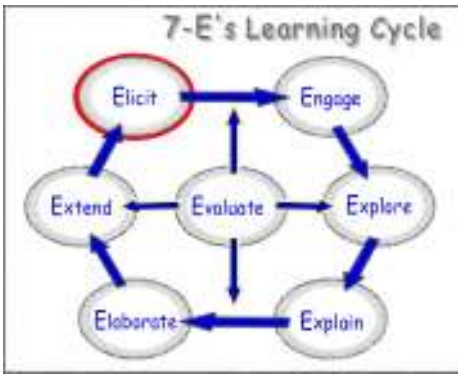
The 7-E's Learning Cycle



Phase 1: *Elicit*

Determining prior knowledge: "What do you know about..?"

Phase 2: *Engage*

Arouse student interest by using a discrepant event,
telling a story, giving a demonstration, or by showing an object, picture, or brief video.
Motivate and capture student interest.

Phase 3: *Explore*

Have students work with manipulative (e.g., natural objects, models) to make observations, investigate a question or phenomenon. Have students make predictions, develop hypotheses, design experiments, collect data, draw conclusions, and so forth. Teacher role is to provide support and scaffolding. Student role is to construct their own understanding through active experience.

Phase 4: *Explain*

Students report findings and discoveries to the class. Teacher allows opportunities to verbalize and clarify the concept; introduces concepts and terms and summarizes the results of the exploration phase. Teacher explanations, texts, and media are used to guide learning.

Phase 5: *Elaborate*

Have students apply the newly learned concepts to new contexts. Pose a different (but similar) question and have students explore it using the concept.

Phase 6: *Evaluate*

Use the formative assessment from Elicit Phase and assess: for example, the design of the investigation, the interpretation of the data, or follow-through on questions, looking for student growth. Growth is the desired change in the students' understanding of key concepts, principles, and skills in a differentiated classroom. Expectations vary according to the student's beginning point. Summative assessment may be used here to measure achievement and assign a grade.

Phase 7: *Extend*

Lead students to connect the concept to different contexts, transfer new learning.

"Teaching Constructivist Science K-8" by Bentley, Ebert, and Ebert; Corwin Press, 2007, pg. 117-119.