<table>
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<tr>
<th>5E Stage of Instruction</th>
<th>Use Formative Assessment Probes or FACTs to:</th>
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| ENGAGE - Generate interest, stimulate curiosity, raise questions, uncover preconceptions and prior experiences | • Uncover preconceptions, prior experiences, or misconceptions resulting from prior instruction  
• Stimulate student interest in the concept or phenomenon  
• Activate student thinking and metacognitive processes  
• Have students generate initial questions about the concept or phenomenon  

Examples: probes, interest scale, directed K-W-L, annotated drawings, human scattergraph, sticky bars, everyday mystery stories, four corners |
| EXPLORE - Provide initial experiences to examine, investigate, and puzzle through ideas and phenomena and construct initial concepts and explanations | • Have students test predictions or hypotheses about an outcome  
• Engage in social construction of initial concepts, ideas, or practices  
• Provide opportunities to discuss and compare ideas  
• Quick checks of developing ideas or questions students have during the exploratory phase  

Examples: card sorts, P-E-O probes, a picture tells a thousand words, claim cards, group Frayer model, what are you doing and why?, whiteboarding, extended sticky bars, muddiest point, 2 minute paper |
| EXPLAIN - Develop conceptual and procedural understanding; introduce formal concepts and vocabulary linked to students' experiences; engage in sense making and construction of scientific explanations | • Guide students toward clarifying their thinking  
• Develop scientific explanations  
• Engage students in listening critically to each others' explanations  
• Formally introduce terminology, concepts, or principles  
• Revisit initial probes and revise based on new learning  

Examples: C-E-O-SE, explanation analysis, RERUN, word use probes, word sort, VDR, RAQ, concept mapping, confidence level assessment, TAR |
| ELABORATE - Apply concepts, skills, and explanations to new contexts; transfer of learning to new, related situations | • Use concepts, ideas, or practices within a new context or with different examples or phenomena  
• Encourage peer to peer checks for understanding  

Examples: Justified list probes; refutations; missed conception; representation analysis; thought experiments; B-D-A drawings; example, non-example; always, sometimes, never; ranking tasks |
| EVALUATE - Assess the extent to which students have achieved understandings and abilities; provide feedback as needed; engage students in self-reflection | • Assess the extent to which students have met a learning target  
• Provide peer to peer and teacher to student feedback  
• Encourage self-assessment and reflection on how ideas have changed  

Examples: 2/3 testing, collaborative cued corrections, I used to think...but now I know, look back, concept mapping cards, success indicators, turn probe into an open ended question |