

Claims, Evidence, Reasoning (CER) Framework

A way to increase writing across grade levels in Science

Q1: What is it?

A way to support students communicating their explanations from experiences in the classroom and engaged in argumentation. The BPS Science department advocates the use of the (CER) framework outlined below:

BPS CER Framework:

Claim: A statement that answers a question or problem (thesis)

- Can be a yes/no statement

Evidence: Is scientific data that supports the claim.

- Can come from
 - o observations made during a lab
 - o previous lessons/research

Reasoning: Provides a justification for why or how the evidence supports the claim (conclusion sentence). Here are is a proposed sentence frame to guide students:

- Since _____ happened (summary of evidence) then _____ (claim) must be true.

Point of note... Science vocabulary is encouraged here to help students connect

Q2: How can it be used in the classroom?

Slowly introduce each component of the CER framework separately. We encourage to use an everyday example that students could relate to...

Question to class, "How was your weekend?"

- **Claim:** I had a great weekend
- **Evidence:** (the proof): I played with my cousins, we had a party, and we ate ice cream.
- **Reasoning:** (why your evidence relates to your claim): Being around my cousins, having a party and eating just enough ice cream to not get sick is a great weekend.

Q3: How can we integrate the CER framework in a Science Lab/Inquiry model?

We encourage the design of learning activities that require students to answer one over arching question connected to a Scientific concept.

As students get more and more practice, rubrics can be established to help guide students writing. See the [BPS Science website](#) for examples of good rubrics.

Resources: (clickable in the Word (doc) version)

- [Claims, Evidence, and Reasoning- Demystifying data about simple machines](#)
- [Supporting Students in Evidence Based Scientific Explanations](#)
- [Supporting Grade 5-8 Students in constructing Explanations in Science](#)