

CER: Claim, Evidence, and Reasoning (responses to a data table)

GRADES

8 - 12

DISCIPLINE

 **Science**

COURSE

Any

PACING	SKILL AND DEFINITION	PRODUCT AND PROMPT	SCORING GUIDE	INSTRUCTIONAL STRATEGIES
50 mins	<p>ACTIVE READING: Ability to support a scientific claim based on evidence from a data table and reasoning.</p>	<p>CER: CLAIM, EVIDENCE, AND REASONING (RESPONSES TO A DATA TABLE)</p> <p>In complete sentences, write a scientific claim that is backed up by evidence and supported by scientific reasoning. Base your answer on your reading of a data table.</p>	<ul style="list-style-type: none"> • Makes an defensible and complete claim. • Provides appropriate and sufficient evidence from the data to support the claim. • Provides reasoning that succinctly links evidence to the claim. • Includes appropriate and sufficient scientific principles. 	<p>(See attached Instructional Plan for details on how to use this CER mini-task in any course where students will form arguments from reading data.)</p> <ol style="list-style-type: none"> 1. Review definitions of "claim," "evidence," and "reasoning," and discuss how they are connected. 2. Model how to construct a claim from a simple (and unrelated to target content) data set to help students learn this new skill. Then model how to write statements that support the claim using evidence and reasoning. 3. Have students practice writing claims and evidence/reasoning statements using the same non-content-based data set. Have them pair-share their own claim/evidence/reasoning statements and/or share-out with whole class. 4. Introduce the actual data set and prompt for the actual target content (in this example, it is a chemistry data set about bonding). 5. Have students work individually or in pairs to complete the full process with the target content. Share out or score all work, and repeat process if necessary. <p>Additional Instruction</p> <p>This particular mini-task was written for a high-school-level chemistry course (content: bonding), but could be adapted to be used in non-science courses where students need practice writing scientific claims based on information they read from a data table. The attachments include versions of the actual worksheets used for the chemistry/bonding activity that can be adapted for other uses, but also a full instructional plan that proposes how to use this mini-task with any content related to reading data tables and then writing CER statements based off of it, as well as a template to adapt for other content.</p>

PACING

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Standards:

CCR.R.1 : Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.

CCR.R.8 : Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.

Additional Attachments:

 **CER Example 1.docx**



 **CER_StudentWork.pdf**



 **CER_RUBRIC.pdf**

 **CER Template.docx**

 **CER Data Table Instructional Strategies.docx**