

Name _____

Period _____

POGIL: Introducing Claim Evidence Reasoning (CER)**Model 2:**

Guiding Question: Based on the data below, which of the following samples represents magnesium metal?

Sample	Mass (g)	Volume (mL)	Appearance	Density (g/mL)
1	115.8	6.00	Golden	19.3
2	89.6	10.0	Orangish	8.96
3	40.5	15.0	Silverish	2.70
4	34.8	20.0	Silverish	1.74
5	43.5	25.0	Silverish	1.74

- 1). Which scientific term describes the relationship between mass and volume?
(As one goes up, the other goes down....)
- 2). Provide the formula that represents this relationship (use your [reference table](#)).

Read:

Scientific Principle: Density is considered an intensive property of a substance. This means that it is the same for every sample of that substance regardless of size. The ratio of mass to volume of a sample for a specific substance will always be the same. The densities of all elements can be found in [Table S of the Chemistry Reference Tables](#)

- 3.) Using [Table S](#), determine the identities of the samples in the table above. (Match the densities)

Sample 1 _____

Sample 2 _____

Sample 3 _____

Sample 4 _____

Sample 5 _____

Hint: Before writing your CER responses, make sure to review any key vocabulary from the *Notes* section regarding the CER process.

State your Claim based on the guiding question for Model 2:

Qualitative Evidence Statement #1:

Quantitative Evidence Statement #2:

Reasoning:

Remember to show the link between your scientific principle (vocabulary/law/theory) to your evidence statements when formulating your reasoning response.