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| **What the Teacher/Instructor Does** |
|  | **Consistent with 5E Model** | **Inconsistent with 5E Model** | **Notes/Ideas** |
| **ENGAGE** | * Generates interest and curiosity
* Raises questions
* Assess current knowledge, including misconceptions
 | * Explains concepts
* Provides definitions and conclusions
* Lectures
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| **EXPLORE** | * Provides time for students to work together
* Observes and listens to students as they interact
* Asks probing questions to redirect students’ investigations when necessary
 | * Explains how to work through the problem or provides answers
* Tells students they are wrong
* Gives information or facts that solve the problem
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| **EXPLAIN** | * Asks for evidence and clarification from students
* Uses students’ previous experiences as a basis for explaining concepts
* Encourages students to explain concepts and definitions in their own words, then provides scientific explanations and vocabulary
 | * Does not solicit the students’ explanations
* Accepts explanations that have no justification
* Introduces unrelated concepts or skills
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| **ELABORATE** | * Expects students to apply scientific concepts, skills, and vocabulary to new situations
* Reminds students of alternative explanations
* Refers students to alternative explanations
 | * Provides definite answers
* Leads students to step-by-step solutions to new problems
* Lectures
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| **EVALUATE** | * Observes and assesses students as they apply new concepts and skills
* Allows students to assess their own learning and group process skills
* Asks open-ended questions
 | * Tests vocabulary words and isolated facts
* Introduces new ideas or concepts
* Promotes open-ended discussion unrelated to the concept
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| **What the Student Does** |
|  | **Consistent with 5E Model** | **Inconsistent with 5E Model** | **Notes/Ideas** |
| **ENGAGE** | * Asks questions such as “Why did this happen?” “What do I already know about this?” “What can I find out about this?”
* Shows interest in the topic
 | * Asks for the “right” answer
* Offers the “right” answer
* Insists on answers and explanations
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| **EXPLORE** | * Thinks creatively, but within the limits of the activity
* Tests predictions and hypotheses
* Records observations and ideas
 | * Passively allows others to do the thinking and exploring
* “Plays around” indiscriminately with no goal in mind
* Stops with one solution
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| **EXPLAIN** | * Explains possible solutions to others
* Listens critically to explanations of other students and the teacher
* Uses recorded observations in explanations
 | * Proposes explanations from “thin air” with no relationship to previous experiences
* Brings up irrelevant experiences and examples
* Accepts explanations without justification
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| **ELABORATE** | * Applies new labels, definitions, explanations, and skills in new but similar situations
* Uses previous information to ask questions, propose solutions, make decisions, and design experiments
* Records observations and explanations
 | * “Plays around” with no goal in mind
* Ignores previous information or evidence
* Neglects to record data
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| **EVALUATE** | * Demonstrates an understanding of the concept or skill
* Answers open-ended questions by using observations, evidence, and previously accepted explanations
* Evaluates his or her own progress and knowledge
 | * Draws conclusions, not using evidence or previously accepted explanations
* Offers only yes-or-no answers and memorized definitions or explanations
* Fails to express satisfactory explanations in his or her own words
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