**Why Inquiry?**

If inquiry is important for the critical thinking skills it teaches, the training of citizens in a democracy for making evidence based decisions, and for preparing some students to make science a vocation, then finding a way to coherently embed inquiry in school science is essential. Designing units around scientific argument connects the practices of inquiry to the content and to each other in a meaningful way. By focusing on the construction of a scientific argument, students will not be learning just procedures or discrete facts, but will be practicing critical thinking skills as they address a question, and seek to evaluate evidence to construct increasingly complex explanations. It is this type of critical thinking that is needed to make choices outside the classroom as well. Through a unit on argumentation, the role of the student will be to question assumptions and to think not just about finding the right answer, but about finding the best answer that relies on the best available evidence. Learning to critique and weigh alternatives are invaluable skills that are applicable well beyond the science class. Finally, by participating in the co-construction of these classroom explanations, students will have a better appreciation for the nature of scientific knowledge. Understanding the process of communal knowledge construction practiced by scientists will provide students with real preparation for pursuing a career in science, and will better equip them to evaluate the science they encounter as they make decisions in their lives.

Falk & Brodsky, UC Berkeley, 2013.