Planning a CER Lesson

What activity will give students a chance to explore the concept?	
Will they need more information (from a text/video/ discussion)? If so, what will you use?	
What will the writing prompt be?	
What scaffolding or pre-writing questions will you use? How will you give them a chance to think out-loud?	
What will a good response include?	

Summary of Tools for Implementing a Claims-Evidence-Reasoning Approach

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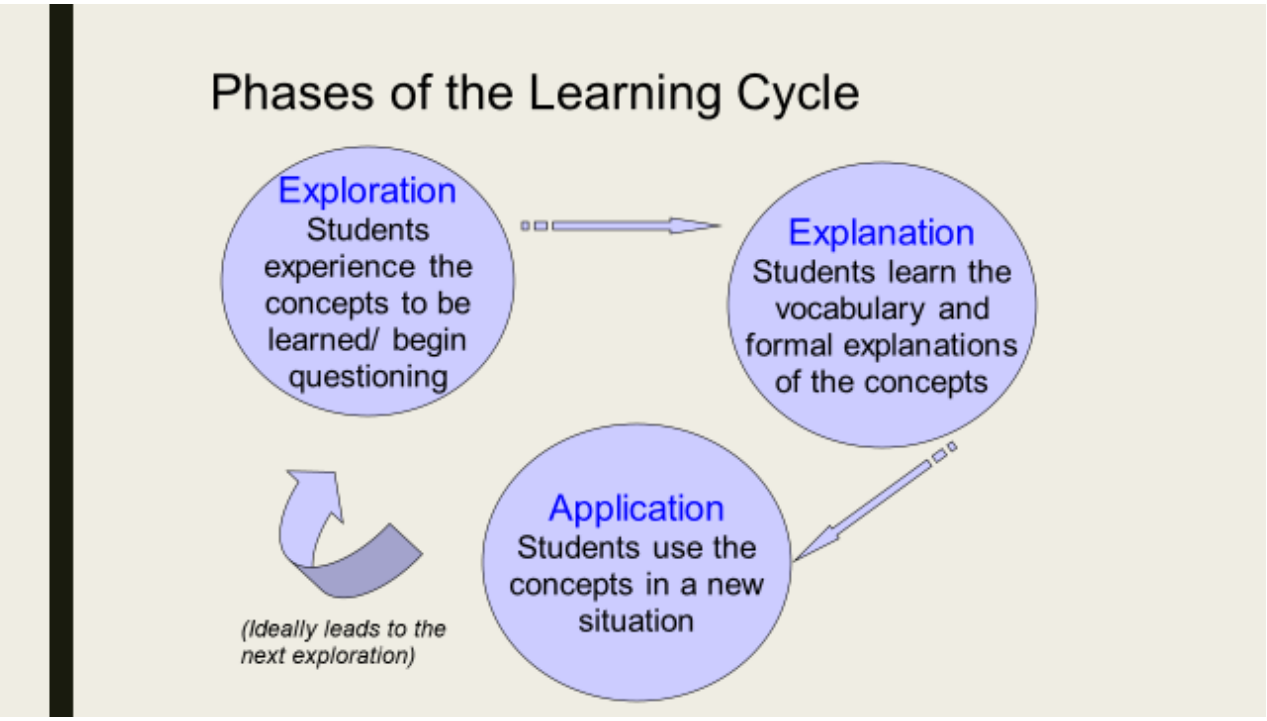
Learning Cycles

Students will be most ready to write when they have experienced a concept first-hand.



The "5E" Learning Cycle

- *Engage: Get them interested!*
- *Explore*
- *Explain*
- *Elaborate (Apply)*
- *Evaluate: Did they understand?*

Generic Evaluation Rubric

(Plan Ahead: Identify what you are looking for ahead of time)

	Yes	Partially	Not at All
Claim Is the claim accurate and complete *based on the data*? (Plan ahead: what claim would you be expecting to see here?)			
Evidence Is the evidence appropriate and sufficient to support the claim? (Plan ahead: what evidence would you expect them to share?)			
Reasoning Are the appropriate scientific principles discussed? (Plan ahead: what concepts do they need to discuss to support their evidence?)			

Sentence Frames for Making an Argument

Claim

- I claim that_____.
- Our research shows that_____.

Evidence

- When we _____, we saw that _____.
- When we did _____, it measured _____.

Reasoning

- This evidence tells me that _____.
- This evidence supports the claim because _____.
- Since we know _____, we can tell that _____.

Rebuttals

- If _____ , then _____ would have _____. However, _____.

Prewriting Questions

1) Science ideas: What evidence will you want to use from your lab? What reasons will you want to use from the article?

2) Science words: What science vocabulary will you want to use?

3) What writing words or sentence frames might you use?

4) Should you use everyday language or formal language?

Time to Talk About Ideas

1. Turn and Talk: Spend a moment exchanging ideas with a partner

2. Gallery Walk: Put work on the wall and walk around to compare.

(The Argument-Driven-Inquiry (ADI) Books emphasize using a gallery walk for C-E-R. They are good resources.)

3. Use fingers to help all students be a part of class discussion. 

4. Peer Review: Use a rubric or just ask them to locate claims/evidence/reasoning in each other's work.

5. Sample Responses: Look at strong and weak sample responses and talk about what makes them strong or weak.

Evaluation

(or, Don't get overwhelmed by grading)

- Replace lab report (or portion of it) with Claims/ Evidence/ Reasoning language.
- Quickly sort by levels of understanding for short assignments (no grade or just a check; this is for your own feedback).
- Quickly mark a rubric.
- Peer or self-review using a simple system (Underline the claim in green…) or a rubric. This is part of giving them time and space to think!
- Have a round of peer review before grading. The resulting papers will be better and easier to grade.
- Let some writing just be practice.

Scaffolding Options

1) Simply give them 3 separate spaces to fill in—
   - Claim:
   - Evidence:
   - Reasoning:

2) Provide specific information for each part of the answer.

For example:

- Claim: Decide if these cells come from a plant or an animal.
- Evidence: What do you see in the image that lets you know what kind of cell it is?
- Reasoning: What do you know about plant and animal cell parts that is important to this question?

3) Offer sentence frames or starters to work from (see next page). These can also be specific to your experiment.

4) Have students answer prewriting questions aloud or on paper.