Name:

CER Prompt – Lesson 7

Claim	Write one sentence that answers the lesson question: **Are there changes in the air that could be related to rising temperatures?**
Evidence	● Talk about **at least two gases** in the air ● Describe **how the gases changed over time** ● Show which gases **stayed mostly the same** and which gases **increased a lot** **You can use:** ○ Percent change ○ Parts per million (ppm) ○ Words like *increased*, *stayed the same*, or *changed very little*
Reasoning	● Explain **why your evidence supports your claim**. ● Explain that some gases are in a **small amount**, but changed **a lot** ● Explain how some gases **stay stable** while others **change over time** ● Explain why gases that are a **small part of the air can still matter**

Sentence Starters (Optional Support): These sentence starters are to help you get started on your writing, use them if they will help you.

- *My claim is that…*
- *The data shows that the concentration of ___ has…*
- *Although ___ is a small part of the atmosphere, the percent change shows…*
- *This matters because…*

CER Checklist for Lesson 7

Use this checklist to review your CER before turning it in.

Claim

☐ My claim clearly answers the lesson question: *Are there any changes in the air that could be related to rising temperatures?*

☐ My claim is clear and does **not** include “because”, “I think”, or “I believe”

Evidence

☐ I used evidence from the **Lesson 7 data or graphs**.

☐ I included **at least two gases** in my evidence.

☐ I described which gases are **mostly stable**

☐ I described which gases show an **unusual increase**

☐ I used **numbers or trends** (ppm, percent change, or “increased a lot / changed very little”).

☐ My evidence is **specific** and connected to the data, not opinions.

Reasoning

☐ I explained **why** my evidence supports my claim.

☐ I connected my explanation to **stability and change** in the atmosphere.

☐ I explained the idea of **scale and proportion** (small amount vs. large percent change).

☐ I explained why gases that are a **small part of the atmosphere can still matter**.

Overall

☐ My CER is written in complete sentences.

☐ My ideas are clear and organized.

☐ My claim, evidence, and reasoning all connect to each other.

Name:

Rough Draft

Name:

Final Draft

CER Lesson 7 RUBRIC

	4	3	2	1	0
Claim (2 points)			I clearly answer the lesson question. My claim matches what we learned in Lesson 7.	I have a claim, but it is unclear or incomplete.	I do not make a claim or it does not answer the question.
Evidence (4 points)	I use evidence from Lesson 7 data or graphs. I include **at least two gases**. I describe which gases are **mostly stable** and which show an **unusual increase**. I use numbers or trends (ppm, percent change, or “changed a lot / changed very little”).	I use evidence and name two gases, but some details are missing.	I use limited evidence or only discuss one gas.	I mentioned data, but it is incorrect or not connected.	I do not use evidence.
Reasoning (4 points)	I explain **why** my evidence supports my claim. I connect my ideas to **stability and change**. I explain **scale and proportion** (small amount vs. large percent change). I explain why gases that are a small part of the atmosphere can still matter.	I explain my thinking but miss one important connection.	My reasoning mostly repeats my evidence instead of explaining it.	My reasoning is unclear or incorrect.	I do not include reasoning.

Name:

Provide your peer with **at least:** 2 GLOWS,(things they did well) and 2 GROWTHS, (things they can improve on.)

GLOWS	GROWTH

Teacher Note:

- This CER aligns to **MS-ESS3-1**
- Students should **not** explain *how* gases cause warming yet (that comes in Lesson 8)
- Look for use of **percent change**, not just raw ppm values

Exemplar CER – Lesson 7

Claim

There are changes in the air that could be related to rising temperatures.

Evidence

The data shows that some gases in the atmosphere have stayed mostly stable over time, while others have changed a lot. Nitrogen and oxygen show very little percent change over the time period shown, so they are considered mostly stable. In contrast, carbon dioxide and methane make up a very small percent of the atmosphere, but their concentrations have increased at an unusually high rate. For example, carbon dioxide increases by a much larger percent compared to gases like nitrogen, even though there is much less of it in the air overall.

Reasoning

This evidence supports the claim because it shows a clear pattern of stability and change in the atmosphere. Even though carbon dioxide and methane are only a small part of the atmosphere, the percent change data shows that they are increasing much faster than the more abundant gases. Looking at scale and proportion helps explain why this is important: a small amount of a gas can still matter if it is changing at an unusual rate over time. Because rising temperatures are happening during the same time period that these gases are increasing, these changes in the air could be related to rising temperatures.