

Dimension 2 – Acquire & Integrate Knowledge

Segment 2: Lesson Segments Addressing Content

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

Element: 11 – How can I use technology for Elaborating on New Information

AITSL STANDARDS: Standard 1 - Know students and how they learn; Standard 2 – Know the content and how to teach it; Standard 3 – Plan for and implement effective teaching and learning; Standard 5 – Assess, provide feedback and report on student learning

Descriptor: During breaks in the presentation of content, the teacher engages students in actively processing new information. Students can explain what they have just learned, ask clarifying questions, and/or actively discuss the content; students can elaborate on and/or make inferences based upon what was explicitly taught.

		Sample Activities		
Score 4.0	<p>In addition to Score 3.0, in-depth inferences and applications that go beyond what was practiced. How am I doing? 4 - Innovating - I adapt and create new strategies (differentiate) for unique student needs and situations, in order for the desired effect to be evident in all students.</p>	<p>Innovating Tip: CHECK Combine an <i>Elaborative Interrogation Strategy</i> into an online discussion for homework. Here, students can create threads that are 'why' questions and also answer the questions of others and try to derive possible answers that define the cause-effect relation between subject and the predicate. In class, students can then decide on the best choice, and why, that answers the questions.</p>		
	<p>3.5 In addition to score 3.0 performance, in-depth inferences and applications with partial success.</p>			
Score 3.0	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 5px;"> <p>Teacher Evidence</p> <ul style="list-style-type: none"> <input type="checkbox"/> Teacher asks explicit questions that require students to make elaborative inferences about the content <input type="checkbox"/> Teacher asks students to explain and defend their inferences <input type="checkbox"/> Teacher presents situations or problems that require inferences </td> <td style="width: 50%; padding: 5px;"> <p>Student Evidence</p> <ul style="list-style-type: none"> <input type="checkbox"/> Students volunteer answers to inferential questions <input type="checkbox"/> Students provide explanations and "proofs" for inferences </td> </tr> </table> <p>How am I doing? 3 - Applying – I engage students in answering Inferential questions and monitor for evidence of the extent to which the majority of students elaborate on what was explicitly taught</p>	<p>Teacher Evidence</p> <ul style="list-style-type: none"> <input type="checkbox"/> Teacher asks explicit questions that require students to make elaborative inferences about the content <input type="checkbox"/> Teacher asks students to explain and defend their inferences <input type="checkbox"/> Teacher presents situations or problems that require inferences 	<p>Student Evidence</p> <ul style="list-style-type: none"> <input type="checkbox"/> Students volunteer answers to inferential questions <input type="checkbox"/> Students provide explanations and "proofs" for inferences 	<p>Emerging Tip: CHEW Have students create a <i>datachart</i> in a Wiki. Teachers can allot the students in pairs or groups and ask them to generate questions and answers for the facts to be learnt. This could also be done as a <i>Hot potato</i>.</p>
<p>Teacher Evidence</p> <ul style="list-style-type: none"> <input type="checkbox"/> Teacher asks explicit questions that require students to make elaborative inferences about the content <input type="checkbox"/> Teacher asks students to explain and defend their inferences <input type="checkbox"/> Teacher presents situations or problems that require inferences 	<p>Student Evidence</p> <ul style="list-style-type: none"> <input type="checkbox"/> Students volunteer answers to inferential questions <input type="checkbox"/> Students provide explanations and "proofs" for inferences 			
	<p>2.5 No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content.</p>			
Score 2.0	<p>There are no major errors or omissions regarding the simpler details and processes. How am I doing? 2 - Developing – I engage students in answering inferential questions, but the majority of students are not monitored for the desired effect of the strategy.</p> <p>However, the teacher exhibits major errors or omissions regarding the more complex ideas and processes.</p>	<p>Beginning Tips: CHUNK You could generate cause-effect questions in a blog. Then students could derive and generate answers for the questions in the blog.</p>		
	<p>1.5 Partial knowledge of the 2.0 content, but major errors or omissions regarding the 3.0 content.</p>			
Score 1.0	<p>With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.</p>			
	<p>0.5 With help, a partial understanding of the 2.0 content, but not the 3.0 content.</p>			
Score 0.0	<p>Even with help, no understanding or skill demonstrated.</p>			



Elaboration

Desired Effect: During breaks in the presentation of content, the teacher engages students in actively processing new information. Students can explain what they have just learned, ask clarifying questions, and/or actively discuss the content; students can elaborate on and/or make inferences based upon what was explicitly taught.

Why Elaborate?

Once students have had an opportunity to process new knowledge, the next step is to help them elaborate on what they have learned by asking questions. Well-planned questions are a productive way to encourage students to incorporate their own thinking into the learning. Questioning techniques compel students to go beyond what was introduced by making inferences and providing evidence to support their claims.

What Can I Do to Help Students Elaborate?

- ✓ Have students respond to each other's questions rather than always using teacher posed questions.
- ✓ Use graphic organizers to help students map out their thinking and reasoning.
- ✓ Utilize general inference and elaborative interrogation questions.

General Inferential Questions

These are questions that cause the student to speculate about something. They require the student to use his or her existing knowledge and combine it with the information gained from explicit instruction to deduce meaning or forecast what will happen in the future. The answer to an inferential question will not be found written in the text or taken directly from a presentation; rather, it is constructed from the information provided.

General Inference Question Examples

- How do these plants and animals survive in this harsh environment?
- When _____ is used, does it present a particular danger to other things or people?
- What is the process for making _____?
- What equipment is typically used in this event?
- What changes occur when _____ reaches this state?
- What kinds of _____ do you think we will find here?

Elaborative Interrogations

Elaborative interrogations are an extension of inferential questions where students are required to support their deductive or logical reasoning. The students are expected to share their thinking process, then justify and defend how they derived their answer. This strategy generates analytical thinkers whether the instructional activity is reading from the text, performing a lab, watching a video, or demonstrating something.

Elaborative Interrogation Examples

- Why do you think this is true?
- What evidence supports your conclusion?
- How did you come to your conclusion?
- What do you expect would happen if...?
- What would happen if this part of the story was changed?
- What are some typical characteristics or behaviors you would expect of...?

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

See over for Proficiency Scales

Remember, to be proficient on Marzano's Teaching Scales for Reflective practice at level 3 you need to use the strategy, exhibit some of the evidence above **AND** monitor the extent to which it affects student outcomes. Then to achieve a 4 (innovating) you need to adapt and create a new version of the strategy that differentiates for unique student needs and situations.

Scale

	0 Not Using	1 Beginning	2 Developing	3 Applying	4 Innovating
Elaborating on new information	Strategy was called for but not exhibited.	Uses strategy incorrectly or with parts missing.	Engages students in answering inferential questions, but the majority of students are not monitored for the desired effect of the strategy.	Engages students in answering Inferential questions and monitors for evidence of the extent to which the majority of students elaborate on what was explicitly taught.	Adapts and creates new strategies for unique student needs and situations in order for the desired effect to be evident in all students.

Reflection Questions

	0 Not Using	1 Beginning	2 Developing	3 Applying	4 Innovating
Elaborating on new information	How can you begin to incorporate some aspects of this strategy into your instruction?	How can you engage students in answering inferential questions?	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 might you adapt and create new strategies for elaborating on new information that address unique student needs and situations?	What are you learning about your students as you adapt and create new strategies?