**THE GENERATIVE QUESTION**

**BACKGROUND IN A NUTSHELL**

The generative question guides your instructional case by serving as the overarching theme or concept that unifies your teaching objectives and engenders scientific thinking. The most effective generative questions have the following characteristics:

* Fairly broad and may extend across unit, course, and even subject boundaries
* Generate scientific inquiry
* Uncover science misconceptions
* Provide a meaningful big picture while opening the doors to a deeper understanding of key scientific concepts
* Typically stimulate further questions that are more targeted/focused on specific content
* May not have a definitive answer

The generative question you come up with now will undoubtedly evolve as you progress through the Institute, the lesson study process, and field-testing in your own classroom. The generative question may be difficult to create unless you are cognizant of what you want the students to understand and how you envision the students will best arrive at this understanding.

**BRAINSTORMING THE GENERATIVE QUESTION à la KWL (sort of)**

1. Think about all the activities that you have done (or would like to do) that address the standards relevant to evolution and/or structure-function relationships. Do any of these activities fall into one of the categories listed below? Jot down on a separate sheet.

**Activities that need to be further developed or replaced**

**Activities I like but need some refining/revising**

**Activities I like as is**

II. Think about the following questions:

* Do any of these activities address multiple standards in life science, physical science, and/or earth science?
* Is there a common theme to these activities?
* For each of these activities, what do I think is the most important concept my students should understand?
* What do I think is the most intriguing/engaging about the science content involved in these activities?
* Are there common learning strategies I use in these activities?

III. Now, let’s see if any generative questions are surfacing. Here are some examples.

* How do the various lines of evidence support the process of evolution?
* Why are present-day species different from their ancestors, and how do we know an ancestral species when we find one?
* If life on Earth is mostly made up of relatively few elements (e.g. C, H, O, N, S), then how do we account for the vast biodiversity on Earth?
* Does the fact that life on Earth is made up of relatively few elements explain the fundamental similarities of all life on Earth? (How can we explain the similarities of life on Earth?)

