-T-S) statements about the data.
2. Determine on which standards were students less successful and create On-The-Surface (O-T-S) statements about the data.

### INTERPRET

#### Data Analysis

1. Identify trends and patterns in the more successful standards
  - What was the content and level of cognition of the standard?
  - What materials/ curriculum were used to teach the standard?
  - What instructional strategies were used to teach the standard?
2. Identify trends and patterns in the less successful standards
  - What was the content and level of cognition of the standard?
  - What materials/ curriculum were used to teach the standard?
  - What instructional strategies were used to teach the standard?
  - What product/ process was used to measure mastery of the standard?
3. Identify trends and patterns in less successful test items
  - What was the content of the incorrect test items?
  - What was the level of thinking or cognition of the items?
  - Did the students struggle with content, level of cognition, or context of the item?
  - What was it about the item that made the distractors attractive?
4. Identify trends and patterns of successful and unsuccessful student groups
  - Were there some groups that outperformed others? What were some potential causes?
  - Were there some groups that underperformed others? What were some potential causes?
5. Identify what standards all students and/or targeted students need support in mastering based on benchmark data analysis.

# Benchmark Analysis Protocol

## Short Form

### PRODUCE

#### Creating Data-Driven Action Plans

1. Determine when these standards will be re-taught. When is the appropriate time to re-teach based on the instructional pacing guide?
2. Align the content and cognition of these standards to the appropriate curriculum and strategies.
  - How can the curriculum support this?
  - What instructional strategies are appropriate?
  - Can you apply what is successful in the classroom to what is not successful?
  - How will the re-teach be different from the initial instruction?
3. Determine appropriate context for students to demonstrate that the re-teach was effective
  - What will the students do?
  - How will it be measured?
4. Produce a data-driven Action Plan

### DISSEMINATE

#### Share Solutions with All Stakeholders

1. Share Action Plans with all stakeholders
  - Administration
  - Teachers
  - Students
  - Parents
  - Others
2. Monitor Action Plans
3. Share and Publish results

# Benchmark Analysis Protocol

## Long Form

ACCESS

### Setting Context

1. Determine which standards were explicitly taught and assessed.
2. Clarify the purpose and ask a data question.

Purpose

Data Question

3. Assemble appropriate curriculum, instructional planning materials, assessments, and data.
4. Understand the roles, responsibilities, and expectations for all stakeholders.

### Data Examination

1. Determine on which standards were students more successful and create On-The-Surface (O-T-S) statements about the data.

| Standard | O-T-S Data Statement |
|----------|----------------------|
|          |                      |
|          |                      |
|          |                      |

2. Determine on which standards were students less successful and create On-The-Surface (O-T-S) statements about the data.

| Standard | O-T-S Data Statement |
|----------|----------------------|
|          |                      |
|          |                      |
|          |                      |

# Benchmark Analysis Protocol

## Long Form

INTERPRET

### Data Analysis

1. Identify trends and patterns in the more successful standards.

- What was the content and level of cognition of the standard?
- What materials/ curriculum were used to teach the standard?
- What instructional strategies were used teach the standard?

| Standard                    |  |  |  |
|-----------------------------|--|--|--|
| Content                     |  |  |  |
| Cognition                   |  |  |  |
| Materials/<br>Curriculum    |  |  |  |
| Instructional<br>Strategies |  |  |  |

# Benchmark Analysis Protocol

## Long Form

**INTERPRET**

### Data Analysis

2. Identify trends and patterns in less successful standards.

- What was the content of the incorrect test items?
- What was the level of thinking or cognition of the items?
- Did the students struggle with content, level of cognition, or context of the item?
- What was it about the item that made the distractors attractive?

|                                     |  |  |  |
|-------------------------------------|--|--|--|
| <b>Standard</b>                     |  |  |  |
| <b>Content</b>                      |  |  |  |
| <b>Cognition</b>                    |  |  |  |
| <b>Materials/<br/>Curriculum</b>    |  |  |  |
| <b>Instructional<br/>Strategies</b> |  |  |  |

# Benchmark Analysis Protocol

## Long Form

INTERPRET

### Data Analysis

3. Identify trends and patterns in less successful test items.

- What was the content of the incorrect test items?
- What was the level of thinking or cognition of the items?
- Did the students struggle with content, level of cognition, or context of the item?
- What was it about the item that made the distractors attractive?

| Standard | Possible Causes for the Incorrect Answer(s) |
|----------|---------------------------------------------|
|          |                                             |
|          |                                             |
|          |                                             |
|          |                                             |
|          |                                             |



# Benchmark Analysis Protocol

## Long Form

INTERPRET

### Data Analysis

4. Identify trends and patterns of successful and unsuccessful student groups.
- Were there some groups that outperformed others? What were some potential causes?
  - Were there some groups that underperformed others? What were some potential causes?

### Outperforming Student Groups

| Groups | Possible Causes |
|--------|-----------------|
|        |                 |
|        |                 |
|        |                 |

### Underperforming Student Groups

| Groups | Possible Causes |
|--------|-----------------|
|        |                 |
|        |                 |
|        |                 |

5. Identify what standards all students and/or targeted students need support in mastering based on benchmark data analysis.

# Benchmark Analysis Protocol

## Long Form

### PRODUCE

#### Creating Data-Driven Action Plans

1. Determine when these standards will be re-taught. When is the appropriate time to re-teach based on the instructional pacing guide?
2. Align the content and cognition of these standards to the appropriate curriculum and strategies.
  - How can the curriculum support this?
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3. Determine appropriate context for students to demonstrate that the re-teach was effective.
  - What will the students do?
  - How will it be measured?
4. Produce a data-driven Action Plan

# Benchmark Analysis Protocol

## Action Plan

|               |                    |       |
|---------------|--------------------|-------|
| Teacher Name: | Grade/Course:      | Date: |
| Standard:     | Targeted Students: |       |

**Based on the analysis of the assessment, curriculum, and instruction, why did students struggle with this standard? What evidence led to this conclusion?**

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When will the standard be re-taught?

---

How will the curriculum support the re-teach of the standard?

---

What instructional strategies are appropriate for the re-teach of the standard?

---

How will the re-teach be different from the initial instruction?

---

What will the students do to demonstrate the re-teach was effective? How will it be measured?

# Benchmark Analysis Protocol

## Long Form

DISSEMINATE

### Share Solutions with All Stakeholders

#### 1. Share Action Plans with all stakeholders

| Stakeholder    | Plan for Dissemination |
|----------------|------------------------|
| Administration |                        |
| Teachers       |                        |
| Students       |                        |
| Parents        |                        |
| Others         |                        |

#### 2. Monitor Action Plans

*I will self-monitor my Action Plans by...*

*I will need support in monitoring my Action Plans by...*

#### 3. Share and Publish results

*When the re-teach is complete, I will share and publish the results of my Action Plans by...*