5E Instructional model

- ➤ Models what teachers do in classrooms Could be used as a framework for:
- A unit of work
- A series of lessons
- Any one lesson

5E Instructional Model

"A framework to inform conversations and guide the observation, critique and reflection of classroom practice."

5E - An Instructional Model

- A framework for purposeful teaching and describes the interactions that take place within a classroom between the teacher.
- The student and the content using five descriptors:



5E Model of Instruction

- 1. Engage
- 2. Explore
 - 3. Explain
- 4. Elaborate
- 5. Evaluate



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- 2. Explore
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- Make connections between past and present learning experiences.
- Students should become mentally engaged in the concept, process, or skills to be learned.

Source: http://enhancinged.wgbh.org/research/eeeee.html

- 1. Engage
- 2. Explore
- 3. Explain
- 4. Elaborate
- 5. Evaluate

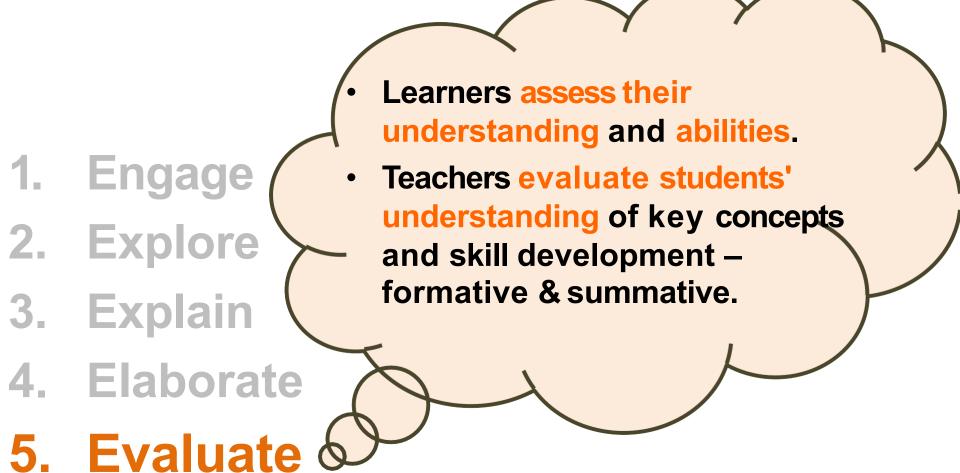
- Students actively explore their environment or manipulate materials.
- They identify and develop concepts, processes, and skills.

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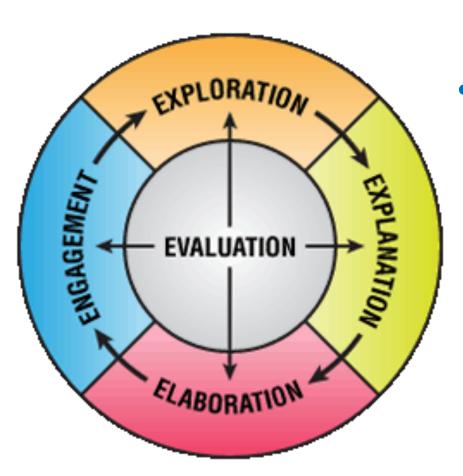
- Students explain the concepts they have been exploring.
- They verbalize their conceptual understanding or to demonstrate new skills or behaviors.
- Teachers can introduce formal terms, definitions, & explanations for concepts, processes, skills, or behaviors.

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- Students to apply their knowledge to new domains/ extends their conceptual understanding.
- "Transfer of learning"
- They develop deeper and broader understanding of major concepts, obtain more information about areas of interest, and refine their skills.

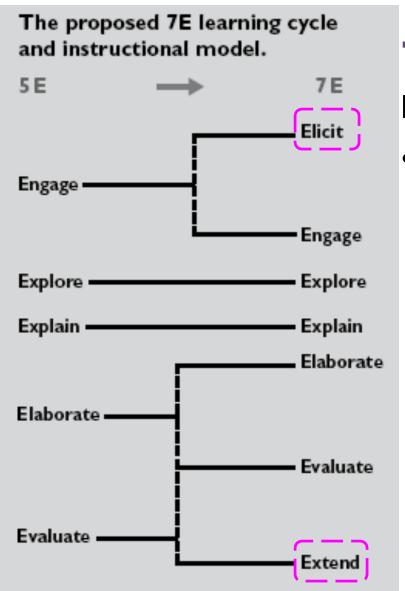


Modification on the 5E Model (1)



 Formative evaluation must take place during all interactions with students.

Modification on the 5E Model (2)



7E Model (Eisenkraft, N.D.)

 Emphasises the increasing importance of eliciting prior understandings and the extending, or transfer, of concepts.

The 5E Model of Instruction



5E Definition	Teacher Behavior	Student Behavior
Engage		
Generate interest Access prior knowledge Connect to past knowledge Set parameters of the focus Frame the idea	Motivates Creates interest Taps into what students know or think about the topic Raises questions and encourages responses	Attentive in listening Ask questions Demonstrates interest in the lesson Responds to questions demonstrating their own entry point of understanding
Explore		
Experience key concepts Discover new skills Probe, inquire, and question experiences Examine their thinking Establish relationships and understanding	Acts as a facilitator Observes and listens to students as they interact Asks good inquiry-oriented questions Provides time for students to think and to reflect Encourages cooperative learning	Conducts activities, predicts, and forms hypotheses or makes generalizations Becomes a good listener Shares ideas and suspends judgment Records observations and/or generalizations Discusses tentative alternatives
Explain		
 Connect prior knowledge and background to new discoveries Communicate new understandings Connect informal language to formal language 	Encourages students to explain their observations and findings in their own words Provides definitions, new words, and explanations Listens and builds upon discussion form students Asks for clarification and justification Accepts all reasonable responses	Explains, listens, defines, and questions Uses previous observations and findings Provides reasonable responses to questions Interacts in a positive, supportive manner
Extend/Elaborate		
Apply new learning to a new or similar situation Extend and explain concept being explored Communicate new understanding with formal language	Uses previously learned information as a vehicle to enhance additional learning Encourages students to apply or extend the new concepts and skills Encourages students to use terms and definitions previously acquired	Applies new terms and definitions Uses previous information to probe ask questions, and make reasonable judgments Provides reasonable conclusions and solutions Records observations, explanations, and solutions
Evaluate		
Assess understanding (Self, peer and teacher evaluation) Demonstrate understanding of new concept by observation or openended response Apply within problem situation Show evidence of accomplishment	Observes student behaviors as they explore and apply new concepts and skills Assesses students' knowledge and skills Encourages students to assess their own learning Asks open-ended questions	Demonstrates an understanding or knowledge of concepts and skills Evaluates his/her own progress Answers open-ended questions Provides reasonable responses and explanations to events or phenomena

Based on the 5E Instructional Model presented by Dr. Jim Barufaldi at the Eisenhower Science Collaborative Conference in Austin, Texas, July 2002.

Elaborate

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mammal's animal.

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	How can I get students interested in this?
Engage	Have students discuss what their pets look like or display a picture of your pet and have students describe it?
	What tasks/questions can I offer to help students puzzle through this?
Explore	Ask students to examine the shapes of their teeth and have them record their observations or if you like have them examine a pair of dentures using a document finder.
	How can I help students make sense of their observations?
Ę.	As you show pictures or models of herbivores' and carnivores' teeth and jaws have students fill out a Venn diagram showing the differences and similarities between the two.

Next, show a variety of mammals with interesting styles of movement such as a rabbit, gazelle, bat, or a dolphin. Ask students to

How can I help my students demonstrates their understanding or knowledge of concepts and skills?

Finally, students will show evidence of understanding by answering formative test and solving problem of a bizzare

- **EXAMPLE OF 5ELESSON PLAN TEMPLATE**
- **Topic: Mammals**

How can my students apply their new knowledge to other situations?

infer what adaptations each animal has that help or affect its movement.



LESSON OBSERVATION GUIDE

observe and collect evidence of student learning, thinking and engagement

Traditional classroom observations tend to focus on what the teacher does during the class period.

observations lessons focus on students and what they do in response to instruction.

puts light on the students and the lesson itself, which was designed by the whole team, not a single teacher

To help them perform effectively, observers should have a copy of the lesson plan, any student handouts used

The teacher is only one player in the full drama of the lesson, with students taking the lead roles.

If the lesson is carefully designed, another teacher should be able to teach it, albeit with a few modifications.



Group Activity: Example of 5E LESSON PLAN

Planning your Lesson for School Tryout

- Three Members Role
- Draft of Lesson Plan
 - Topic Selection
- Worksheet preparation
- Materials and Apparatus



Thank you...

