






The BSCS 5E Instructional Model

The BSCS 5E Instructional Model provides a format for lessons that builds on what students already know. The model's sequence for the learning experience enables learners to construct their understanding of a concept across time. Each phase of the learning sequence can be described using five words that begin with *E*: engage, explore, explain, elaborate, and evaluate.

Learning Phase	Students' Roles	Teachers' Roles
 Engage	Students are introduced to the concept. Students make connections to prior knowledge and to what is to be studied. Student thinking is clarified. Students become mentally engaged in the new learning experience.	Teachers ask questions of students and engage them in guided inquiry lessons. They use strategies such as KWL that make connections between the past and present learning experience. Teachers set a level of anticipation.
 Explore	Students explore or experiment at this point. They engage in observations, use science tools and materials (manipulatives), collect data, and record data.	Teachers set up the investigation and guide students in inquiry and ask probing questions to clarify understanding.
 Explain	Students verbalize their understandings from the Explore phase, look for patterns in their data, and describe what they observed. This can be done in small and/or whole groups.	Teachers ask probing questions that encourage students to look for patterns or irregularities in data.
 Elaborate	Students expand their learning, practice skills, and behavior, and make connections or applications to related concepts and the world around them.	Teachers provide learning opportunities for students to apply their knowledge and to gain a deeper understanding. Activities can include reading articles and books, writing, designing other experiments, and exploring related topics on the Internet.
 Evaluate	Students answer questions, pose questions, and illustrate their knowledge (understandings) and skills (abilities).	Teachers diagnose student understanding through an ongoing process. Assessment can be both formative (ongoing and dynamic) and summative (end-of-lesson final test or product).

Source: BSCS developed the BSCS 5E Instructional Model in the 1980s. Since that time, BSCS has used this model in its curriculum development programs as well as its professional development programs. The BSCS 5E Instructional Model has been widely disseminated and widely used as an effective instructional model that allows the students to construct their understanding across time. Adapted by SEDL with permission from BSCS. <http://www.bscs.org>.

Bybee, R. W., Taylor, J. A., Gardner, A., Van Scotter, P., Carlson Powell, J., Westbrook, A., & Landes, N. (2006). *The BSCS 5E Instructional Model: Origins, effectiveness and applications*. Retrieved from <http://www.bscs.org/bcs-5e-instructional-model>