

Santa Clara County  Office of Education

Claims – Evidence – Reasoning  
Supporting Student's Writing

October 2013

# Outcomes/Agenda:

- Identify types of writing in your class that use C-E-R
- Examine levels of complexities for creating Claims, and for Student Responses
- Learn how to use a new C-E-R Graphic Organizer to support students by using it



# Claims – Evidence – Reason Writing

One of the basic types of writing. Applies to:

- Opinion/ Augmentative Writing **CCSS W.1**
- Expository Writing **CCSS W.2**

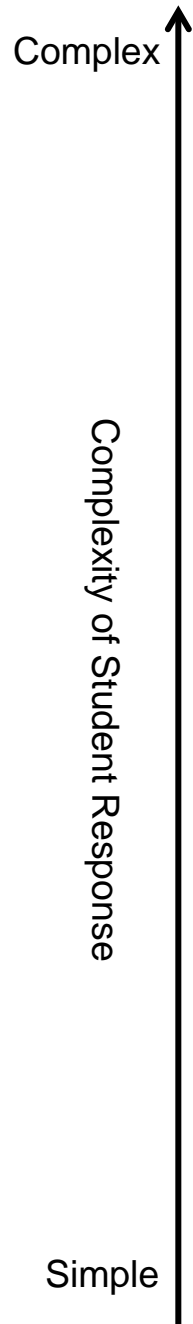
Sample text types:

- Constructed responses (SBAC)
- Performance Assessments (SBAC)
- Research Reports
- Public Service Announcements
- Lab Reports
- Essays
- Debates
- Editorials
- Speeches

# Claims – Evidence – Reason Writing

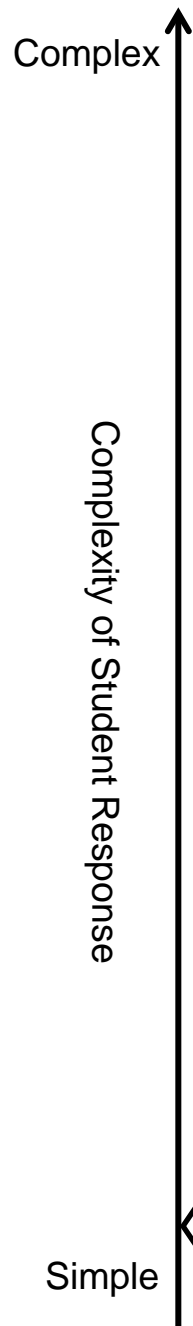
- Which of these types of writing do you use in your teaching?
  - Constructed responses
  - Performance Assessments
  - Research Reports
  - Public Service Announcements
  - Lab Reports
  - Essays
  - Debates
  - Editorials
  - Speeches





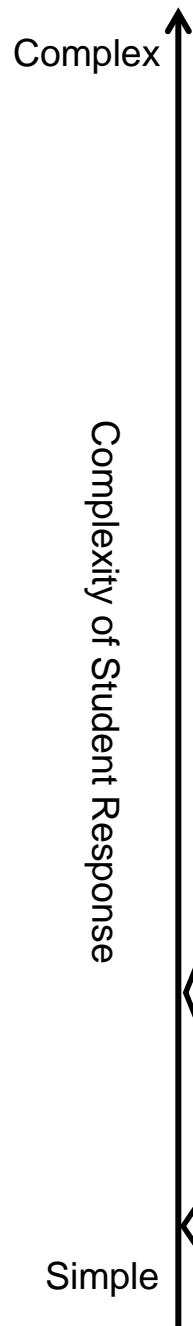
# The Stages of Claims – Evidence – Reason

Adapted from *Supporting Grade 5-8 Students in Constructing Explanations in Science* by Katherine L. McNeill & Joseph S. Krajcik



- 1. Claim
- 2. Evidence
- 3. Reasoning

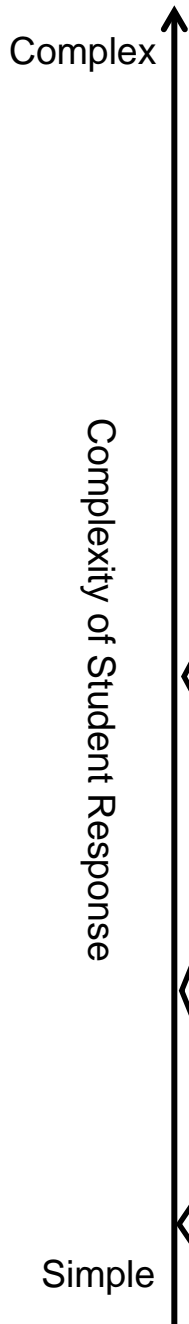
# The Stages of Claims – Evidence – Reasoning



1. Claim
2. Evidence
  - **Appropriate**
  - **Sufficient**
3. Reasoning

1. Claim
2. Evidence
3. Reasoning

# The Stages of Claims – Evidence – Reason



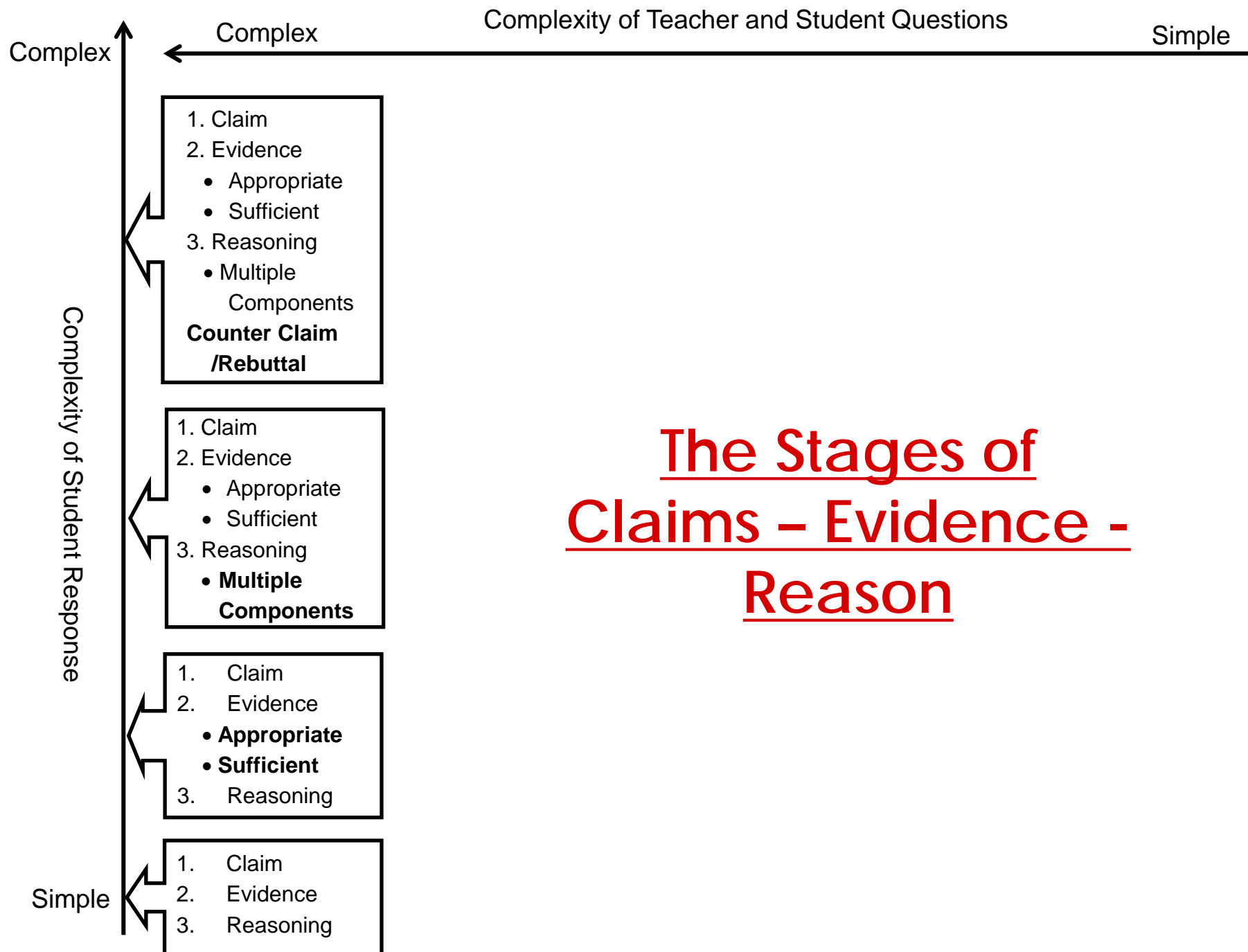
1. Claim  
2. Evidence  
• Appropriate  
• Sufficient  
3. Reasoning  
• **Multiple Components**

1. Claim  
2. Evidence  
• **Appropriate**  
• **Sufficient**  
3. Reasoning

1. Claim  
2. Evidence  
3. Reasoning

# The Stages of Claims – Evidence – Reason





# The Stages of Claims – Evidence – Reason

Complexity of Teacher and Student Questions

Complex

Simple

Complex

1. Claim  
 2. Evidence  
 • Appropriate  
 • Sufficient  
 3. Reasoning  
 • Multiple Components  
**Counter Claim /Rebuttal**

Very Focused:  
 1 of 2 options  
 (e.g., yes or no)

Complexity of Student Response

1. Claim  
 2. Evidence  
 • Appropriate  
 • Sufficient  
 3. Reasoning  
 • **Multiple Components**

The Stages of  
**Claims – Evidence -**  
Reason

1. Claim  
 2. Evidence  
 • **Appropriate**  
 • **Sufficient**  
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Simple

1. Claim  
 2. Evidence  
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Complexity of Teacher and Student Questions

Complex

Simple

Complex

- 1. Claim
  - 2. Evidence
    - Appropriate
    - Sufficient
  - 3. Reasoning
    - Multiple Components
- Counter Claim /Rebuttal**

Very Focused:  
Multiple options  
Each option can be a fairly complete answer

Very Focused:  
1 of 2 options  
(e.g., yes or no)

Complexity of Student Response

- 1. Claim
- 2. Evidence
  - Appropriate
  - Sufficient
- 3. Reasoning
  - **Multiple Components**

The Stages of  
Claims – Evidence –  
Reason

- 1. Claim
- 2. Evidence
  - **Appropriate**
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Simple

- 1. Claim
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Complexity of Teacher and Student Questions

Complex

Simple

Complex

1. Claim  
 2. Evidence  
 • Appropriate  
 • Sufficient  
 3. Reasoning  
 • Multiple Components  
**Counter Claim /Rebuttal**

Very Broad:  
 Multiple options  
 Answer is a combination of the different options

Very Focused:  
 Multiple options  
 Each option can be a fairly complete answer

Very Focused:  
 1 of 2 options  
 (e.g., yes or no)

1. Claim  
 2. Evidence  
 • Appropriate  
 • Sufficient  
 3. Reasoning  
 • **Multiple Components**

The Stages of  
**Claims – Evidence -**  
Reason

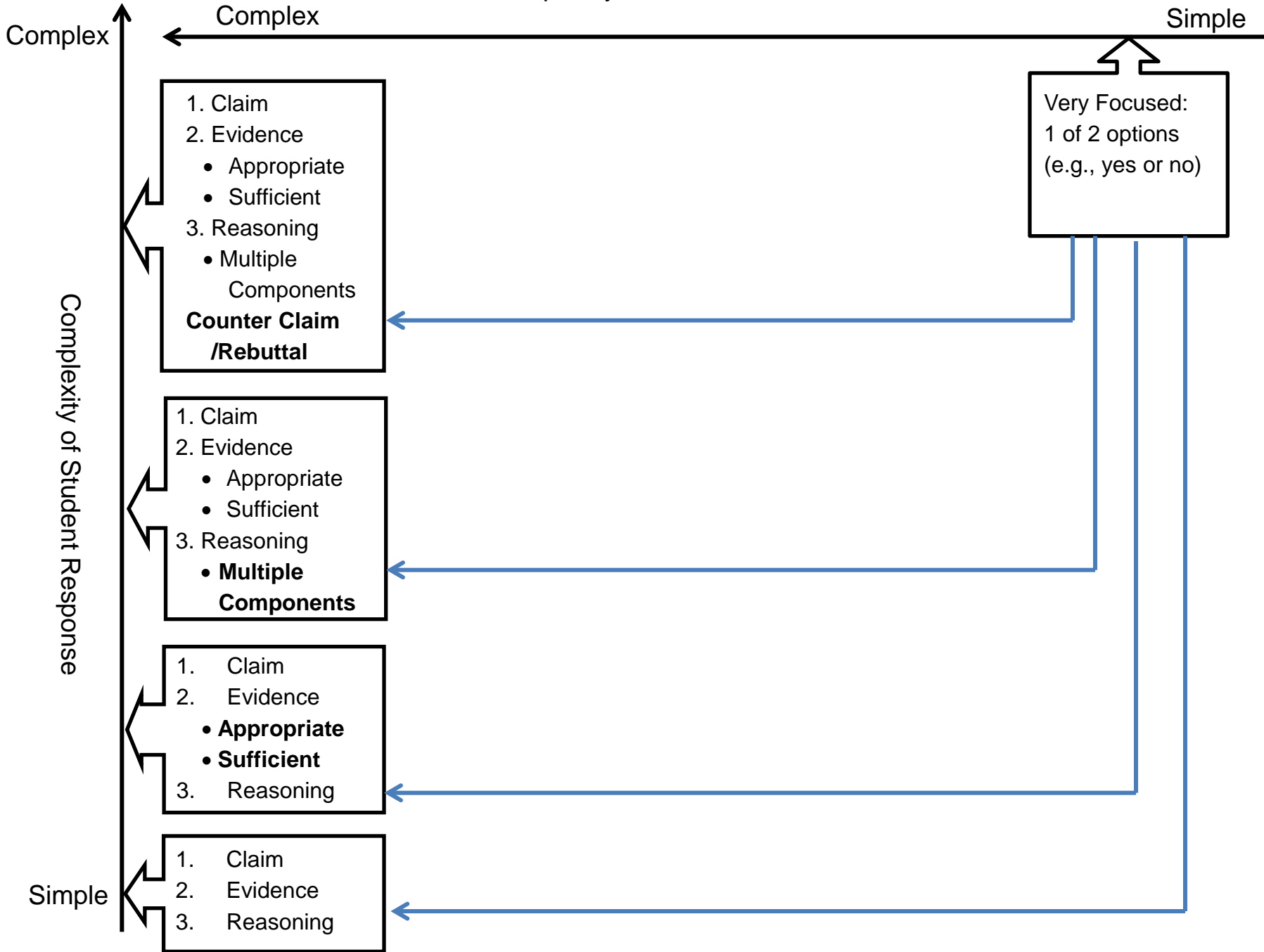
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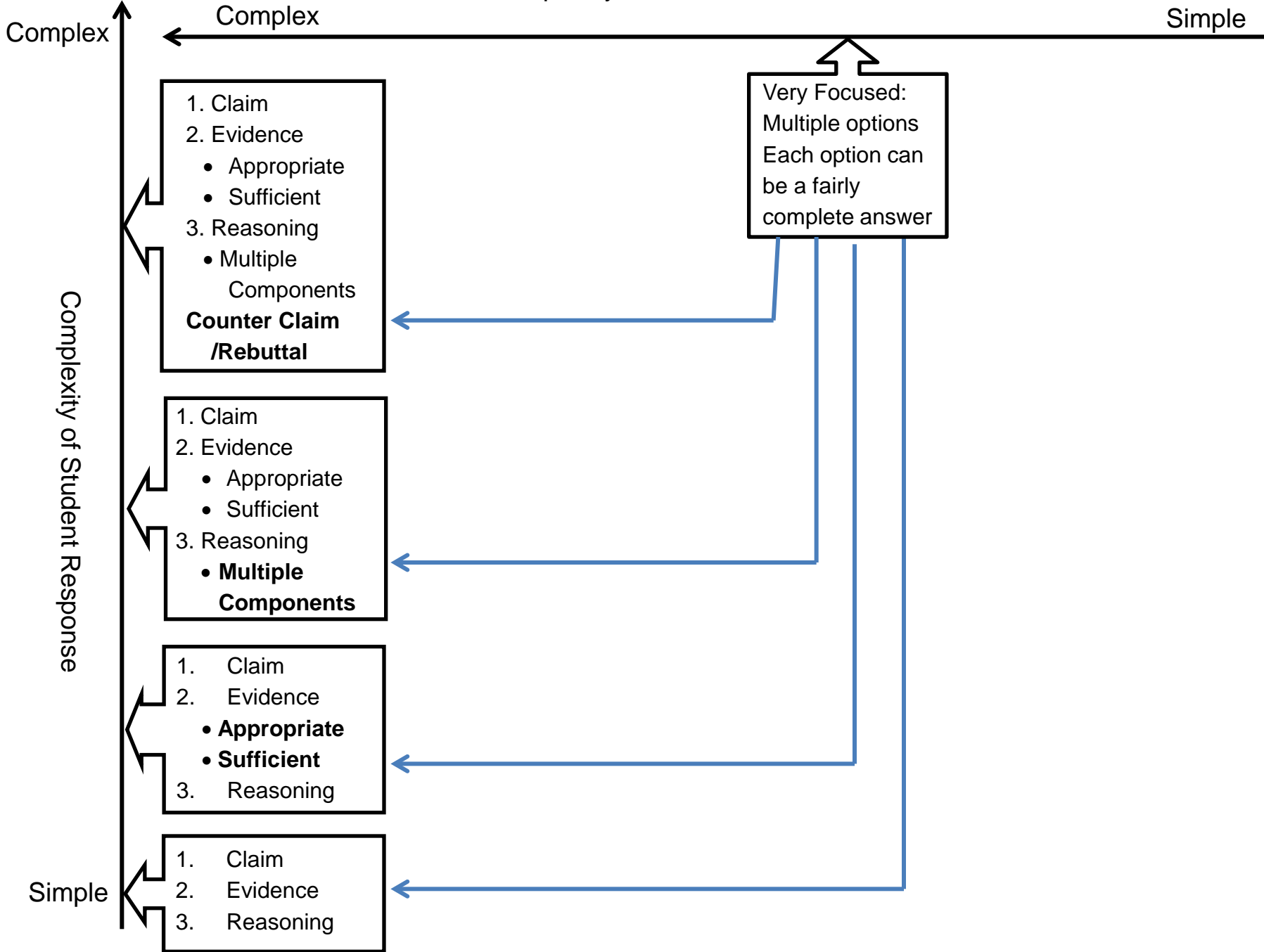
Complexity of Student Response

Simple

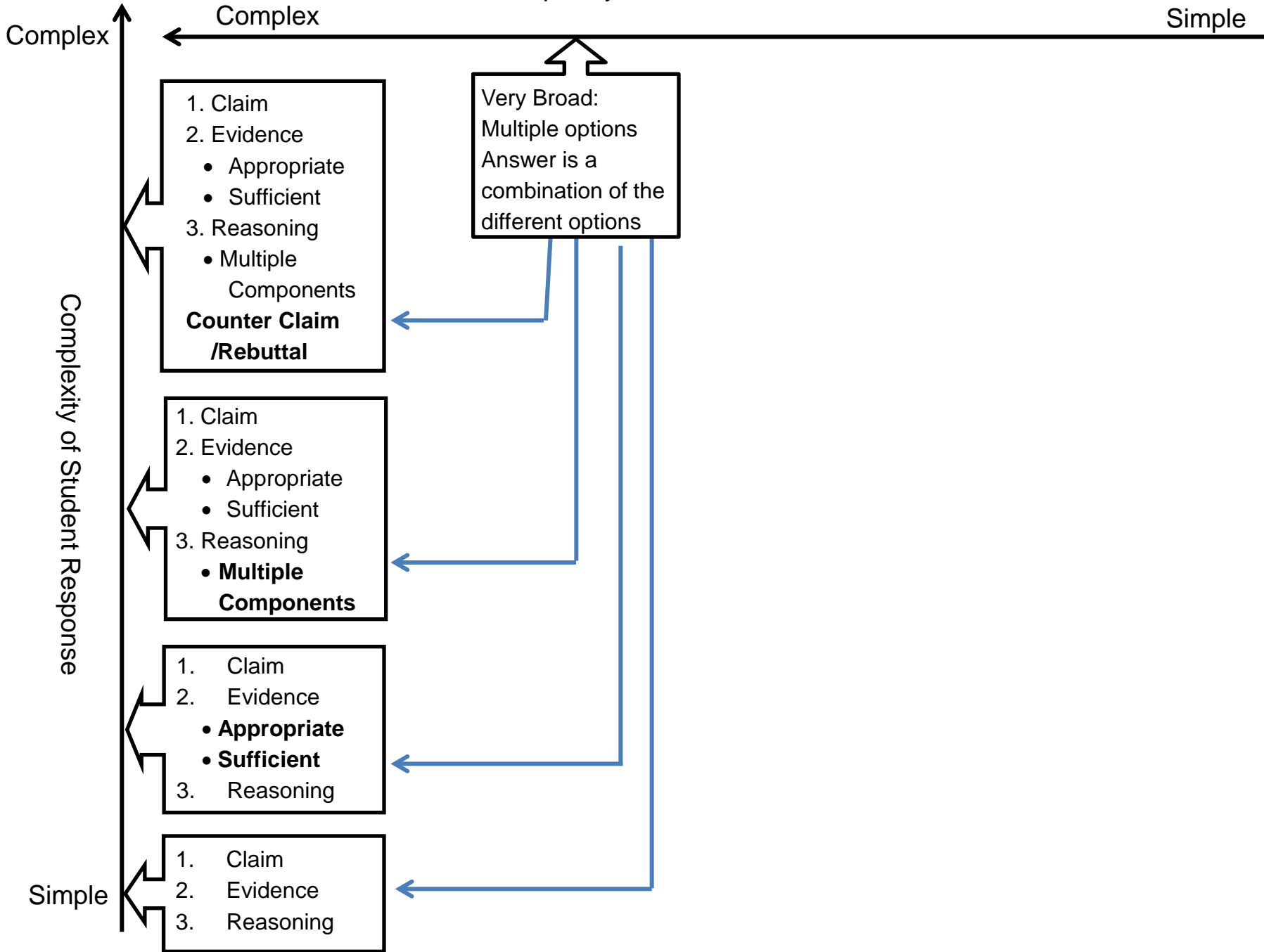
Complexity of Teacher and Student Questions



Complexity of Teacher and Student Questions



Complexity of Teacher and Student Questions



To apply C-E-R to their writing, first students have to know:

What is a claim?

What is substantial evidence?

What is a relevant reason?





# Claim

In writing, a claim is a statement about the solution to a problem or question.

Question:

Will supporting students with C-E-R writing improve their understanding of the content?



# Evidence

In writing, evidence is a **specific fact** that supports a claim.

In **science**, the fact is often referred to as “**data**”.

Please help students understand that evidence is **NOT** an **opinion**!



# Is It a Claim, or Is It Evidence

Partner A tell Partner B

**Granite has many small crystals**

Partner B tell Partner A

**Granite is an Igneous Rock**

Partner A tell Partner B

**Combining vinegar and baking soda creates a chemical reaction**

Partner B tell Partner A

**The reaction produced bubbles (a gas)**



# Reasons

In writing, reasons explain **why** your evidence proves your claim to be true.

In science, this usually includes the science principle involved.



What do you know?

In other words

How do you know that?

**Claim + Evidence**

Why does your evidence support your claim?

**+ Reasoning =**

**Explanation**

Let's apply what we  
have just seen.



# Graphic Organizer for C-E-R

**Claims – Evidence – Reasoning (C-E-R) Writing Graphic Organizer**

**Remember:** The purpose of this Graphic Organizer is to help make connections between the claim, the evidence of that claim, and the reason that the evidence supports that claim. The order that you use it doesn't matter (questions first, claim first, evidence first, or reason first).

Question	
Claim	
Evidence	
Transition Words	Source
Reason:	
Evidence	
Transition Words	Source
Reason:	
Evidence	
Transition Words	Source
Reason:	
Conclusion	
Transition Words	



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Evidence	
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Evidence	
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Reason:

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Reason:



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Transition Words			Source	Reason:	
Evidence					
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Claim				
<b>Evidence</b>				
Transition Words		Source	Reason:	
<b>Evidence</b>				
Transition Words		Source		
<b>Evidence</b>				
Transition Words		Source	Reason:	
<b>Conclusion</b>				
Transition Words				



# Transition Words

- Act as a roadmap for the reader
- Signal readers how to organize what they are about to read in context with what they have previously read.

## Words that can be used to sequence events:

prior to	since	first, second	at the same time
last	finally	to emphasize	to begin with

## Words that can be used to emphasize a point:

again	truly	especially	for this reason
to repeat	in fact	to emphasize	

## Words that can be used to clarify:

that is	for instance	in other words
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## Words that can be used to add information:

again	another	for instance	for example
also	and	moreover	additionally
as well	besides	along with	other
next	finally	in addition	

## Word that can be used to compare two things:

likewise	also	while	in the same way
like	as	similarly	

## Words that can be used to contrast two things:

but	still	although	on the other hand
however	yet	otherwise	even though

## + Words that can be used to conclude or summarize:

finally	as a result	to sum up	in conclusion
lastly	therefore	all in all	because

□



# Graphic Organizer for C-E-R

**Claims – Evidence – Reasoning (C-E-R) Writing Graphic Organizer**

**Remember:** The purpose of this Graphic Organizer is to help make connections between the claim, the evidence of that claim, and the reason that the evidence supports that claim. The order that you use it doesn't matter (questions first, claim first, evidence first, or reason first).

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# Graphic Organizer for C-E-R

Claims – Evidence – Reasoning (C-E-R) Writing Graphic Organizer

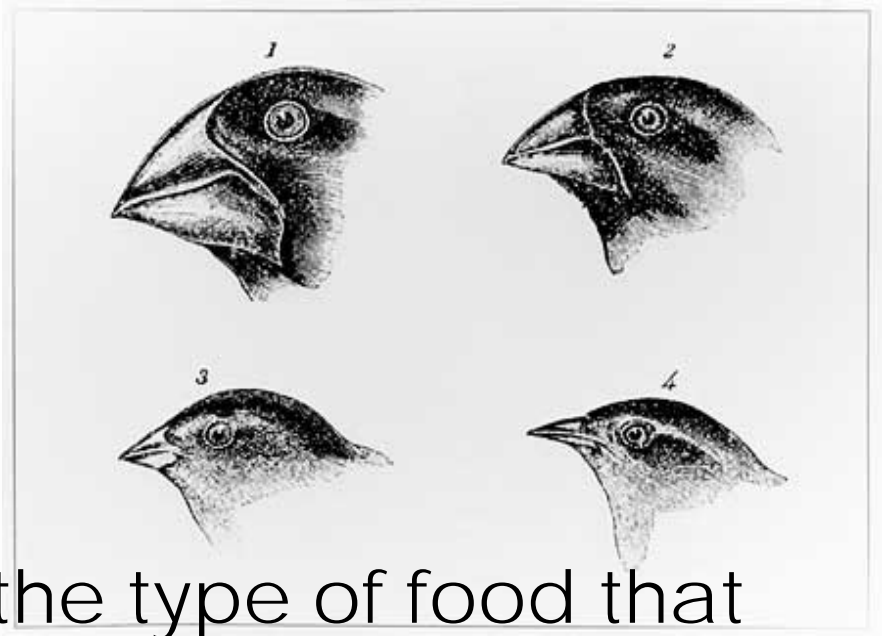
The purpose of this Graphic Organizer is to help make a claim, provide evidence of that claim, and the reason that the evidence supports that claim. You use it doesn't matter (questions first, claim first, evidence first).

Question	
Claim	
Evidence	
	Source
Evidence	
	Source
Evidence	
	Source
Conclusion	



# Darwin's Finches

In the Pacific Ocean, 500 miles off the west coast of Ecuador, lay the Galapagos Islands. On the islands, there are over a dozen species of small birds called Darwin's Finches. The different bird species are all basically the same except for their beaks. Each species' beak is a different size and shape, and each beak is specialized for the type of food that the bird eats.





# Darwin's Finches

## Directions for Classroom:

1. Read "Darwin's Finches"
2. Note any words or ideas that you don't understand.
3. Discuss problematic words and ideas.
4. Read the question, and write your claim.

# Darwin's Finches

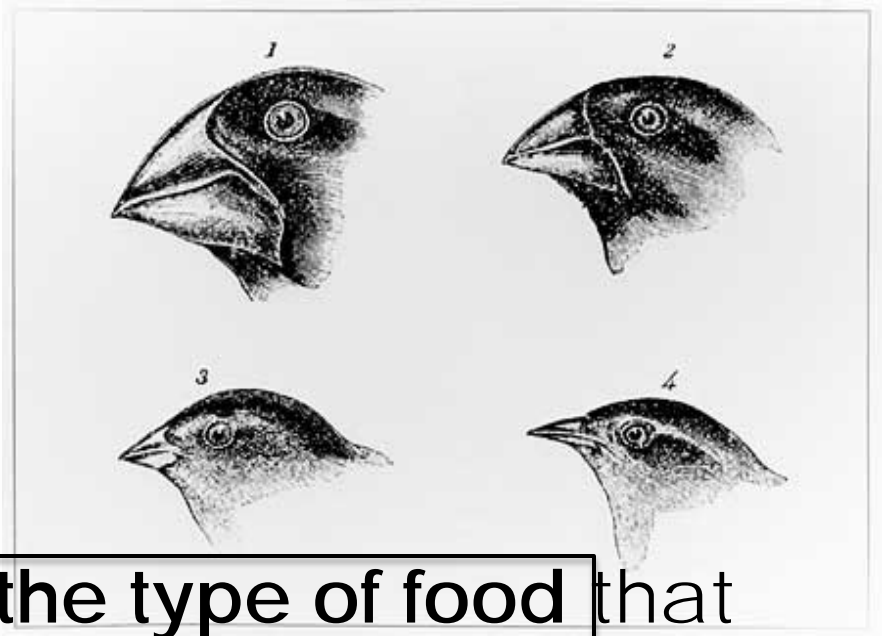
## Directions for Classroom (continued):

5. Read "Darwin's Finches" a 2<sup>nd</sup> time.
6. Underline evidence that supports your claim.
7. Draw a box around the reason in the article that supports each piece of evidence.



# Darwin's Finches

In the Pacific Ocean, 500 miles off the west coast of Ecuador, lay the Galapagos Islands. On the islands, there are over a dozen species of small birds called Darwin's Finches. The different bird species are all basically the same except for their beaks. Each species' beak is a different size and shape, and each beak is **specialized for the type of food** that the bird eats.



# Darwin's Finches

## Directions for Classroom (continued):

8. Transfer each pieces of evidence with the related reason to the C-E-R graphic organizer.
9. Remember to include your source.
10. Summarize in the conclusion.
11. Selection transition words.
12. Write paragraph.



**Question**

What will most likely happen to the finch population if the large seed plants became extinct?

**Claim**

If the large seed plants died out, the finches with large beaks would go extinct.

**Evidence 1**

Transition Word	Each species' beak is a different size and shape	Source
<b>Firstly</b>		<u>Darwin's Finches</u> paragraph 1

**Evidence 2**

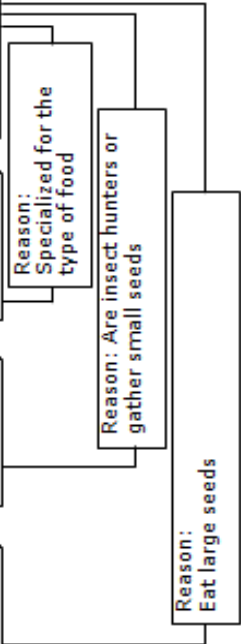
Transition Word	Small and narrow beaks	Source
<b>Also</b>		<u>Darwin's Finches</u> paragraph 2

**Evidence 3**

Transition Word	Large beaks	Source
<b>Lastly</b>		<u>Darwin's Finches</u> paragraph 2

**Conclusion**

Transition Word	The large beaked birds would no longer have a food source and, because of the specialization of their beak, would not be able to compete and would be naturally selected against.
<b>Therefore</b>	



# Sample Paragraph

If the large seed plants died out in the Galapagos Island, I believe that the finches with large beaks would go extinct. Firstly, as explained in the first paragraph of "Darwin's Finches", each species' beak is a different size and shape. Each beak's size and shape makes it specialized to eat a different type of food more easily. Also, paragraph 2 of the same articles goes on to say that finches with small and narrow beaks survive by gathering small seeds or hunting insects. Lastly, the large beaked finches eat large seeds. Therefore, I believe that if the large seed plants died out, the large beaked birds would no longer have a food source and, because of the specialization of their beaks, these finches would not be able to survive.



# Claims-Evidence-Reasoning Writing

## Why is this important?

- ◆ It is the basis of much of the CCSS Writing Standard #1 – Argumentative Writing Standard #2 – Explanatory Writing Standard #4 – Clear, organized writing Standard #8 – Use evidence from multiple sources Standard #9 – Draw evidence from text
- ◆ It is the basis of NGSS Science and Engineering Practices #6 – Constructing Explanations . . . #7 – Engaging in Argument from Evidence #8 – . . . evaluating and communicating information



# Claims-Evidence-Reasoning Writing

## Why is this important?

- ◆ Writing helps students learn:
  - It forces them to organize their thoughts and find relationships between ideas.
  - Writing holds ideas in place long enough for students to think about them.
  - Writing helps get all students to participate in learning.
- ◆ Writing helps you (as the teacher) spot misconceptions.



# Claims – Evidence – Reason Writing

- What does Claims – Evidence – Reasoning writing look like in some of these types of writing?
  - Constructed responses
  - Performance Assessments
  - Research Reports
  - Public Service Announcements
  - Lab Reports
  - Essays
  - Debates
  - Editorials
  - Speeches



# C-E-R in Constructed Response

State the Claim. State the first piece of evidence with its source and the reason that supports the claim. State the second piece of evidence with its source and the reason that supports the claim. State the third piece of evidence with its source and the reason that supports the claim. Summarize the support for the claim in the concluding sentence.

# C-E-R in Constructed Response

- Claim
- Evidence 1 & Reason 1
- Evidence 2 & Reason 2
- Evidence 3 & Reason 3
- Conclusion summarizes the reasons & evidence.



# C-E-R in a Lab Report

Hypothesis is the Claim

The Data is the Evidence

The Conclusion is the science principle that support all the evidence.



# C-E-R in a Lab Report

- Claim
- Evidence 1
- Evidence 2
- Evidence 3
- Conclusion summarizes Reason 1, Reason 2, and Reason 3.



# Claims – Evidence – Reason Writing

Sample text types:

- Constructed responses
- Performance Assessments
- Research Reports
- Public Service Announcements
- Lab Reports
- Essays
- Debates
- Editorials
- Speeches

How could you use this graphic organizer to support students C-E-R writing for some of these different writing types?



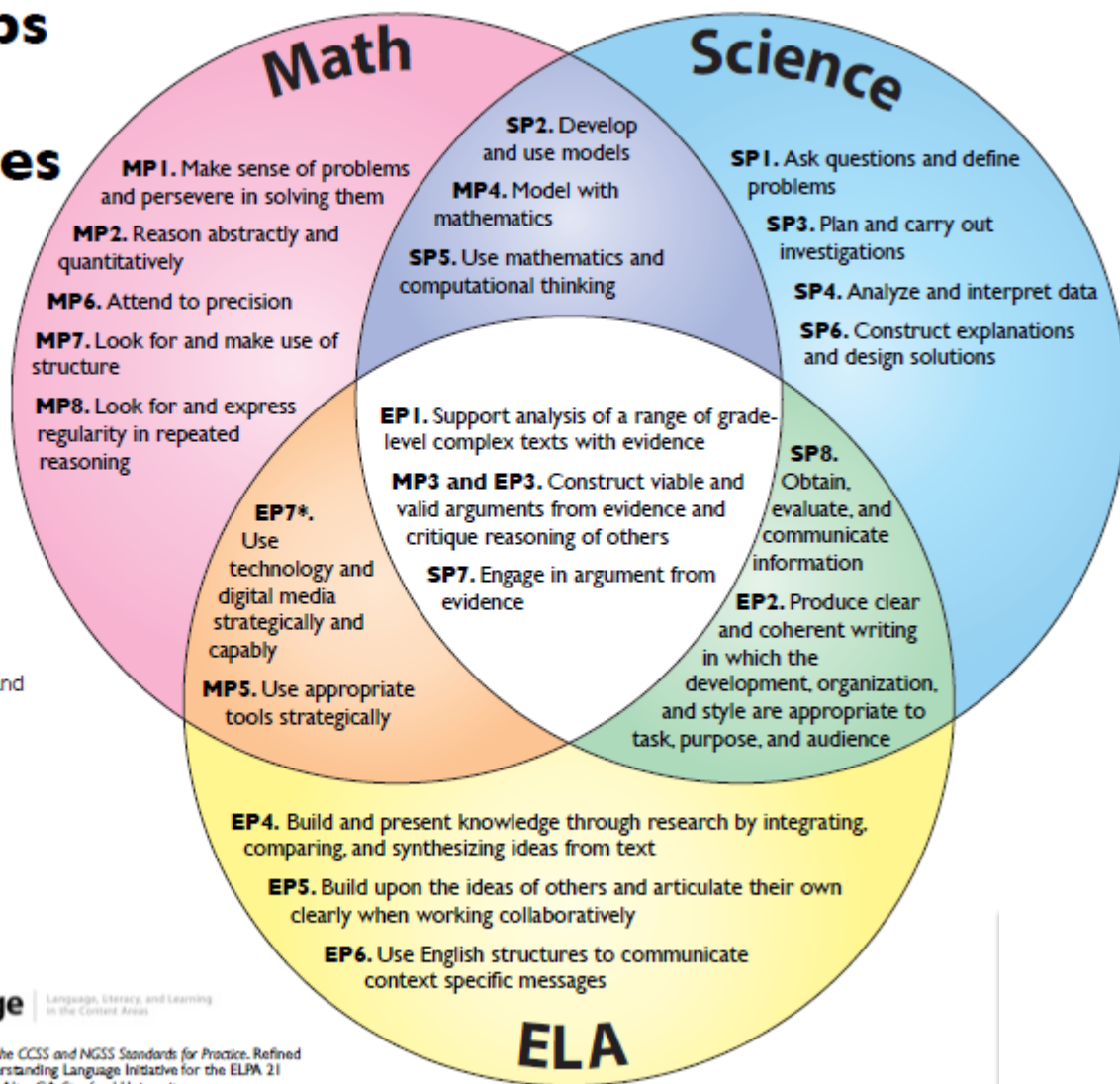
# Relationships and Convergences

Found in:

1. CCSS for Mathematics (practices)
- 2a. CCSS for ELA & Literacy (student capacity)
- 2b. ELPD Framework (ELA "practices")
3. NGSS (science and engineering practices)

## Notes:

1. MP1–MP8 represent CCSS Mathematical Practices (p. 6–8).
2. SP1–SP8 represent NGSS Science and Engineering Practices.
3. EP1–EP6 represent CCSS for ELA "Practices" as defined by the ELPD Framework (p. 11).
4. EP7\* represents CCSS for ELA student "capacity" (p. 7).



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EDUCATION

**Understanding Language** | Language, literacy, and learning  
in the Content Areas

Suggested citation:  
Cheuk, T. (2013). Relationships and convergences among the CCSS and NGSS Standards for Practice. Refined version of diagram created by the Understanding Language Initiative for the ELPA 21 Consortium States' ELP Standards. Palo Alto, CA: Stanford University.



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# Outcomes/Agenda:

- Identify types of writing in your class that use C-E-R
- Examine levels of complexities for creating Claims, and for Student Responses
- Learn how to use a new C-E-R Graphic Organizer to support students by using it





# Any questions about C-E-R Writing or the Graphic Organizer?



Contact Information:

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