IGELS INSTRUCTIONAL MODEL

(Components May Be Combined)

 PRE-CONCEPT/MISCONCEPTION/ALTERNATIVE CONCEPTION CHECKPOINT (What do students know about concept and what don't they understand? A starting point to learning/instruction)

CONCEPT OVERVIEW WITH HOOK

(Why is this important to your students? Why should they study/know this? Introduction with no jargon)

• INTRODUCTORY INQUIRY-BASED ACTIVITY RELATED TO CONCEPT (Introducing essential/relevant content and practicing reasoning/science process/quantitative skills)

FORMATIVE CHECKPOINT

(Faculty and students check for reasoning about and/or understanding of concept)

• COLLABORATIVE/EXPERIMENTAL/EXPERIENTIAL ACTIVITY/PROJECT SCAFFOLDING CONTENT OR SKILL AND CONNECTING SCIENCE TO STUDENTS' WORLD

(Preparing students for societal and scientific futures while building on their knowledge and skills and helping them see relevancy of science)

 DISCUSSION/ACTIVITY TO HELP STUDENTS CONSTRUCT AND SYNTHESIZE CONCEPTUAL UNDERSTANDING (Opportunity for student reflection and to integrate concept with disciplinary models/themes/other concepts and other disciplines)

SUMMATIVE CHECKPOINT

(Student demonstration of understanding, reasoning, possession of skills and an improved sense of belonging/self-efficacy through a variety of methods including explanations in students' own words, presentations, and/or plans for future studies)