

HRASE Questioning Hierarchy Suggested by Penick, Crow and Bonnstetter (1996)

History—questions that relate to students' experience:

- What did you do . . . ?
- What happened when you . . . ?
- What happened next . . . ?

Relationships—questions that engage students in comparing ideas, activities, data, etc.:

- How does this compare to . . . ?
- What else does this relate to . . . ?
- What do all these procedures have in common?

Application—questions that require students to use knowledge in new contexts:

- How could this idea be used to design . . . ?
- What recognized safety issues could this solution solve?
- What evidence do we have that supports . . . ?

Speculation—questions that require thinking beyond given information:

- What would happen if you changed . . . ?
- What might the next appropriate step be?
- What potential problems may result from . . . ?

Explanation—questions that get at underlying reasons, processes, and mechanisms:

- How does that work?