Leading Teachers to Help Students Revise their Thinking

Session 5
Federally Designated Schools

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September 2, 2020

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Educating Georgia's Future

Webinar Series for Federally Identified Schools
Formative Instructional Practices Online Professional Learning (FIP)
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1. Formative Instructional Practices (FIP) Professional Learning: How Federally Designated Schools Can Improve
This webinar session will share with leaders the *revised* Formative Instructional Practices (FIP) Online Professional Learning platform. FIP offers 25 courses that focus on four major Tier 1 evidence-based practice areas that lead to greater student achievement when used well: 1) Creating and Using Clear Learning Targets, 2) Collecting, Analyzing and Using Evidence of Student Learning, 3) Understanding and Using Effective Feedback with Students, and 4) Facilitating Student Ownership of Learning. Access to FIP courses and navigation on the platform will be demonstrated. A link to access a video that shows FIP in Action in a classroom is provided along with a video-viewing Reflection/Questions guide.

2. Using GA FIP Webpage Resources to Support Improvement Planning
This webinar session will acquaint school leaders with the resources that are available for use to support a plan for implementing Formative Instructional Practices Online Professional Learning in a school or district. Highlights include a ready-to-use introductory presentation, support files for districts and teachers on *first steps* for FIP, the alignment of FIP Foundations Courses to TAPS and LAPS, and sample professional growth plans for leaders and teachers that use FIP courses.

3. Using FIP Courses to Design Better Classroom-based Formative Assessments
This webinar session will preview key content that is available in the Designing Sound Assessment series of FIP courses. Information with direct course examples will be shared to help leaders see how targeted and efficient teaching, learning and lesson-based assessments can become when the right kinds of formative practices are used to accurately to document evidence of student learning. Three areas will be highlighted: (1) Clarifying Teaching and Assessment Expectations (2) Mastering Methods of Assessment, and (3) Putting the Pieces Together: Designing and Critiquing Sound Assessments.

4. Creating Optimal Opportunities to Lead FIP Professional Learning
This webinar will share key points from the book resource, *Leadership for Teacher Learning* by Dylan Wiliam. Discussion topics will be applied to FIP so that leaders can consider a plan for using FIP in ways that can be most supportive for teachers. A resource on how to use instructional rounds to support use of new practices will be provided.

5. Leading Teachers to Help Students Revise their Thinking Using Formative Assessment
The primary purpose of classroom-based formative assessment is to use the results to help students revise their thinking. This webinar will provide leaders with considerations to reflect upon during Instructional Awareness Walks when students exhibit misconceptions in their understanding. Key and actionable suggestions will be provided to leaders to share with teachers so teachers can help students revise their thinking and work more accurately toward mastery.

6. Organizing to Help Teachers Facilitate Student Ownership of Learning
Helping students develop ownership for their learning is one of the four pillars of FIP. Often, teachers need assistance to think about foundational skills that need to be taught before grouping students to work as peers to support their own and others' learning. This webinar will identify several foundational skills that leaders can use to support teacher capacity to plan for student ownership of learning.

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Richard Woods, *Georgia's School Superintendent*
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Review from Previous Webinars in the Series:

Formative Instructional Practices Defined
"It is not the instrument that is formative; it is the use of the information gathered ."
(Chappuis, 2009)

Formative Instructional Practices (FIP) are **intentional behaviors** that **teachers and students use** to make decisions about learning. Formative instructional practices are the formal and informal ways that teachers and students gather and respond to evidence of student learning.

Georgia FIP is a blended model for professional learning. It provides Tier I evidenced-based interventions and practice opportunities for educators to accurately use formative instructional practices in districts and schools.

GA FIP online professional learning has four foundational components.

1. Clear Learning Targets
2. Collecting, analyzing and using evidence of student learning
3. Effective Feedback
4. Student Ownership of Learning

Review: Why Consider FIP for SDE?

The GSAPS assesses a school's level of implementation in each of the five systems of GSCI:

Coherent Instruction: Districts and schools must have an established shared instructional guidance system (Structure 3: Use of a balanced blend of assessments) ⭐

Effective Leadership: A major support necessary for an effective instructional guidance system is leadership in the school and at the district level ⭐

Professional Capacity: In addition to effective leadership, schools, to improve, particularly in instruction, must have a coherent system to develop the capacity of the professionals in the school ⭐

Family and Community Engagement: A school must have an intentional explicit system for engaging the adults beyond the school in the core instructional work of the school ⭐

Supportive Learning Environment: A school must design a system that organizes the efforts in the school to meet the differing needs of all students ⭐

Source: (Page 1 of Process Guide for GaDOE's GSAPS)
Organizing for School Improvement edited by Anthony Bryk (2010)

Today's Discussion

- Formative instructional practices mean low-to-no stakes judgements of student learning progress and appropriate support to improve

- Revisit key points from webinar 4 about becoming better instructional leaders and teachers

- Describe key vocabulary associated with revising knowledge

- Share a process to ensure effective instructional delivery of new content instruction *prior to process for revision*

- Share a process to lead teachers in developing strategies for showing students how to revise their thinking

- Reflect on today's topic and apply learning to a FIP scenario

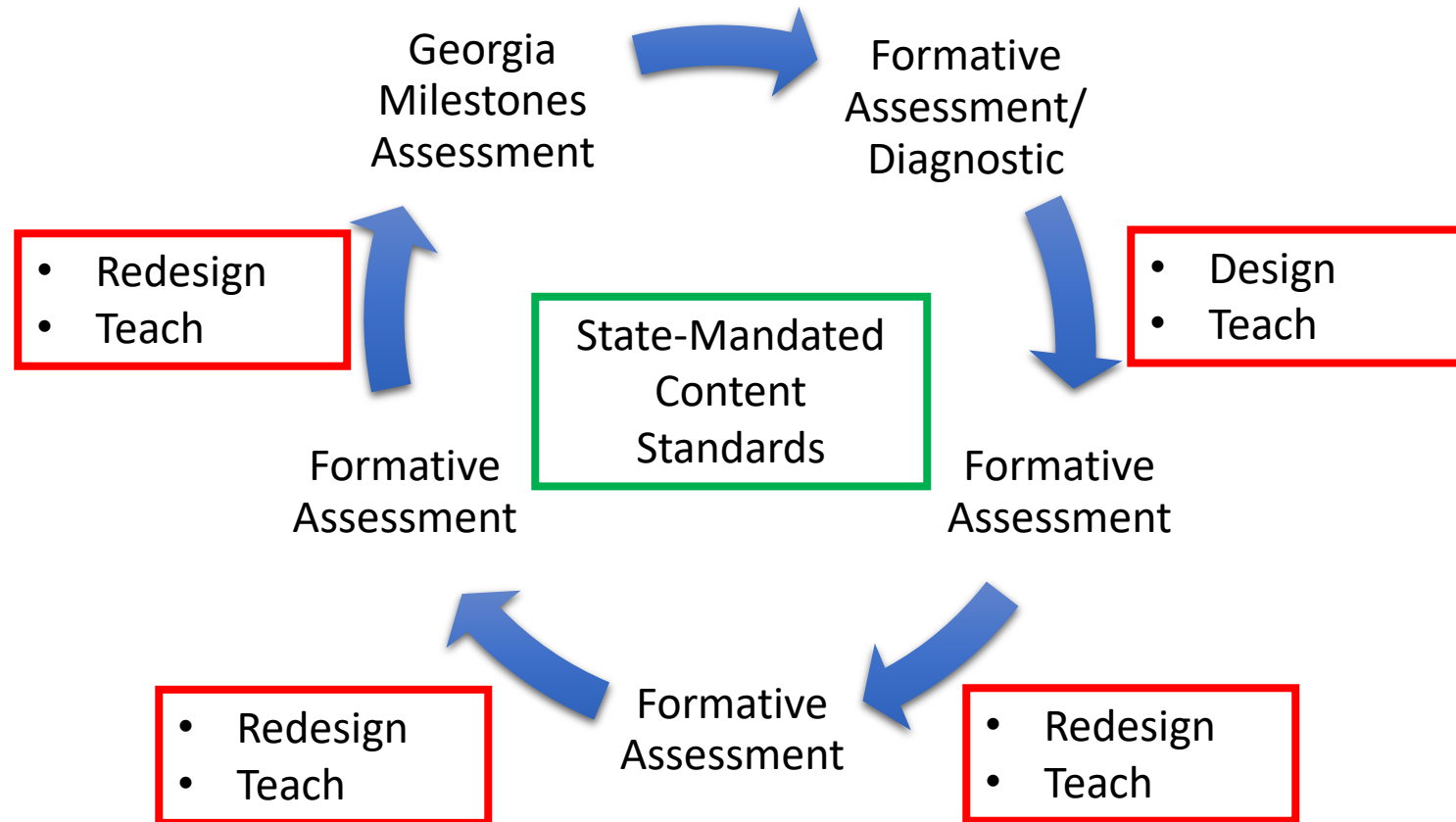# Low-to-No Stake Judgements of Learning Progress

Leader and Teacher Development

Think about it…

In *Formative Assessment Strategies for Every Classroom*, Susan M. Brookhart states that Formative assessment should *not* used for final grades.

- Students need—and deserve—an opportunity to learn before they are graded on how well they have learned.

- Formative assessment is used before instruction, to find out where students are, and during instruction, to find out how they are progressing.

- When results of formative assessment are not used for grading, the information gathered becomes more useful for learning and especially for less-able students.

- Students are free to pay attention to figuring out how they are doing and what they need to work on without worrying about a grade.

- There is some evidence that highly motivated and strong students use all information, including graded work, formatively.

- This is not the case for students who experience negative feelings after failure. These feelings get in the way of processing additional information about their learning. For such students, the value of feedback is lost, overshadowed by the low grade.

Formative Processes in Action

Georgia Milestones Assessment → Formative Assessment/ Diagnostic

- Redesign
- Teach

State-Mandated Content Standards

- Design
- Teach

Formative Assessment

Formative Assessment

- Redesign
- Teach

Formative Assessment

- Redesign
- Teach

Let's revisit key points from FIP Webinar #4:

Key Book Points - *Leadership for Teacher Learning*

- Professional development opportunities need to focus more on *what* teachers need to learn to become better at teaching students.

- Teachers must know explicitly what students need to learn and this information comes from teachers having a keen knowledge of the standards and how to work with them effectively to benefit students.

- Dylan Wiliam's work with formative assessment has found that when leaders offer teachers **choice** from *constrained options*, about what they would like to improve, and provided **flexibility**, **small steps**, **accountability**, and **support**, they improve in using formative assessment appropriately, *and students get better*.

Dylan Wiliam's Webinar Comments

http://www.dylanwiliamcenter.com/webinars/

- 10 years of <u>deliberate practice</u> is required to become expert in other professions ***as well as teaching***

- Even the best teachers and leaders need to practice to become better

- Most teachers make exponential improvement in years 1 to 3 and often go into auto-pilot mode if not pushed and encouraged to get better

- Some teachers are motivated to get better on their own

- Create the conditions for all teachers continue to improve well beyond their current levels

Leading Teachers to Close Gaps in Student Learning

How to Teach the Knowledge Revision Process

Today's References

Brookhart, S. (2008). *How to give students effective feedback*. Alexandria, VA: Association for Supervision and Curriculum Development.

Halter, L., Marzano, R., Ocasio, T., Schmidt, R., and Senn, D. (2015). *Revising knowledge: Classroom techniques to help students examine their deeper understanding.* West Palm Beach, FL: Learning Sciences International.

Marzano, R., Brown, J. (2009). *A handbook for the art and science of teaching.* Alexandria, VA: Association for Supervision and Curriculum Development

I suspect that every leader and teacher can complete this statement…

Using formative assessment in the classroom is important to _____.

Using formative assessment in the classroom is important to determine the next steps for instruction for students.

"Why measure something if you cannot change it?" ~Alfred Binet

Think about this...

"The process of revising knowledge is not confined to classrooms or schools. Individuals at every age and stage of development are constantly revising prior learning by correcting errors and misconceptions as well as adding new information. The difference between this almost unconscious ongoing learning process and the revising knowledge strategy is this: **you, the classroom teacher must intentionally teach and model the process for students to ensure that they acquire critical content knowledge."** (p. 5 *Revising Knowledge, 2015)*

"If your students are dutifully copying your notes or outline from the board or writing down every word from your lectures, the knowledge is yours, not theirs. If your students plug into their notebooks a graphic organizer that you created, it does not represent their knowledge. It represents yours." (p.6 *Revising Knowledge, 2015)*

Key Vocabulary about Thinking

- Metacognitive strategies are understood as the students' knowledge and skills to take control of their learning by planning, monitoring and evaluating

    Declarative (knowing what)

    Procedural (knowing how)

    Conditional (knowing when and why)

Weinstein, C. E., Husman, J., & Dierking, D. R. (2000). Self-regulation interventions with a focus on learning strategies. In M. Boekaerts, P. R. Pintrich & M. Zeidner (Eds.), Handbook of self-regulation (pp. 728-744). San Diego, CA: Academic Press

Key Vocabulary about Thinking

- *Schema*: how concepts are stored in memory (short and long-term)

- *Schemata*: how concepts are organized based on experiences and others' perspectives.

- *Schema Development for Revising Knowledge*:

    Accretion = addition of new knowledge into existing memory

    Tuning = evolving to become more consistent with experience

    Restructuring = when new information does not fit into the current schema and results in the reorganizing or development of a new schema

Teachers have to *deliberately think* about and *plan how to* help students acquire and use declarative, procedural and conditional knowledge when teaching GSE standards.
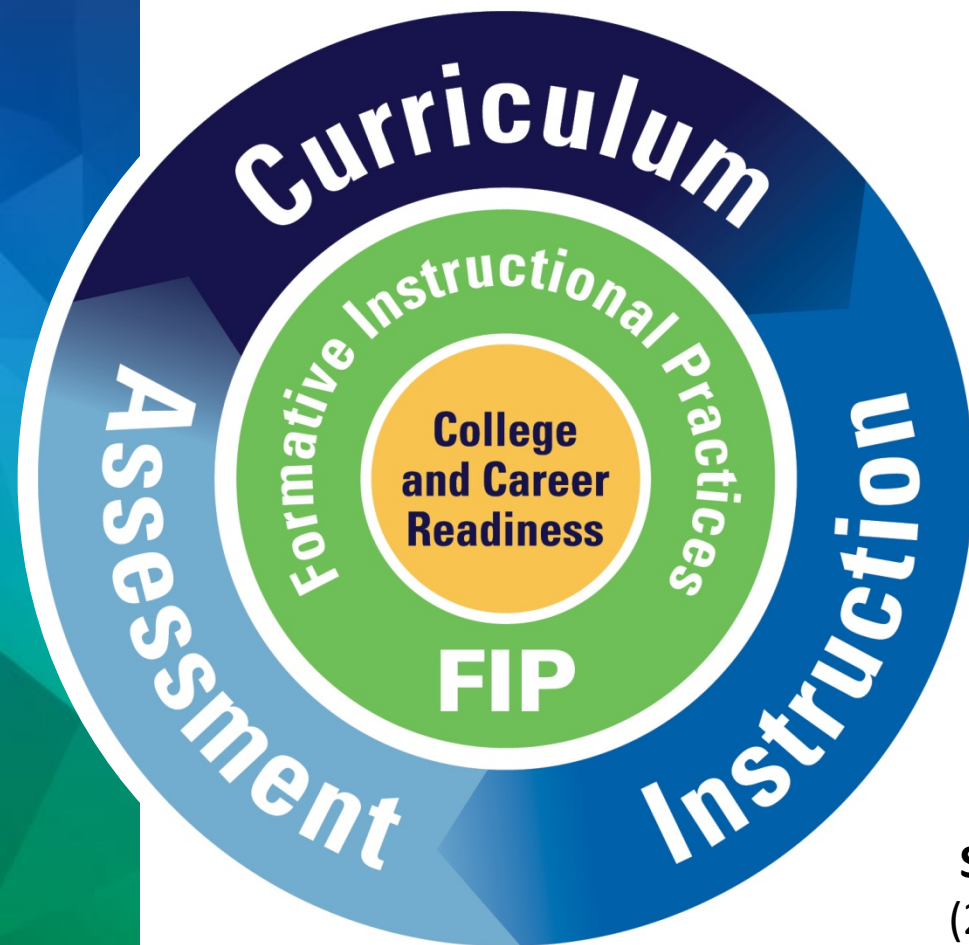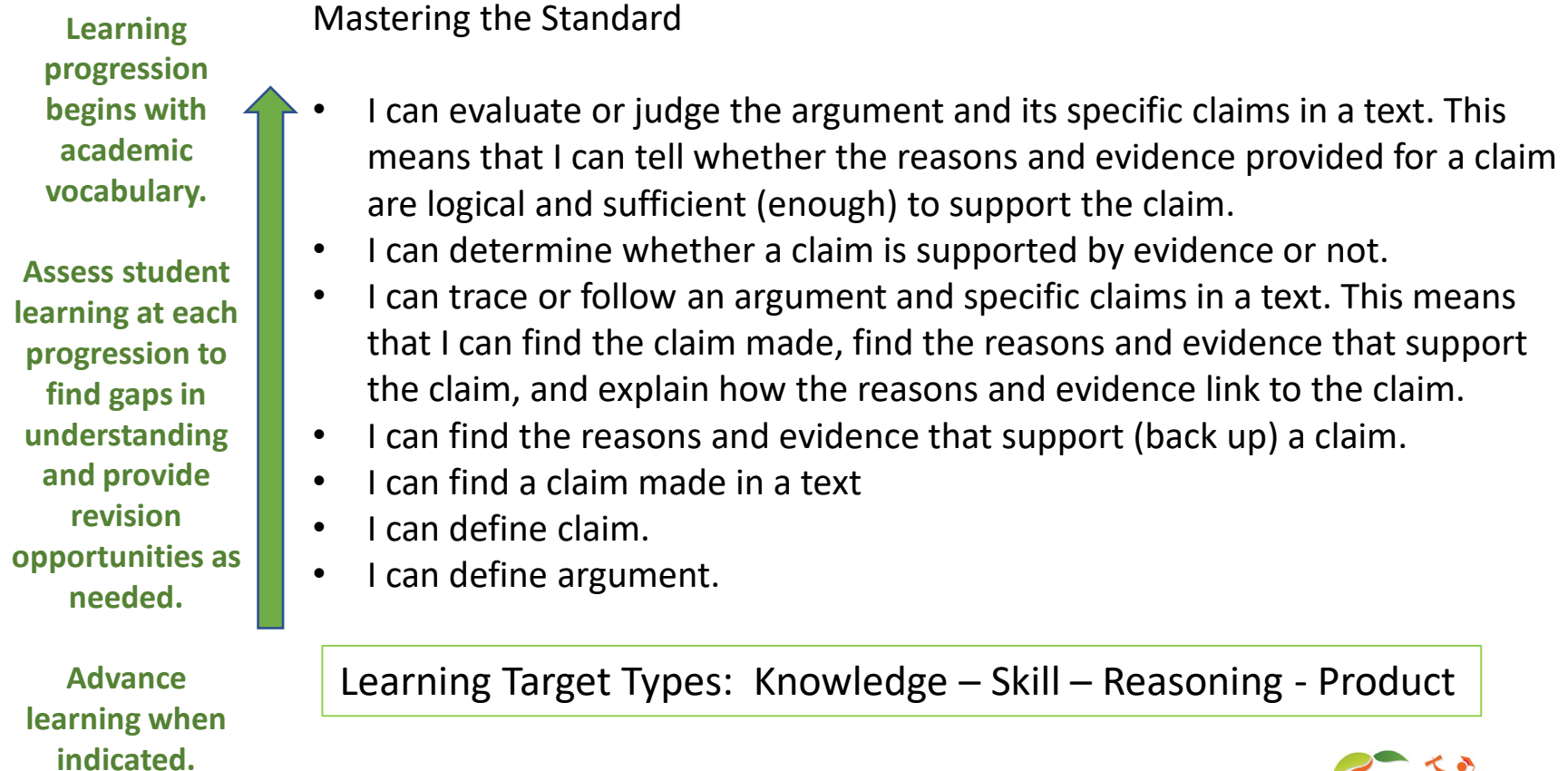
Where is the "HOW?" Many of my fellow teachers and I understand the need for more rigor and challenging our students to help them achieve. We get it. What is lacking is the "how." How is teaching with the new standards different from teaching with the old?

Teachers need models and training to help them step back to the role of skilled facilitators, to guide students to take ownership of their own learning.

Source: Marzano, R. J. and Toth, M. D. (2014). *Teaching for rigor: A call for a critical instructional shift*. West Palm Beach, FL: Learning Sciences International.

FIP Shows Educators How to Create Clear Learning Targets or "Chunks" of Learning from Standards

Standard: Trace and evaluate the argument and specific claims in a text, distinguishing claims that are supported by reasons and evidence from claims that are not.

Learning progression begins with academic vocabulary.

Assess student learning at each progression to find gaps in understanding and provide revision opportunities as needed.

Advance learning when indicated.

Mastering the Standard

- I can evaluate or judge the argument and its specific claims in a text. This means that I can tell whether the reasons and evidence provided for a claim are logical and sufficient (enough) to support the claim.
- I can determine whether a claim is supported by evidence or not.
- I can trace or follow an argument and specific claims in a text. This means that I can find the claim made, find the reasons and evidence that support the claim, and explain how the reasons and evidence link to the claim.
- I can find the reasons and evidence that support (back up) a claim.
- I can find a claim made in a text
- I can define claim.
- I can define argument.

Learning Target Types: Knowledge – Skill – Reasoning - Product

Example for Delivery of Content <u>Before</u> Students can Make Revisions

Halter, L., Marzano, R., Ocasio, T., Schmidt, R., and Senn, D. (2015). *Revising knowledge: Classroom techniques to help students examine their deeper understanding. (p.20).* West Palm Beach, FL: Learning Sciences International.

Parts	Learning Sequence
Part 1	The teacher begins a new unit of content with a preview activity and follows that with an initial presentation of a critical content **chunk** including any necessary vocabulary.
Part 2	Teacher stops after a "chunk" to give students a task to do with a partner or group to **P**rocess/**E**laborate on and **R**ecord/**R**epresent their understanding of the new content. Ideally, the teacher will engage students in the "PER" process <u>between</u> each new chunk of information.
Part 3	Repeat the above cycle until until all of the chunks of critical content for the lesson or until are introduced to students.
Part 4	Have students review the critical content chunks they learned in the previous lesson. Then, assign a "content activity" to help students deepen their understanding and/or practice skills, strategies, or processes. These activities are often more challenging and ongoing projects during which the teacher monitors progress, offers feedback to improve performance, and gradually releases control of learning to students. Purposeful homework may be assigned if appropriate.
Part 5	Only after students have had adequate time to practice what they learned or deepened their understanding **SHOULD** they be expected to revise their knowledge.

5 Aspects of Revising Knowledge

For students to revise their own thinking and understanding of content, they should have completed 3 to 5 initial experiences with the content (each chunk) _and then be taught what revising entails_.

1. Reviewing prior understanding of the content (declarative)

2. Identifying and correcting mistakes (declarative and procedural)

3. Identifying gaps in knowledge and filling in the gaps (declarative and procedural)

4. Deciding where to amend prior knowledge (conditional)

5. Explaining the reasons behind revising prior learning (declarative, procedural   and conditional)

Teacher Steps for Implementing the Basics of Revising Knowledge

From: Halter, L., Marzano, R., Ocasio, T., Schmidt, R., and Senn, D. (2015). *Revising Knowledge: Classroom techniques to help students examine their deeper understanding.* West Palm Beach, FL: Learning Sciences International.

Five aspects for revising knowledge are below.

1. Reviewing prior understanding of the content
2. Identifying and correcting mistakes
3. Identifying gaps in knowledge and filling in the gaps
4. Deciding where to amend prior knowledge
5. Explaining the reasons behind revising prior learning

Steps to Implement the Basics	Explanatory Note for Teacher
1. Master the 5 aspects as well as the cognitive processes that compromise revising knowledge.	Begin to create scenarios in your mind that you could share with students as examples of how you have revised prior learning about critical content. Or, share an example from your personal life that might resonate with students. Your goal is to help students realize that this is not a mysterious process, but one in which all thinking individuals engage.
2. Develop a set of student-friendly definitions appropriate to the age/grade of your students.	Review these definitions and revise as needed so you are comfortable and fluent in your use of them with students. Your goal is to make the vocabulary of knowledge revision used and understood by students on a daily basis.
3. If appropriate, prepare a wall poster containing the definitions.	Show students the poster and remind them to use it for reference purposes.
4. Directly teach the student-friendly definitions while also briefly modeling what the specific aspect looks like and sounds like.	Deliberately plan a lesson to teach and model the 5 definitions for revising prior learning.
5. Directly teach the meanings, and model the various aspects of the process using familiar critical content that students have already learned.	The reason for using familiar content is to avoid cognitive overload that can occur when students have to mentally toggle back and forth between learning a new process and trying to understand new content.
6. Decide where your students will be recording and representing the new learning that they will ultimately revise during the course of a chapter or unit of instruction or lesson.	You have several options for where students will record or represent new knowledge, including (1) a revision template that you have copied and provided to students or (2) an interactive academic or vocabulary notebook that students have purchased.
7. Make sure that all students have either recorded knowledge (written notes, key words and phrases or sentences), solved problems, and/or represented knowledge (using drawings, pictographs or graphic organizers).	This step in getting ready to teach and model the process of revising prior knowledge presupposes that your students have acquired some experiences and routines relative to making notes or summarizing things that they have learned.

Leadership Tip:

For an upcoming PLC, grade level or departmental meeting, ask teachers to bring a sample of prior student work for revision. Teachers will plan how to teach and model the five aspects of revision for students. Teachers can work in teams and discuss their plans.

Plan to Teach and Model How to Revise Prior Learning

Learning Target	Students will be able to understand the five basic steps for revising prior learning.
Materials	Poster containing student-friendly definitions of the five aspects of revising knowledge and an example of recorded prior learning using familiar content for students that contains mistakes and gaps.
Step 1	The teacher explains what it means to **review/revisit** prior learning. Teacher displays a worksheet that is an example from prior student learning that has mistakes and gaps. Teacher thinks aloud about what it means to review/revisit. Teacher whisper reads the prior knowledge and thinks out loud about what is on the worksheet. Teacher then thinks aloud about some things that might need to be changed.
Step 2	The teacher proceeds to the second aspect of revising knowledge: **identify and correct mistakes**. The teacher asks the students if they can spot any mistakes and explain how to fix them. Since the content is previously learned, students should be able to quickly point out mistakes and correct them.
Step 3	The teacher proceeds to give the meaning of the third aspect: **identify gaps in knowledge and fill the gaps**. The teachers asks a student to come and write/list some things that were left out.
Step 4	The teacher gives the meaning of the fourth aspect: **think about new things you have learned since you first worked on this topic.** Tell me the changes to this work that show what you now know.
Step 5	The teacher now engages the class to **explain their reasons for revising this prior learning/knowledge**. The teachers adds any additional reasons that may be uniquely her/his own.

Student Friendly Definitions for the 5 Aspects of Revising Knowledge

From: Halter, L., Marzano, R., Ocasio, T., Schmidt, R., and Senn, D. (2015). *Revising Knowledge: Classroom techniques to help students examine their deeper understanding.* West Palm Beach, FL: Learning Sciences International.

Five aspects for revising knowledge are below.

1. Reviewing prior understanding of the content
2. Identifying and correcting mistakes
3. Identifying gaps in knowledge and filling in the gaps
4. Deciding where to amend prior knowledge
5. Explaining the reasons behind revising prior learning

Aspect of Knowledge Revision	Younger Student	Older Student	
1. Reviewing/revisiting prior understanding of content	Look at the picture you drew, the problem you solved, or the sentence you wrote, and see if there is anything you want to add or change.	Go back to something you recorded (wrote) or represented (drew) and give your opinion or draw a conclusion about the accuracy and completeness of your work.	← Accretion
2. Identifying and correcting mistakes	See if you can spot any mistakes, and then fix them.	Find any errors in reasoning, factual understandings, or procedural errors and correct them.	← Tuning
3. Identifying gaps in knowledge and filling in the gaps	Figure out if there are things that are almost right, but need a few more facts or steps in a math solution to make them right.	Determine if there are any partially correct or incomplete statements in your notes or drawings and add what is missing.	← Tuning
4. Deciding where to amend prior knowledge	Think about new things you have just learned since you first worked on this topic. Make changes to your work to show what you know now.	Decide what new information or procedures you have learned. Add them to your notes, drawings or problems.	← Accretion
5. Explaining the reasons behind revising prior learning	Tell me why you made the changes.	Explain your thinking about the changes you made.	← Restructuring

Knowledge Revision Tools and Processes

- 5 aspects of revising knowledge

- Academic Notebooks

- Vocabulary Notebooks

- Visual Tools

- Writing Tools

- Homework

Provide Opportunities for Students to Revise Knowledge

- Original exposure to new content

- After each additional exposure

- After each practice opportunity

Revision Template for Older Students

Use to Think	Now I Know
List some initial understandings below.	List how the understandings in the left column changed or new information was learned or a misunderstanding was corrected.

Example of Primary Anchor Chart for Revising Prior Learning

1. Look at your picture very carefully. Does it make sense? Does it seem complete?

2. If you made a mistake, fix it.

3. If you left something out, put it in now.

4. Add in the new things you learned.

5. Now, tell your partner the reasons you changed this or write a sentence about your changes.

Apply What We've Learned

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When should students be given opportunities to revise their knowledge of this GSE standard?

Standard: Trace and evaluate the argument and specific claims in a text, distinguishing claims that are supported by reasons and evidence from claims that are not.

Learning progression begins with academic vocabulary.

Assess student learning at each progression to find gaps in understanding and provide revision opportunities as needed.

Advance learning when indicated.

Mastering the Standard

- I can evaluate or judge the argument and its specific claims in a text. This means that I can tell whether the reasons and evidence provided for a claim are logical and sufficient (enough) to support the claim.
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- I can find a claim made in a text
- I can define claim.
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Learning Target Types: Knowledge – Skill – Reasoning - Product

Answers

- At each original exposure to the content

- After each additional exposure

- After each practice opportunity

Next Steps:

As an instructional leader, plan how to share the five steps for revising student knowledge with teachers.

Use this PowerPoint, handouts and the following sample of 3rd grade work as tools to teach the process.

Sample 3rd Grade Work for Revision

School: ████ Elem (GA) Teacher: ████████
Grade: 3rd Grade
Test: GA Grade 3 Animals That Work in Groups
Student: ████████

Student Essay

Animals take care of each other. the adult females protect the fawns around them. It makes no difference whether they are the mothers of them or not. Some of the females do not have their own fawns yet. However they to will protect the fawns. the leader which is the goose at the tip of the v has no other geese in front. If a goose becomes very tired or sick or hurt. The other geese will help.

ELA 3W2: Write informative/explanatory texts to examine a topic and convey ideas and information clearly.

    a. Introduce a topic and group related info together,...
    b. Develop the topic with facts, definitions, and details.
    c. Use linking words and phrases...
    d. Provide a concluding statement.

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