Claim Evidence Reasoning PPT

Claim Evidence Reasoning

APK (Accessing Prior Knowledge): How would you define the terms claim, evidence, and reasoning?

What do the terms claim, evidence, and reasoning make you think of?

Claim – a statement that answers a question

Evidence – observations, data tables, graphs, pictures

Reasoning – scientific principles, readings, formulas that describe why the evidence supports the claim

Claim: what do you know?

Evidence: how do you know that?

Reasoning: Why does the evidence support your claim?

CLAIM+EVIDENCE+REASONING=EXPLAINATION

When? We use CER-based narratives after completing a lesson.

Why? CER-based narratives allow you to make connections between the lesson and the lab.

How? CER-based narratives are set up in a paragraph form (usually 5-7 sentences in length). There are times when it is necessary to include a data table, graph, or picture in with your evidence.

WATCH Claim, Evidence, Reasoning video on your schedule to answer the questions below.

[Claim, Evidence, Reasoning, VIDEO LINK](https://www.youtube.com/watch?v=WQTsue0lKBk)

What is her claim?

What is her evidence?

What is her reasoning? (connects the evidence to her claim)

If the Focus Question is, “Who is the best NFL quarterback?

Claim: Drew Brees is the best quarterback in the NFL.

Evidence: (Evidence Includes Data) His completion percentage is 59.4 and he has 36 touchdowns in his career from 2012-2013.

Reasoning: According to Sports Illustrated, Drew Brees is able to adjust to the defense during the game and come back with a different plan of attack.

You may use information from text to support your claim and evidence.

Each corner of the room is represented by a letter, either A, B, C, or D. The following few slides are multiple choice questions. After I read the question and possible answers and tell you it is okay to move, go to the corner of the room that you believe is the correct answer.

Which one of the following do you believe best represents the definition for a “claim”?

A. A statement that expresses the answer or conclusion to a question or problem.

B. A question that somebody might ask.

C. A response to a question.

D. A statement that does NOT answer a question.

Which one of the following do you believe best represents the definition for “evidence”?

A. Information that does not appropriately support the claim.

B. A statement that answers a question.

C. Scientific data that supports the claim.

D. A question that supports the claim.

Which one of the following do you believe best represents the definition for “reasoning”?

A. A graph and a data table

B. A collection of scientific principles, textual information, and prior knowledge that supports the claim.

C. A statement that answers a question.

D. The objective of the lesson.

Now back to science…

How to write a CER-based narrative using a science example.

Take out your “Reflect” Sheet from Lesson 2.

When writing a CER (Claim-Evidence-Reasoning Narrative) in class, your paragraph will be set up as followed:

Sentence #1: Objective

Sentence #2: Claim

Sentence #3-4: Evidence

Sentence #5-6: Reasoning

Sentence #7: Conclusion

Your “Evidence” and “Explanation” may be shorter or longer than 2 sentences each, but for this purpose, they are each 2 sentences long.

The objective of the lesson will always be given to you. It will most likely be on the board beginning with “At the end of today’s lesson I will be able to…”. When writing a CER, you would remove that phrase and insert “The objective of this lesson was to…”

Title of Lesson: The Force of Gravity

Lesson Goal: differentiate between mass and weight.

(You always begin your CER paragraph by restating the objective or lesson goal and inserting “The objective of this lesson was to”) So for this example I would say, “The objective of this lesson was to differentiate between mass and weight.”

Which of the following do you believe would be the best objective for the beginning of this CER?

A. differentiate between mass and weight.

B. I will be able to differentiate between mass and weight.

C. At the end of today’s lesson I will be able to differentiate between mass and weight.

D. The objective of this lesson was to differentiate between mass and weight.

Which of the following do you believe would be the best claim for this CER?

A. The difference between mass and weight is that mass is a measurement of how much matter is in an object and weight is a measurement of how hard gravity is pulling on an object.

B. The difference between mass and weight is that they are both measurements.

C. Mass and weight are the same.

D. Mass is the measurement of gravity pulling down on an object and weight is the measurement of how much matter is in an object.

Focus Question: What is the difference between mass and weight?

Claim: (Answer the focus question) The difference between mass and weight is that mass is a measurement of how much matter is in an object and weight is a measurement of how hard gravity is pulling on an object.

Evidence: (What did you do in the lab that supports your claim?)

“I know this because in the lab we…”

Measured the force of washers on a spring scale

Created a graph that showed the relationship between mass and weight

Explanation: (What did you learn while doing the lab, listening in class, or reading the textbook that supports your claim?)

“In class we learned/read that…”

Your mass always stays the same, but your weight will change on different planets or the moon where the gravity acting on you is different.

The graph we created showed that the gravitational force (weight) is proportional to the mass (number of washers).

The graph also showed that as the mass is doubled, the force of gravity doubles.

Define vocabulary words like matter, spring scale, proportional, gravity.

Conclusion: (Restate your claim and include an explanation) The difference between mass and weight is that mass is a measurement of how much matter is in an object and weight is a measurement of how hard gravity is pulling on an object because as the mass increased, the force of gravity increased, too.

The objective of this lesson was to differentiate between mass and weight. Mass is a measurement of how much matter is in an object and weight is a measurement of hard gravity is pulling on the object. I know this because in the lab we measured the force of washers on a spring scale. We created a graph that showed the relationship between mass and weight. In class we learned (read) that your weight would change on different planets or on the moon because there is a different amount of gravity acting on you than there is on earth. The graph showed that the gravitational force (weight) is proportional to the mass (number of washers). Proportional means that as the mass changed, the force of gravity changed with it. The graph also showed that as the mass is doubled, the force of gravity doubles. Gravity is a natural occurrence that makes objects attracted to each other and causes objects to fall to the ground when dropped from a height. A spring scale was used to measure the force of the washers in Newtons. In conclusion, mass and weight are different because mass is the measurement of how much matter is in an object and weight is the measurement of how hard gravity is pulling on the object because the graph I created during the lab showed that mass is proportional to weight.