**Unit 4: Scientific Explanations, and the History of the Earth**

**Earth and Space Science Standard**

**Constructing Explanations in Science (Claim, Evidence, Reasoning)**

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| --- | --- | --- |
| **Claim or...** | **Evidence or...** | **Reasoning or...** |
| Answer  Idea  Conclusion  Thesis | Observations  Data  Facts  Information | Justification  (Claim + Evidence; Logic behind your answer that incorporates scientific principles and evidence; final conclusion) |

* The **claim** (typically answers the question: “What do I think?”)
* The **evidence** (typically answers the question: “How do I know this is the case?”).
* The **reasoning** (typically answer the question: “Why do I think this?”)

What does “CER” stand for?

What is a scientific “claim”?

What is scientific reasoning?

**Skill Standard: Apply Scientific reasoning to link evidence to claims to assess the extent to which the reasoning and data support the explanation.**

The table below is a guide for you when making claims, gathering evidence and providing scientific reasoning.

| CLAIM | EVIDENCE | REASONING |
| --- | --- | --- |
| Statement about the results of an investigation.What claim is being made? | Provide scientific data to support your claim. You should only use appropriate data and include enough to prove your claim | Connect your claim to your evidence. Tell why your data counts as evidence using scientific principles |
|  | What is your evidence for the claim?  Do you have enough evidence to support the claim?  Is there other evidence that would support the claim?  Is there evidence that would suggest another claim would be more appropriate?  what do you think of the quality of the evidence of the claim? |  |
|  | **Sentence Stems** |  |
|  | According to the text…  The author teaches us…  In the book, it says…  According to the scientists….  For instance, in the text… | This shows that because….  This is important because…  This proves that because…  From the evidence, it can be inferred that…  From the evidence we know that… |
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