Marzano Protocol: Lesson Segments Addressing Content

Design Question #2: What will I do to help students effectively interact with new knowledge?

6.   Identifying Critical Information

The teacher identifies a lesson or part of a lesson as involving important information to which students should pay particular attention.

Teacher Evidence
- ❏ Teacher begins the lesson by explaining why upcoming content is important
- ❏ Teacher tells students to get ready for some important information
- ❏ Teacher cues the importance of upcoming information in some indirect fashion
    - Tone of voice
    - Body position
    - Level of excitement

Student Evidence
- ❏ When asked, students can describe the level of importance of the information addressed in class
- ❏ When asked, students can explain why the content is important to pay attention to
- ❏ Students visibly adjust their level of engagement

Scale Levels: *(choose one)*
     ☐ Innovating   ☐ Applying   ☐ Developing   ☐ Beginning   ☐ Not Using   ☐ Not Applicable

Scale

	Innovating	Applying	Developing	Beginning	Not Using
Identifying critical information	Adapts and creates new strategies for unique student needs and situations.	Signals to students which content is critical versus non-critical and monitors the extent to which students are attending to critical information.	Signals to students which content is critical versus non-critical.	Uses strategy incorrectly or with parts missing.	Strategy was called for but not exhibited.

Reflection Questions

	Innovating	Applying	Developing	Beginning	Not Using
Identifying critical information	What are you learning about your students as you adapt and create new strategies?	How might you adapt and create new strategies for identifying critical information that address unique student needs and situations?	In addition to signaling to students which content is critical versus non-critical, how might you monitor the extent to which students attend to critical information?	How can you signal to students which content is critical versus non-critical?	How can you begin to incorporate some aspect of this strategy in your instruction?

7. Organizing Students to Interact with New Knowledge

The teacher organizes students into small groups to facilitate the processing of new information.

Teacher Evidence
- ❏ Teacher has established routines for student grouping and student interaction in groups
- ❏ Teacher organizes students into ad hoc groups for the lesson
  - Diads
  - Triads
  - Small groups up to about 5

Student Evidence
- ❏ Students move to groups in an orderly fashion
- ❏ Students appear to understand expectations about appropriate behavior in groups
  - Respect opinions of others
  - Add their perspective to discussions
  - Ask and answer questions

Scale Levels: *(choose one)*
- ☐ Innovating
- ☐ Applying
- ☐ Developing
- ☐ Beginning
- ☐ Not Using
- ☐ Not Applicable

Scale

	Innovating	Applying	Developing	Beginning	Not Using
Organizing students to interact with new knowledge	Adapts and creates new strategies for unique student needs and situations.	Organizes students into small groups to facilitate the processing of new knowledge and monitors group processing.	Organizes students into small groups to facilitate the processing of new knowledge.	Uses strategy incorrectly or with parts missing.	Strategy was called for but not exhibited.

Reflection Questions

	Innovating	Applying	Developing	Beginning	Not Using
Organizing students to interact with new knowledge	What are you learning about your students as you adapt and create new strategies?	How might you adapt and create new strategies for organizing students to interact with new knowledge that address unique student needs and situations?	In addition to organizing students into small groups to facilitate the processing of new knowledge, how can you monitor group processes?	How can you organize students into small groups to facilitate the processing of new knowledge?	How can you begin to incorporate some aspect of this strategy in your instruction?

8. Previewing New Content

The teacher engages students in activities that help them link what they already know to the new content about to be addressed and facilitates these linkages.

Teacher Evidence
- ❒ Teacher uses preview question before reading
- ❒ Teacher uses K-W-L strategy or variation of it
- ❒ Teacher asks or reminds students what they already know about the topic
- ❒ Teacher provides an advanced organizer
    - Outline
    - Graphic organizer
- ❒ Teacher has students brainstorm
- ❒ Teacher uses anticipation guide
- ❒ Teacher uses motivational hook/launching activity
    - Anecdotes
    - Short selection from video
- ❒ Teacher uses word splash activity to connect vocabulary to upcoming content

Student Evidence
- ❒ When asked, students can explain linkages with prior knowledge
- ❒ When asked, students make predictions about upcoming content
- ❒ When asked, students can provide a purpose for what they are about to learn
- ❒ Students actively engage in previewing activities

Scale Levels: *(choose one)*
☐ Innovating   ☐ Applying   ☐ Developing   ☐ Beginning   ☐ Not Using   ☐ Not Applicable

Scale

	Innovating	Applying	Developing	Beginning	Not Using
Previewing new content	Adapts and creates new strategies for unique student needs and situations.	Engages students in learning activities that require them to preview and link new knowledge to what has been addressed and monitors the extent to which students are making linkages.	Engages students in learning activities that require them to preview and link new knowledge to what has been addressed.	Uses strategy incorrectly or with parts missing.	Strategy was called for but not exhibited.

Reflection Questions

	Innovating	Applying	Developing	Beginning	Not Using
Previewing new content	What are you learning about your students as you adapt and create new strategies?	How might you adapt and create new strategies for previewing new content that address unique student needs and situations?	In addition to engaging students in learning activities that require them to preview and link new knowledge to what has been addressed, how can you also monitor the extent to which students are making linkages?	How can you engage students in learning activities that require them to preview and link new knowledge to what has been addressed?	How can you begin to incorporate some aspect of this strategy in your instruction?

9. Chunking Content into "Digestible Bites"

Based on student needs, the teacher breaks the content into small chunks (i.e. digestible bites) of information that can be easily processed by students.

Teacher Evidence
❐ Teacher stops at strategic points in a verbal presentation
❐ While playing a video tape, the teacher turns the tape off at key junctures
❐ While providing a demonstration, the teacher stops at strategic points
❐ While students are reading information or stories orally as a class, the teacher stops at strategic points

Student Evidence
❐ When asked, students can explain why the teacher is stopping at various points
❐ Students appear to know what is expected of them when the teacher stops at strategic points

Scale Levels: *(choose one)*
    ❐ Innovating   ❐ Applying   ❐ Developing   ❐ Beginning   ❐ Not Using   ❐ Not Applicable

Scale

	Innovating	Applying	Developing	Beginning	Not Using
Chunking content into digestible bites	Adapts and creates new strategies for unique student needs and situations.	Breaks input experiences into small chunks based on student needs and monitors the extent to which chunks are appropriate.	Breaks input experiences into small chunks based on student needs.	Uses strategy incorrectly or with parts missing.	Strategy was called for but not exhibited.

Reflection Questions

	Innovating	Applying	Developing	Beginning	Not Using
Chunking content into digestible bites	What are you learning about your students as you adapt and create new strategies?	How might you adapt and create new strategies for chunking content into digestible bites that address unique student needs and situations?	In addition to breaking input experiences into small chunks based on student needs, how can you also monitor the extent to which chunks are appropriate?	How can you break input experiences into small chunks based on student needs?	How can you begin to incorporate some aspect of this strategy in your instruction?

10. Processing New Information

During breaks in the presentation of content, the teacher engages students in actively processing new information.

Teacher Evidence
- ❒ Teacher has group members summarize new information
- ❒ Teacher employs formal group processing strategies
  - Jigsaw
  - Reciprocal Teaching
  - Concept attainment

Student Evidence
- ❒ When asked, students can explain what they have just learned
- ❒ Students volunteer predictions
- ❒ Students voluntarily ask clarification questions
- ❒ Groups are actively discussing the content
  - Group members ask each other and answer questions about the information
  - Group members make predictions about what they expect next

Scale Levels: *(choose one)*
  ❒ Innovating ❒ Applying ❒ Developing ❒ Beginning ❒ Not Using ❒ Not Applicable

Scale

	Innovating	Applying	Developing	Beginning	Not Using
Processing new information	Adapts and creates new strategies for unique student needs and situations.	Engages students in summarizing, predicting, and questioning activities and monitor the extent to which the activities enhance students' understanding.	Engages students in summarizing, predicting, and questioning activities.	Uses strategy incorrectly or with parts missing.	Strategy was called for but not exhibited.

Reflection Questions

	Innovating	Applying	Developing	Beginning	Not Using
Processing new information	What are you learning about your students as you adapt and create new strategies?	How might you adapt and create new strategies for processing new information that address unique student needs and situations?	In addition to engaging students in summarizing, predicting, and questioning activities, how can you monitor the extent to which the activities enhance students' understanding?	How can you engage students in summarizing, predicting, and questioning activities?	How can you begin to incorporate some aspect of this strategy in your instruction?

11. Elaborating on New Information

The teacher asks questions or engages students in activities that require elaborative inferences that go beyond what was explicitly taught.

Teacher Evidence
- ❒ Teacher asks explicit questions that require students to make elaborative inferences about the content
- ❒ Teacher asks students to explain and defend their inferences
- ❒ Teacher presents situations or problems that require inferences

Student Evidence
- ❒ Students volunteer answers to inferential questions
- ❒ Students provide explanations and "proofs" for inferences

Scale Levels: *(choose one)*
    ❒ Innovating   ❒ Applying   ❒ Developing   ❒ Beginning   ❒ Not Using   ❒ Not Applicable

Scale

	Innovating	Applying	Developing	Beginning	Not Using
Elaborating on new information	Adapts and creates new strategies for unique student needs and situations.	Engages students in answering inferential questions and monitors the extent to which students elaborate on what was explicitly taught.	Engages students in answering inferential questions.	Uses strategy incorrectly or with parts missing.	Strategy was called for but not exhibited.

Reflection Questions

	Innovating	Applying	Developing	Beginning	Not Using
Elaborating on new information	What are you learning about your students as you adapt and create new strategies?	How might you adapt and create new strategies for elaborating on new information that address unique student needs and situations?	In addition to engaging students in answering inferential questions, how can you monitor the extent to which students elaborate on what was explicitly taught?	How can you engage students in answering inferential questions?	How can you begin to incorporate some aspect of this strategy in your instruction?

12. Recording and Representing Knowledge

The teacher engages students in activities that help them record their understanding of new content in linguistic ways and/or represent the content in nonlinguistic ways.

Teacher Evidence
- ❒ Teacher asks students to summarize the information they have learned
- ❒ Teacher asks students to generate notes that identify critical information in the content
- ❒ Teacher asks students to create nonlinguistic representations for new content
  - Graphic organizers
  - Pictures
  - Pictographs
  - Flow charts
- ❒ Teacher asks students to create mnemonics that organize the content

Student Evidence
- ❒ Students' summaries and notes include critical content
- ❒ Students' nonlinguistic representations include critical content
- ❒ When asked, students can explain main points of the lesson

Scale Levels: *(choose one)*
  ❒ Innovating   ❒ Applying   ❒ Developing   ❒ Beginning   ❒ Not Using   ❒ Not Applicable

Scale

	Innovating	Applying	Developing	Beginning	Not Using
Recording and representing knowledge	Adapts and creates new strategies for unique student needs and situations.	Engages students in activities that help them record their understanding of new content in linguistic ways and/or in nonlinguistic ways and monitors the extent to which this enhances students' understanding.	Engages students in activities that help them record their understanding of new content in linguistic ways and/or in nonlinguistic ways.	Uses strategy incorrectly or with parts missing.	Strategy was called for but not exhibited.

Reflection Questions

	Innovating	Applying	Developing	Beginning	Not Using
Recording and representing knowledge	What are you learning about your students as you adapt and create new strategies?	How might you adapt and create new strategies for recording and representing knowledge that address unique student needs and situations?	In addition to engaging students in activities that help them record their understanding of new content in linguistic ways and/or in nonlinguistic ways, how can you monitor the extent to which this enhances students' understanding?	How can you engage students in activities that help them record their understanding of new content in linguistic ways and/or in nonlinguistic ways?	How can you begin to incorporate some aspect of this strategy in your instruction?

13. Reflecting on Learning

The teacher engages students in activities that help them reflect on their learning and the learning process.

Teacher Evidence
❐ Teacher asks students to state or record what they are clear about and what they are confused about
❐ Teacher asks students to state or record how hard they tried
❐ Teacher asks students to state or record what they might have done to enhance their learning

Student Evidence
❐ When asked, students can explain what they are clear about and what they are confused about
❐ When asked, students can describe how hard they tried
❐ When asked, students can explain what they could have done to enhance their learning

Scale Levels: *(choose one)*
    ❐ Innovating   ❐ Applying   ❐ Developing   ❐ Beginning   ❐ Not Using   ❐ Not Applicable

Scale

	Innovating	Applying	Developing	Beginning	Not Using
Reflecting on learning	Adapts and creates new strategies for unique student needs and situations.	Engages students in reflecting on their own learning and the learning process and monitors the extent to which students self-assess their understanding and effort.	Engages students in reflecting on their own learning and the learning process.	Uses strategy incorrectly or with parts missing.	Strategy was called for but not exhibited.

Reflection Questions

	Innovating	Applying	Developing	Beginning	Not Using
Reflecting on learning	What are you learning about your students as you adapt and create new strategies?	How might you adapt and create new strategies for reflecting on learning that address unique student needs and situations?	In addition to engaging students in reflecting on their own learning and the learning process, how can you monitor the extent to which students self-assess their understanding and effort?	How can you engage students in reflecting on their own learning and the learning process?	How can you begin to incorporate some aspect of this strategy in your instruction?

Student Interviews

Student Questions:
- Why is the information that you are learning today important?
- How do you know what are the most important things to pay attention to?
- What are the main points of this lesson?

Design Question #3: What will I do to help students practice and deepen their understanding of new knowledge?

14. Reviewing Content

The teacher engages students in a brief review of content that highlights the critical information.

Teacher Evidence
- ☐ Teacher begins the lesson with a brief review of content
- ☐ Teacher uses specific strategies to review information
  - Summary
  - Problem that must be solved using previous information
  - Questions that require a review of content
  - Demonstration
  - Brief practice test or exercise

Student Evidence
- ☐ When asked, students can describe the previous content on which new lesson is based
- ☐ Student responses to class activities indicate that they recall previous content

Scale Levels: *(choose one)*
  ☐ Innovating ☐ Applying ☐ Developing ☐ Beginning ☐ Not Using ☐ Not Applicable

Scale

	Innovating	Applying	Developing	Beginning	Not Using
Reviewing content	Adapts and creates new strategies for unique student needs and situations.	Engages students in a brief review of content that highlights the critical information and monitors the extent to which students can recall and describe previous content.	Engages students in a brief review of content that highlights the critical information.	Uses strategy incorrectly or with parts missing.	Strategy was called for but not exhibited.

Reflection Questions

	Innovating	Applying	Developing	Beginning	Not Using
Reviewing content	What are you learning about your students as you adapt and create new strategies?	How might you adapt and create new strategies for reviewing content that address unique student needs and situations?	In addition to, engaging students in a brief review of content, how can you monitor the extent to which students can recall and describe previous content?	How can you engage students in a brief review of content that highlights the critical information?	How can you begin to incorporate some aspect of this strategy in your instruction?

15. Organizing Students to Practice and Deepen Knowledge

The teacher uses grouping in ways that facilitate practicing and deepening knowledge.

Teacher Evidence
❒ Teacher organizes students into groups with the expressed idea of deepening their knowledge of informational content
❒ Teacher organizes students into groups with the expressed idea of practicing a skill, strategy, or process

Student Evidence
❒ When asked, students explain how the group work supports their learning
❒ While in groups students interact in explicit ways to deepen their knowledge of informational content or, practice a skill, strategy, or process
- Asking each other questions
- Obtaining feedback from their peers

Scale Levels: *(choose one)*
    ❒ Innovating   ❒ Applying   ❒ Developing   ❒ Beginning   ❒ Not Using   ❒ Not Applicable

Scale

	Innovating	Applying	Developing	Beginning	Not Using
Organizing students to practice and deepen knowledge	Adapts and creates new strategies for unique student needs and situations.	Organizes students into groups to practice and deepen their knowledge and monitors the extent to which the group work extends their learning.	Organizes students into groups to practice and deepen their knowledge.	Uses strategy incorrectly or with parts missing.	Strategy was called for but not exhibited.

Reflection Questions

	Innovating	Applying	Developing	Beginning	Not Using
Organizing students to practice and deepen knowledge	What are you learning about your students as you adapt and create new strategies?	How might you adapt and create new strategies for organizing students to practice and deepen knowledge that address unique student needs and situations?	In addition to organizing students into groups to practice and deepen their knowledge, how can you also monitor the extent to which the group work extends their learning?	How can you organize students into groups to practice and deepen their knowledge?	How can you begin to incorporate some aspect of this strategy in your instruction?

16. Using Homework

When appropriate (as opposed to routinely) the teacher designs homework to deepen students' knowledge of informational content or, practice a skill, strategy, or process.

Teacher Evidence
❒ Teacher communicates a clear purpose for homework
❒ Teacher extends an activity that was begun in class to provide students with more time
❒ Teacher assigns a well crafted homework assignment that allows students to practice and deepen their knowledge independently

Student Evidence
❒ When asked, students can describe how the homework assignment will deepen their understanding of informational content or, help them practice a skill, strategy, or process
❒ Students ask clarifying questions of the homework that help them understand its purpose

Scale Levels: *(choose one)*
    ❒ Innovating   ❒ Applying   ❒ Developing   ❒ Beginning   ❒ Not Using   ❒ Not Applicable

Scale

	Innovating	Applying	Developing	Beginning	Not Using
Using homework	Adapts and creates new strategies for unique student needs and situations.	When appropriate (as opposed to routinely) assigns homework that is designed to deepen knowledge of informational content or, practice a skill, strategy, or process and monitors the extent to which students understand the homework.	When appropriate (as opposed to routinely) assigns homework that is designed to deepen knowledge of informational content or, practice a skill, strategy, or process.	Uses strategy incorrectly or with parts missing.	Strategy was called for but not exhibited.

Reflection Questions

	Innovating	Applying	Developing	Beginning	Not Using
Using homework	What are you learning about your students as you adapt and create new strategies?	How might you adapt and create new strategies for assigning homework that address unique student needs and situations?	In addition to assigning homework that is designed to deepen knowledge of informational content or practice a skill, strategy, or process, how can you also monitor the extent to which the group work extends their learning?	How can you assign homework that is designed to deepen knowledge of informational content or practice a skill, strategy, or process?	How can you begin to incorporate some aspect of this strategy in your instruction?

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17. Examining Similarities and Differences

When the content is informational, the teacher helps students deepen their knowledge by examining similarities and differences.

Teacher Evidence
☐ Teacher engages students in activities that require students to examine similarities and differences between content
- Comparison activities
- Classifying activities
- Analogy activities
- Metaphor activities

☐ Teacher facilitates the use of these activities to help students deepen their understanding of content
- Ask students to summarize what they have learned from the activity
- Ask students to explain how the activity has added to their understanding

Student Evidence
☐ Student artifacts indicate that their knowledge has been extended as a result of the activity
☐ When asked about the activity, student responses indicate that they have deepened their understanding
☐ When asked, students can explain similarities and differences
☐ Student artifacts indicate that they can identify similarities and differences

Scale Levels: *(choose one)*
    ☐ Innovating   ☐ Applying   ☐ Developing   ☐ Beginning   ☐ Not Using   ☐ Not Applicable

Scale

	Innovating	Applying	Developing	Beginning	Not Using
Examining similarities and differences	Adapts and creates new strategies for unique student needs and situations.	When content is informational, engages students in activities that require them to examine similarities and differences, and monitors the extent to which the students are deepening their knowledge.	When content is informational, engages students in activities that require them to examine similarities and differences.	Uses strategy incorrectly or with parts missing.	Strategy was called for but not exhibited.

Reflection Questions

	Innovating	Applying	Developing	Beginning	Not Using
Examining similarities and differences	What are you learning about your students as you adapt and create new strategies?	How might you adapt and create new strategies for examining similarities and differences that address unique student needs and situations?	In addition to engaging students in examining similarities and differences, how can you monitor the extent to which the students are deepening their knowledge?	How can you engage students in activities that require them to examine similarities and differences?	How can you begin to incorporate some aspect of this strategy in your instruction?

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18. Examining Errors in Reasoning

When content is informational, the teacher helps students deepen their knowledge by examining their own reasoning or the logic of the information as presented to them.

Teacher Evidence

☐ Teacher asks students to examine information for errors or informal fallacies
- Faulty logic
- Attacks
- Weak reference
- Misinformation

☐ Teacher asks students to examine the strength of support presented for a claim
- Statement of a clear claim
- Evidence for the claim presented
- Qualifiers presented showing exceptions to the claim

Student Evidence

☐ When asked, students can describe errors or informal fallacies in information

☐ When asked, students can explain the overall structure of an argument presented to support a claim

☐ Student artifacts indicate that they can identify errors in reasoning.

Scale Levels: *(choose one)*
    ☐ Innovating   ☐ Applying   ☐ Developing   ☐ Beginning   ☐ Not Using   ☐ Not Applicable

Scale

	Innovating	Applying	Developing	Beginning	Not Using
Examining errors in reasoning	Adapts and creates new strategies for unique student needs and situations.	When content is informational, engages students in activities that require them to examine their own reasoning or the logic of information as presented to them and monitors the extent to which students are deepening their knowledge.	When content is informational, engages students in activities that require them to examine their own reasoning or the logic of information as presented to them.	Uses strategy incorrectly or with parts missing.	Strategy was called for but not exhibited.

Reflection Questions

	Innovating	Applying	Developing	Beginning	Not Using
Examining errors in reasoning	What are you learning about your students as you adapt and create new strategies?	How might you adapt and create new strategies for examining their own reasoning or the logic of information that address unique student needs and situations?	In addition to engaging students in examining their own reasoning or the logic of information as presented to them, how can you monitor the extent to which the students are deepening their knowledge?	How can you engage students in activities that require them to examine their own reasoning or the logic of information as presented to them?	How can you begin to incorporate some aspect of this strategy in your instruction?

19. Practicing Skills, Strategies, and Processes

When the content involves a skill, strategy, or process, the teacher engages students in practice activities that help them develop fluency.

Teacher Evidence

☐ Teacher engages students in massed and distributed practice activities that are appropriate to their current ability to execute a skill, strategy, or process
- Guided practice if students cannot perform the skill, strategy, or process independently
- Independent practice if students can perform the skill, strategy, or process independently

Student Evidence

☐ Students perform the skill, strategy, or process with increased confidence
☐ Students perform the skill, strategy, or process with increased competence

Scale Levels: *(choose one)*
   ☐ Innovating   ☐ Applying   ☐ Developing   ☐ Beginning   ☐ Not Using   ☐ Not Applicable

Scale

	Innovating	Applying	Developing	Beginning	Not Using
Practicing skills, strategies, and processes	Adapts and creates new strategies for unique student needs and situations.	When content involves a skill, strategy, or process, engages students in practice activities and monitors the extent to which the practice is increasing student fluency.	When content involves a skill, strategy, or process, engages students in practice activities.	Uses strategy incorrectly or with parts missing.	Strategy was called for but not exhibited.

Reflection Questions

	Innovating	Applying	Developing	Beginning	Not Using
Practicing skills, strategies, and processes	What are you learning about your students as you adapt and create new strategies?	How might you adapt and create practice activities that increase fluency and address unique student needs and situations?	In addition to engaging students in practice activities, how can you monitor the extent to which the practice is increasing student fluency?	How can you engage students in practice activities when content involves a skill, strategy, or process?	How can you begin to incorporate some aspect of this strategy in your instruction?

20. Revising Knowledge

The teacher engages students in revision of previous knowledge about content addressed in previous lessons.

Teacher Evidence
- ❑ Teacher asks students to examine previous entries in their academic notebooks or notes
- ❑ The teacher engages the whole class in an examination of how the current lesson changed perceptions and understandings of previous content
- ❑ Teacher has students explain how their understanding has changed

Student Evidence
- ❑ Students make corrections to information previously recorded about content
- ❑ When asked, students can explain previous errors or misconceptions they had about content

Scale Levels: *(choose one)*
❑ Innovating ❑ Applying ❑ Developing ❑ Beginning ❑ Not Using ❑ Not Applicable

Scale

	Innovating	Applying	Developing	Beginning	Not Using
Revising knowledge	Adapts and creates new strategies for unique student needs and situations.	Engages students in revision of previous content and monitors the extent to which these revisions deepen students' understanding.	Engages students in revision of previous content.	Uses strategy incorrectly or with parts missing.	Strategy was called for but not exhibited.

Reflection Questions

	Innovating	Applying	Developing	Beginning	Not Using
Revising knowledge	What are you learning about your students as you adapt and create new strategies?	How might you adapt and create new strategies for revising content that address unique student needs and situations?	In addition to engaging students in revision of previous content, how can you monitor the extent to which these revisions deepen students' understanding?	How can you engage students in the revision of previous content?	How can you begin to incorporate some aspect of this strategy in your instruction?

Student Interviews

Student Questions:
- How did this lesson add to your understanding of the content?
- What changes did you make in your understanding of the content as a result of the lesson?
- What do you still need to understand better?

Design Question #4: What will I do to help students generate and test hypotheses about new knowledge?

21. Organizing Students for Cognitively Complex Tasks

The teacher organizes the class in such a way as to facilitate students working on complex tasks that require them to generate and test hypotheses.

Teacher Evidence
- ☐ Teacher establishes the need to generate and test hypotheses
- ☐ Teacher organizes students into groups to generate and test hypotheses

Student Evidence
- ☐ When asked, students describe the importance of generating and testing hypotheses about content
- ☐ When asked, students explain how groups support their learning
- ☐ Students use group activities to help them generate and test hypotheses

Scale Levels: *(choose one)*
☐ Innovating ☐ Applying ☐ Developing ☐ Beginning ☐ Not Using ☐ Not Applicable

Scale

	Innovating	Applying	Developing	Beginning	Not Using
Organizing students for cognitively complex tasks	Adapts and creates new strategies for unique student needs and situations.	Organizes students into groups to facilitate working on cognitively complex tasks and monitors the extent to which group processes facilitate generating and testing hypotheses.	Organizes students into groups to facilitate working on cognitively complex tasks.	Uses strategy incorrectly or with parts missing.	Strategy was called for but not exhibited.

Reflection Questions

	Innovating	Applying	Developing	Beginning	Not Using
Organizing students for cognitively complex tasks	What are you learning about your students as you adapt and create new strategies?	How might you adapt and create new strategies for organizing students to complete cognitively complex tasks?	In addition to organizing students in groups for cognitively complex tasks, how can you monitor the extent to which group processes facilitate generating and testing hypotheses?	How can you organize students in groups to facilitate working on cognitively complex tasks?	How can you begin to incorporate some aspect of this strategy in your instruction?

22. Engaging Students in Cognitively Complex Tasks Involving Hypothesis Generation and Testing

The teacher engages students in complex tasks (e.g. decision making, problem solving, experimental inquiry, investigation) that require them to generate and test hypotheses.

Teacher Evidence

☐ Teacher engages students with an explicit decision making, problem solving, experimental inquiry, or investigation task that requires them to generate and test hypotheses

☐ Teacher facilitates students generating their own individual or group task that requires them to generate and test hypotheses

Student Evidence

☐ Students are clearly working on tasks that require them to generate and test hypotheses

☐ When asked, students can explain the hypothesis they are testing

☐ When asked, students can explain whether their hypothesis was confirmed or disconfirmed

☐ Student artifacts indicate that they can engage in decision making, problem solving, experimental inquiry, or investigation

Scale Levels: *(choose one)*
☐ Innovating ☐ Applying ☐ Developing ☐ Beginning ☐ Not Using ☐ Not Applicable

Scale

	Innovating	Applying	Developing	Beginning	Not Using
Engaging students in cognitively complex tasks involving hypothesis generation and testing	Adapts and creates new strategies for unique student needs and situations.	Engages students in cognitively complex tasks (e.g. decision making, problem solving, experimental inquiry, investigation) and monitors the extent to which students are generating and testing hypotheses.	Engages students in cognitively complex tasks (e.g. decision making, problem solving, experimental inquiry, investigation).	Uses strategy incorrectly or with parts missing.	Strategy was called for but not exhibited.

Reflection Questions

	Innovating	Applying	Developing	Beginning	Not Using
Engaging students in cognitively complex tasks involving hypothesis generation and testing	What are you learning about your students as you adapt and create new strategies?	How might you adapt and create new strategies for organizing students to complete cognitively complex tasks?	In addition to engaging students in groups for cognitively complex tasks, involving hypothesis generation and testing, how can you monitor the extent to which students are generating and testing hypotheses?	How can you engage students in cognitively complex tasks involving hypothesis generation and testing?	How can you begin to incorporate some aspect of this strategy in your instruction?

23. Providing Resources and Guidance

The teacher acts as resource provider and guide as students engage in cognitively complex tasks

Teacher Evidence

☐ Teacher makes himself/herself available to students who need guidance or resources
- Circulates around the room
- Provides easy access to himself/herself

☐ Teacher interacts with students during the class to determine their needs for hypothesis generation and testing tasks

☐ Teacher volunteers resources and guidance as needed by the entire class, groups of students, or individual students

Student Evidence

☐ Students seek out the teacher for advice and guidance regarding hypothesis generation and testing tasks

☐ When asked, students can explain how the teacher provides assistance and guidance in hypothesis generation and testing tasks

Scale Levels: *(choose one)*
☐ Innovating ☐ Applying ☐ Developing ☐ Beginning ☐ Not Using ☐ Not Applicable

Scale

	Innovating	Applying	Developing	Beginning	Not Using
Providing resources and guidance	Adapts and creates new strategies for unique student needs and situations.	Acts as a guide and resource provider as students engage in cognitively complex tasks and monitors the extent to which students request and use guidance and resources.	Acts as a guide and resource provider as students engage in cognitively complex tasks.	Uses strategy incorrectly or with parts missing.	Strategy was called for but not exhibited.

Reflection Questions

	Innovating	Applying	Developing	Beginning	Not Using
Providing resources and guidance	What are you learning about your students as you adapt and create new strategies?	How might you adapt and create new strategies for providing resources and guidance?	In addition to acting as a guide and resource provider, how can you monitor the extent to which students request and use guidance and resources?	How can you act as a guide and resource provider as students engage in cognitively complex tasks?	How can you begin to incorporate some aspect of this strategy in your instruction?

Student Interviews

Student Questions:
- How did this lesson help you apply or use what you have learned?
- What change has this lesson made about your understanding of the content?