

## Teaching Using the 5 E's

The 5 E learning cycle is a method of structuring a lesson that is based upon constructivist learning theory, research-based best practices in pedagogy, and cognitive psychology. It is a recursive cycle of distinctive cognitive stages of learning that include: engage, explore, explain, elaborate (extend), and evaluate. The lesson often takes several days or weeks to complete.

The first stage is the “**engage**”. This is the introduction to the lesson that motivates or hooks the students’ interest in the learning to follow. It can be a demonstration, a discussion, a reading, or other activity used to tap into prior knowledge about the lesson and engage the students’ curiosity. It is used to uncover what students know and think about the concept or topic.

This is followed with an “**explore**” activity that allows the students to have experiences with the concepts and ideas of the lesson. Students are encouraged to work together without direct instruction from the teacher. They observe, question, and investigate the concepts to develop fundamental awareness of the nature of the materials and ideas.

The “**explain**” stage encourages students to explain concepts and definitions in their own words. Students are asked to justify and clarify their ideas. Formal definitions, explanations, and labels are provided. This is done through such activities as discussions, chalk talks, films, etc. and can be didactic in nature.

The “**elaborate**” (extend) stage allows students to apply their new labels, definitions, explanations, and skills in new, but similar situations. It often involves experimental inquiry, investigative projects, problem solving, and decision making. This is also a good time for extension for higher students and intervention or reteach for lower.

The “**evaluate**” stage assesses both learning and teaching and can use a wide variety of informal and formal assessment strategies. Teachers frequently observe students as they apply new concepts and skills to assess students’ knowledge and/or skills, looking for evidence that the students have changed their thinking or behaviors. The opportunity to allow students to assess their own learning and group-process skills is often provided.

Even though the 5 E's were just described in linear order, there are times when it is appropriate to loop back into the cycle before going forward. For example, several explore/explain loops may need to occur before the students have the full ability to move forward into an extend session. Or, it may be that during the extend stage, the teacher may find students who need to revisit an engage activity. Evaluation is an ongoing process and is not generally left for the end activity. It is helpful to think of the 5 E's as recursive and looping back on itself. It is also possible for a single E activity to have all of the other E's embedded within it. For example, an extend session may well begin with engage, followed by brief explore/explain, and be embedded with informal evaluations along the way. The idea of the 5 E's cycle being somewhat like a fractal with mini 5 E's building upon one another to create a 5 E's lesson can be an appropriate analogy.