



Course 2 - Supporting K-12 Students with CER: Designing Learning Tasks

Kate McNeill
Mandy Knight
Boston College



Agenda



- Introductions
- Teacher Survey – This years focus?
- Discussion – Current questions and issues
- Activity – Examine examples of CER questions
- Activity – Analyze CER questions from last year
- Discussion – Characteristics of Good Questions
- Activity – Design next lesson
- Debrief and questions

This Year's Focus



- Take 5-10 minutes to fill out survey questions
- Discussion
 - What has gone well with CER?
 - What questions do you have?
 - What would you like to focus on during our five meetings this year?

Example Questions



- What are the strengths and weaknesses of each of the four questions?

Review Example Questions



- What are the strengths and weaknesses of the questions?
- Which question(s) would be appropriate, if the goal is for students to write a scientific argument? Why?
- If the question is not appropriate, can it be revised?

Example Questions:



- A group of students are writing about their ecocolumns. Hannah and Maria are discussing with Daniel if it would be a good idea to remove the Elodea from the ecocolumn. Hannah says, "Lets take it out, none of the fish or snails are eating it". But, Daniel said, "We have to leave it in, it's very important for the ecosystem". Who do you agree with? Can you support your claim with evidence that will convince these 4th and 5th grade scientists of what they should do and why? Be sure to teach them what they need to know about the role of plants in their aquarium habitat using information that you've gained from your reading and your observation of your own aquarium.

Example Questions



- What is the role of DNA in the human body?
 - Is it possible to do the investigation and collect data?
- What will happen when you mix salt and water?
 - What is this question asking? What data would be collected?
 - What would the reasoning look like?
- What surface in the school is the best environment to support the growth of microbes?

Activity: Analyze Your Learning Task



- Examine the question and student work from the task you used last year as part of the CER workshop.
- If you were going to use this question again, would you do anything differently?
 - If yes, what would you change? Why?
 - If no, why do you think it worked well?

Characteristics of Good Questions



- In looking at the transcripts from the workshops last year, one thing that came up repeatedly was the difficulty of designing a “good” question.
- What are some characteristics of good CER questions?

Activity – Design a Lesson



- Design a lesson using the framework for the next session (Feb. 16).
- When designing the lesson, keep in mind the characteristics of good questions that we have discussed.
- Next session you will bring in 6 samples of student writing – 2 low, 2 medium and 2 high.

Discussion



- What are some examples of CER questions?
- What challenges arose in designing the questions?
- What questions do you have?

Logistics and Wrap-up



- Before Feb. 16 Workshop
 - Teach a lesson with CER prompt
 - Bring in 6 samples of student work – 2 high, 2 medium and 2 low. Write high, Medium or low on each paper. Remove student names.

Contact information



- Kate McNeill' s contact information
 - Kmcneill@bc.edu
- Mandy Knight' s contact information
 - amanda.knight.1@bc.edu
- Workshop Webpage
 - To be announced