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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 |  |
| **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 |  |
| **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 |  |
| **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 |  |
| **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 |  |
| **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 |  |
| **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 |  |
| **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 |  |
| **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 |  |
| **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 |  |