

Text Structure: Cause and Effect

By
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A Teacher's Story

Mrs. Kealoha is getting ready to start her thematic unit on the American Revolution. Her mind wanders: there is so much to teach in a short amount of time; the students struggle with knowing this era of America's history; the content is challenging, especially when students need to understand that authors structure text in different ways. Where do I begin?

Mrs. Kealoha realizes that in order for her 5th grade students to understand the text structure, she must review her lesson on how authors use different types of text structures. She knows her students understand the concept of cause and effect, but she is unsure if they are able to identify it in writing. Not an easy task, she begins searching for a short paragraph to use for the next day's lesson. Mrs. Kealoha wants this initial lesson to make an impact. She knows her students learned about cause and effect in science and wants to transfer this knowledge to the social studies content.

The next day, Mrs. Kealoha feels confident that this lesson will be more effective. She knows the importance of tapping into students' background knowledge, and chose a passage that students can relate to. She passes out the following paragraph and asks her students to read it.

On September 11, 1992, Hurricane Iniki struck the Hawaiian Islands. It was the most powerful hurricane to hit the Hawaiian Islands. As a result, Hurricane Iniki caused 1.8 billion dollars in damages and six people died. The island of Kaua'i suffered the most damage. More than 1,400 homes were destroyed and thousands more were damaged. The heavy winds and rains caused many farmers to lose their crops. For weeks, residents of Kaua'i did not have electricity.

Good Morning boys and girls. Today, we will continue to learn about the American Revolution.

Lei raises her hand. *Mrs. Kealoha, if we're studying about the American Revolution, why are we reading about hurricanes?*

Mrs. Kealoha grins. *We will learn about the American Revolution, but before we begin, let's talk about text structure. Text structure refers to how authors structure or organize their writing in different ways.*

Tyler raises his hand. *Is this like when we read books to see how the authors compared and contrasted different topics?*

Mrs. Kealoha replies. *Yes, exactly. Today we will learn about the text structure of cause and effect. But first, I want to see if you understand the concept of cause and effect. The relationship of cause and effect is to understand what happened and why it happened. When we want to know **what happened**, this is called the effect. When we want to know the reasons **why an event or events happened**, this is called the cause. So who can tell me the effect or what happened when Hurricane Iniki struck the Hawaiian Islands?*

Students' hands spring up ... *more than 1,400 houses were destroyed; farmers lost their crops; people lived without electricity.*

Who can tell me the cause or why houses were destroyed or farmers lost their crops?

Hurricane Iniki, the students shout.

Mrs. Kealoha feels great about the day's lesson. Students were able to identify the cause and effect in the text. She knows they are familiar with this topic, and is confident that if she continues the questioning and dissecting of text, the students will be able to understand the American Revolution.

As students progress through schooling, the content that is learned is often factual. For many students, they have too few experiences and/or lack the background knowledge about various factual information, which often hinders their ability to comprehend content area subjects.

In this book, *Effective Instructional Strategies: Cause and Effect*, you will learn the importance of teaching cause and effect through one teacher's journey. The goal is for you to learn the research supporting these key practices and how you can take these examples and apply them in the classroom with your students. All persons referred to are fictional characters.

The framework for this book is the *Pacific Communities with High-performance In Literacy Development (Pacific CHILD) Teachers' Manual*. Pacific CHILD is a professional development program that was tested in the Pacific region using a true randomized control trial design. The Pacific CHILD is a principles-based professional development program consisting of research-based teaching and learning strategies proven to help improve students' reading comprehension using informational text.

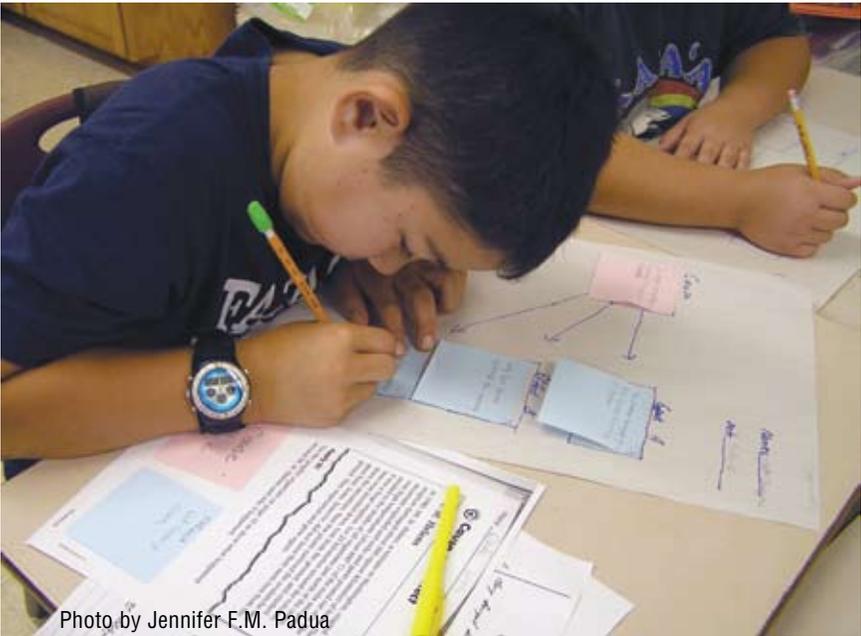


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What is Text Structure?

Text structure is the way authors organize their writing. Each structure has distinctive characteristics that help the reader understand what writing genre is being used. In informational text and content area text books, the most commonly used text structures are cause and effect, compare and contrast, and description and classification (Pacific Resources for Education and Learning, 2008).

Why is Learning Text Structure Important?

In upper elementary grades and higher, students are faced with reading more content area texts. Content area texts are organized in different ways, and knowing those ways helps students get the meaning. The writing in these texts can be abstract and/or contain too many unknown academic words, making it difficult for the reader to understand. The topics may also be unfamiliar to the reader. The teaching of text structure is important for many reasons.

- Students' comprehension is improved when they understand the text features (the physical presentation of the text) and the text structure (the way authors structure or organize their writing) (Dickson, Simmons, and Kame'enui, 1995).
- When readers can anticipate where information is located in the text, they are able to make predictions about the content and will better understand what the author is trying to explain (Dymock, 2007; Meyer & Poon, 2001; Duke & Pearson, 2002).
- If readers become confused by what they are reading, they can use what they know about text structure as a strategy to help them figure out the meaning and clear up their confusion (Tovani, 2000).
- Students who are knowledgeable about and/or follow the author's structure in their attempts to recall a text remember more than those who do not. In addition, more good than poor readers follow the author's structure in their attempt to recall a text (Pearson & Fielding, 1991).

- Once students understand that text structures exist and what the major ones are, they can use strategies, such as graphic organizers and signal words, to help them structure the text of their own writing.

Like any other reading strategy, it is important for Mrs. Kealoha to help students understand and know what text structure is, and then teach text structure explicitly and systematically. Explicit teaching consists of:

- Helping students understand what the concept is.
- Explaining how to use a strategy to learn the concept, its importance, and purpose.
- Explaining how and when to use the strategy.
- Modeling of the strategy.
- Student-guided practice of the strategy.
- Student independent practice of the strategy.

Two Key Steps to Teach Cause and Effect

Effective teaching of cause and effect includes the following:

- Defining the text structure and pattern.
- Using three strategies: asking questions, identifying signal words, and using visual representations (PREL, 2008; Williams, Nubla-King, Pollini, Stafford, Garcia & Snyder, 2005).

Defining the text structure and pattern

When students understand how authors organize their thoughts, students are better able to comprehend what they are reading. In addition, knowing the text structure enables students to anticipate and think flexibly about the author's intention.

Mrs. Kealoha begins her lesson with this in mind. But before she has her students delve into the text, she wants to see if students understand that authors use different kinds of text structures. First, she decides to explain the concept of cause and effect using a familiar topic.

We have learned that authors organize their writing in different ways and this is called text structure. One of the text structures we will learn today is cause and effect. The purpose of cause and effect is to tell the reader what events happened and the reasons why it happened. When you can figure out when the author is telling about why something happened, or the cause, and what happened, or the effect, this will better help you understand what you are reading.

Mrs. Kealoha makes an anchor chart.

Three Strategies to Teach Cause and Effect

Strategy #1: Asking Questions

Mrs. Kealoha continues, *One strategy you can use to figure out the text pattern is by asking questions. Let me show you an example.*

She writes the following sentence on the board.

The strong winds caused the roof to fly off of the house.

Mrs. Kealoha explains, *If you need to figure out the effect, ask yourself what events happened or what was the result? What happened in this sentence?*

One student responds, *The roof flew off the house.*

She continues, *When you need to figure out the cause or reasons why it happened, ask yourself why did it happen or what was the cause?*

Another student shouts, *the strong winds blew it off.*

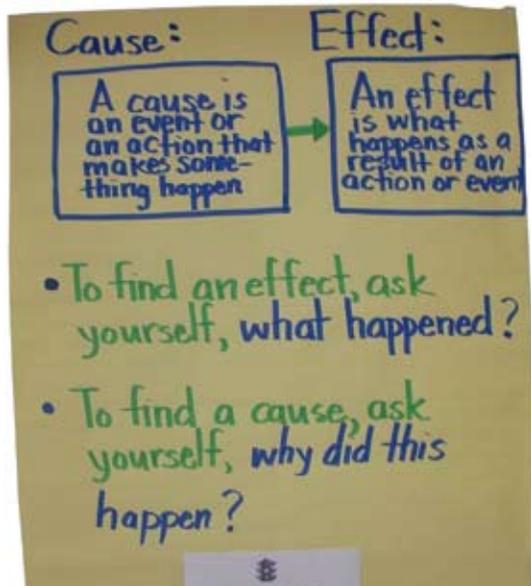


Photo by Jennifer F.M. Padua

She provides several written examples for her students to identify the concept of cause and effect. She continues to question them: *What events happened? Why did they happen?*

Example 1

I had a stomachache because I ate too much food.
What happened (effect)? Why did it happen (cause)?

Mrs. Kealoha allows students to work with a partner for the next example.

Example 2

The window was left open during the heavy rainfall. Therefore, the bedroom rug was soaked. *What happened (effect)? Why did it happen (cause)?*

For the third example, Mrs. Kealoha will use the content from the American Revolution. She knows that too much text may overwhelm students, so using a couple of sentences and allowing students to work in partners will provide a scaffold while simultaneously releasing some of the learning responsibility onto them.

Example 3

The British placed taxes on goods to help pay for the French and Indian War. As a result, the colonists were unhappy and refused to pay the tax. *What happened (effect)? Why did it happen (cause)?*

Mrs. Kealoha noticed that by starting with familiar concepts and then bringing in chunks of the content area information, students were able to better understand the concept. Mrs. Kealoha knows that providing examples, thinking aloud, and asking questions help, but she also knows that students need to identify the text structure of cause and effect independently. But what other strategies could she teach them?

Strategy #2: Identifying Signal Words

Identifying signal words is another strategy to teach text structure (Dickson, et al., 1995; PREL 2008; Dymock & Nicholson, 2007; Williams, et al., 2005). One challenge with the cause and effect text structure is the time factor. For instance, if authors organize text using the sequence text structure, they may use the signal words: *first, second, next, finally*, etc. For cause and effect, some of the signal words are: *because, as a result of, therefore*.

Unlike a sequence text structure where events happen in order, one of the challenges with cause and effect is that authors may not present

information in the manner in which they have occurred. Sometimes, the author presents the *cause* first and in other instances, the *effect* may be first. Here is an example:

As a result of the strong winds, the roof flew off of the house.



The roof flew off the house as a result of the strong winds.



When readers are familiar with the signal words, they are better able to identify what the cause is and what the effect is. For instance, a cause signal word often indicates that the cause is stated nearby as shown by the underlined words.

Examples:

- The roof flew off the house because of the strong winds.
- As a result of the strong winds, the roof flew off of the house.

Mrs. Kealoha realizes some students may find it challenging to ask questions (*what happened?* or *why did it happen?*) to identify cause and effect. She decides to teach how to use signal words as another strategy to help identify the text structure.

Mrs. Kealoha uses the sentences from the previous lessons and explains how identifying the signal word can direct the students to determine the cause. She further describes that signal words are just signals, and as readers they must be detectives to find the cause, which is often stated nearby. She gives each student an anchor card (see Appendix A), reviews the words, and explains how one way she does this is by circling the signal word and underlining the cause.

She models the two examples for students.

Example 1: I had a stomachache because I ate too much food.

Example 2: Since I woke up late, I missed the bus.

Mrs. Kealoha has the students work with a partner for example 3.

Example 3: The window was left open during the heavy rainfall.
Therefore the bedroom rug was soaked.

For example 4, Mrs. Kealoha gives a small chunk of the content and continues the partner work.

Example 4: The British placed taxes on goods to help pay for the French and Indian War. As a result, the colonists were unhappy and refused to pay the tax.

As she observes students' understanding of the use of signal words as a way to identify cause and effect, she provides larger chunks of text. Mrs. Kealoha understands the importance of gradually revealing the information to students.

At the end of the lesson, Mrs. Kealoha explains that not all authors will use signal words in their writing, so practicing the use of questioning (what happened, why did it happen?) remains an important strategy.

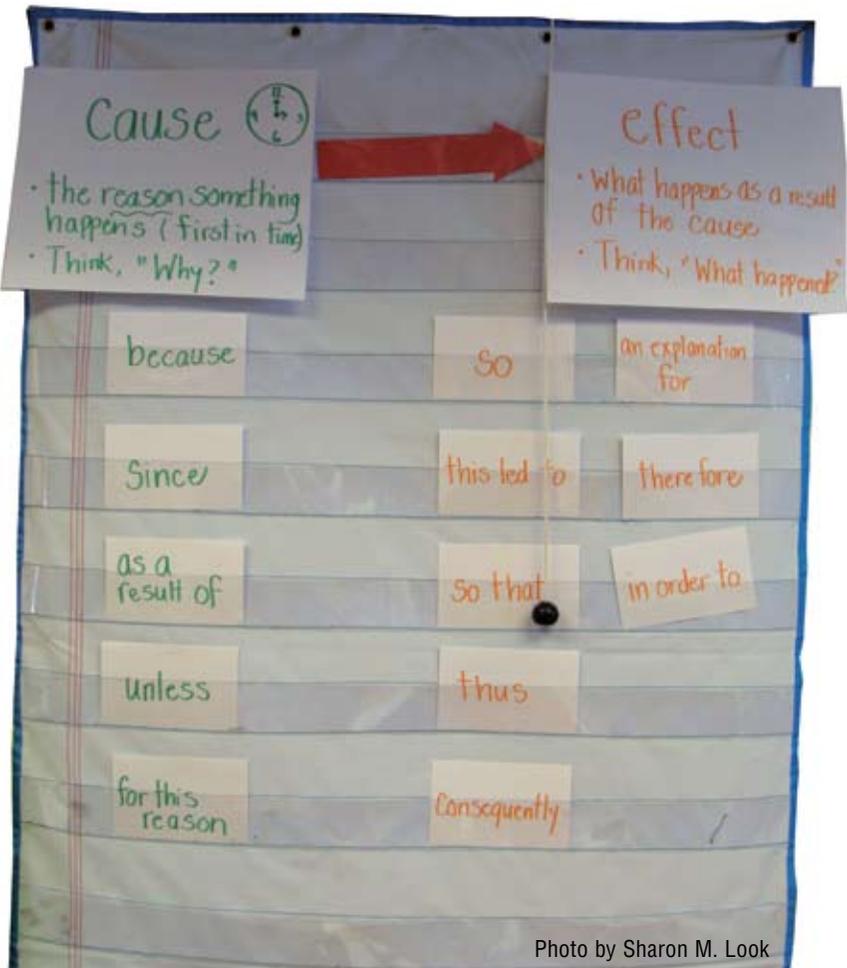


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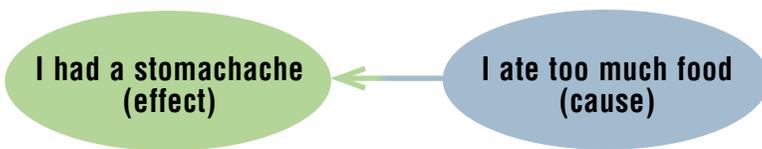
Strategy #3: Using Visual Representations

The next strategy to help identify cause and effect is the use of visual representations (Duke & Pearson, 2002; PREL, 2008; Dymock & Nicholson, 2007; Williams, et al., 2005). When there is an increased amount of text, finding the cause and effect can be complicated. Mrs. Kealoha learned that there are three basic patterns to show the cause and effect relationship: 1) the single event, 2) the chain reaction, and 3) the branching tree.

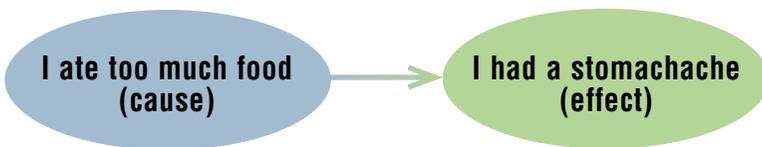
The National Reading Panel (2000) supports the use of visual representations, also known as graphic organizers, to help students comprehend text. Mrs. Kealoha thinks the best way for her students to see how the author uses the patterns of cause and effect is through the use of visual representations. She uses the sentences from prior lessons to demonstrate this concept.

Pattern 1: Single Event

Mrs. Kealoha explains: *When there is only one cause and one effect in the text, we call this a single event. For example, in the sentence: I had a stomachache because I ate too much food.*



Mrs. Kealoha also shows them another visual representation and emphasizes the importance of labeling because it will demonstrate their understanding of cause and effect.



Pattern 2: Chain Reaction

Chain reaction occurs when a cause creates an effect and that effect turns into a cause and creates another effect; basically one event leads to another event (Ciardiello, 2002; Dymock & Nicholson, 2007).

Mrs. Kealoha explains: *The chain reaction pattern can be tricky because the author might not write all the information. Sometimes, you may have to break apart the text and infer what the author is saying to identify the causes and effects.* She writes the following sentence on the board.

The British placed taxes on goods to help pay for the French and Indian War. As a result, the colonists were unhappy and refused to pay the tax.

She draws a square, writes part of the first sentence, and asks *Why did British place taxes on goods?*

British placed taxes on goods.

Because of the war, responds Sheila.

Tell me more, replies Mrs. Kealoha.

The French and Indian War cost money and British needed the money to help pay for it so they taxed the colonists, answers Sheila.

Mrs. Kealoha draws squares to visually represent Sheila's answer.

French and Indian War occurred.

British needed money to pay for the war.

British placed taxes on goods.

Let's stop here and figure out the cause and effect relationship. If the French and Indian War is the cause, what's the effect? asks Mrs. Kealoha.

Anthony answers, *British needed money to help pay for the war.*

Mrs. Kealoha labels the graphic organizer.

French and Indian War occurred. (cause)

British needed money to pay for the war. (effect)

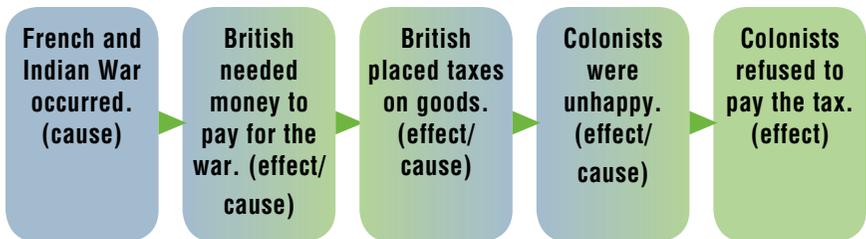
British placed taxes on goods.

There's also another effect, British placed taxes on goods, shares Sheila. *Wait, can there be two effects?*

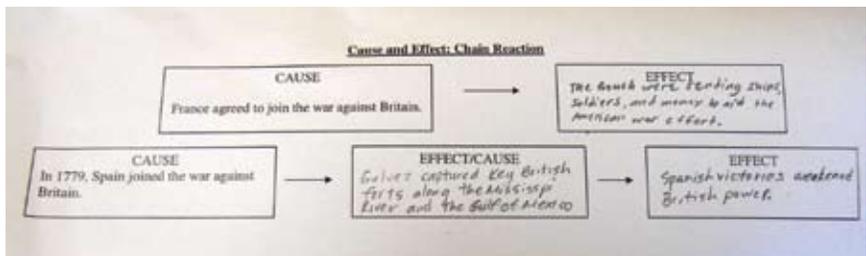
This one is tricky, replies Mrs. Kealoha. What happens in a chain reaction is that the effect turns into a cause resulting in another effect. This is why it is important for you to label your graphic organizer.



Mrs. Kealoha continues dissecting the text, drawing visuals and asking questions to show students the chain reaction in a cause and effect relationship.



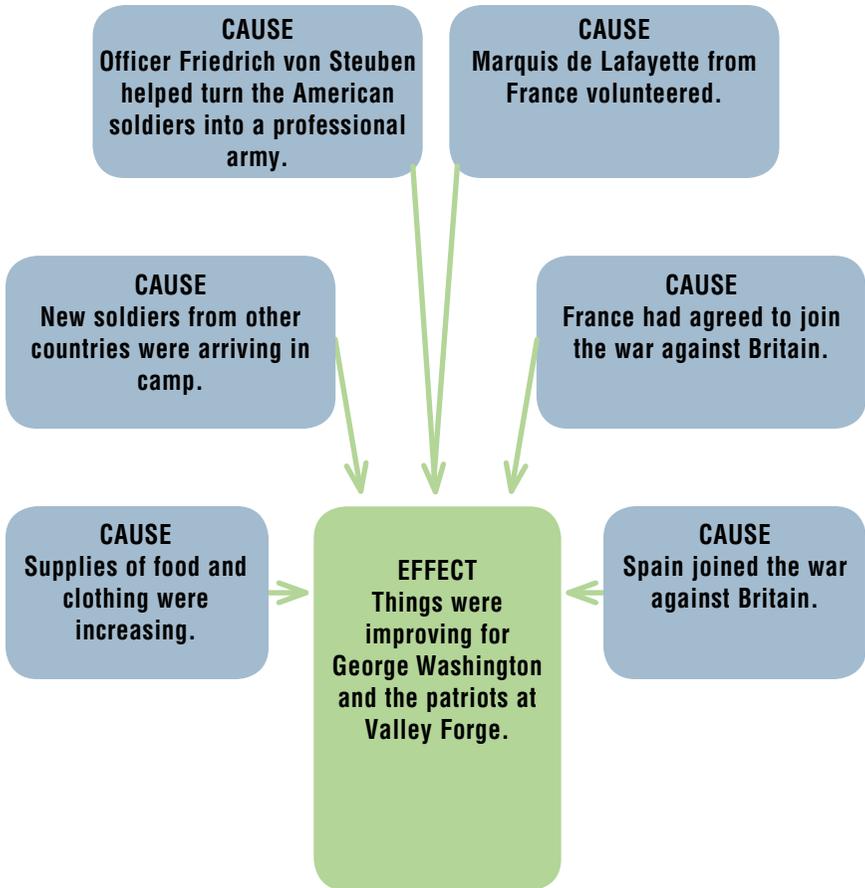
Mrs. Kealoha allows students to work in groups to complete another chain reaction relationship.



Pattern 3: Branching Tree

Branching Tree occurs when one cause creates multiple effects or multiple causes create one effect (Ciardiello, 2002; Dymock & Nicholson, 2007). These multiple causes or effects can branch off into other cause and effect patterns (Ciardiello, 2002; Dymock & Nicholson, 2007).

On another day, Mrs. Kealoha uses the article about how other nations helped George Washington at the battle in Valley Forge. She begins reading and stops frequently to draw a visual representation to show the cause and effect pattern.



As Mrs. Kealoha finishes the lesson, she explains that in a branching tree, all of the causes may happen at the same or different times, yet they all still contribute to the effect.

Mrs. Kealoha knows that using visual representations are helpful, and students need substantial support before allowing them to work independently. For the next few lessons she continues modeling and providing guided practice.

Connecting Text Structure Learning from Reading to Writing

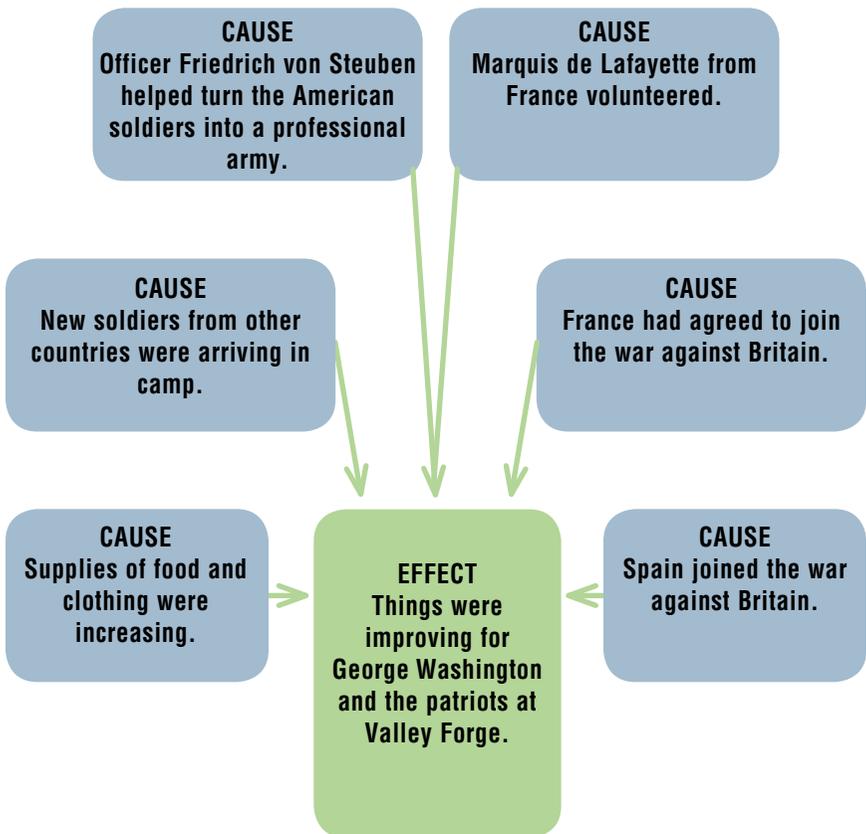
Mrs. Kealoha has seen progress with her explicit teaching of cause and effect, and her students are doing much better with comprehending the content. She also knows that as part of a balanced literacy curriculum, she needs to help students make the connection between reading and writing.

Reflecting back on what she has done thus far, Mrs. Kealoha knows that the graphic organizers can serve as an outline, and the use of signal words can assist students not only comprehending what they read, but also writing their ideas cohesively.

Like the previous lessons, she uses the same sentences to model and think aloud how to connect reading and writing.

We will continue learning about the American Revolution. This time, we will use our visual representations to show our understanding of what we read and to demonstrate our writing.

I'm going to think aloud and show you how to use your visual representation as a writing outline. Mrs. Kealoha takes out the visual representation from a previous lesson.



We're going to use this visual representation to help us write about how other nations assisted the colonists during the American Revolution.

First, we're going to use the topic as our main idea statement. By looking at this graphic organizer, I know that Spain and France and other nations helped the colonists. So I'll write that down.

Many nations assisted the colonists during the American Revolution.

Mrs. Kealoha continues to think aloud: *I remember reading that when George Washington and the patriots were at Valley Forge, they were exhausted, tired, and felt trapped.* Mrs. Kealoha writes down this information.

Many nations assisted the colonists during the American Revolution. For example, when George Washington and the patriots were at Valley Forge, they were exhausted, tired, felt trapped, and almost defeated. When other nations heard about their struggles, they came to the patriots' rescue.

What did they do? asks Mrs. Kealoha. *Let's look at our graphic organizer to complete this information.*

Mrs. Kealoha calls on Anthony who raises his hand...*they supplied clothing and food.*

Why is this important? she asks.

Because the soldiers were hungry and their clothes were dirty, answers Anthony.

Great. What happened as a result of that? continues Mrs. Kealoha.

The soldiers felt better, they weren't tired, and they had the strength to continue fighting, replies Anthony.

Wonderful. Let's add that information to our paragraph and I'm going to add a signal word to show the cause and effect relationship, responds Mrs. Kealoha.

Many nations assisted the colonists during the American Revolution. For example, when George Washington and the patriots were at Valley Forge, they were exhausted, tired, and felt trapped, almost defeated. When other nations heard about the patriots' struggles, they came to the rescue. Other nations provided food and clothing for the soldiers. As a result, the soldiers felt better and they now had the strength to continue fighting.

Mrs. Kealoha continues to ask, *What happened?* and adds on to the existing paragraph.

By the end of the lesson, she has explicitly shown students how to make the reading-writing connection through the use of graphic organizers and signal words. She gives students an assignment to try on their own.

Mrs. Kealoha is proud of what she has accomplished with this group of 5th graders. She knows the importance of making sure that students understand that there are different kinds of text structures, what they are, and then providing explicit think-alouds to model how each of the three cause and effect strategies are used. She can then gradually begin to diminish the amount of help until students can do it independently. Of course, throughout this entire process she is assessing students by observing, listening to their conversations, analyzing their work, and re-teaching when necessary.

Overview of Key Steps

- Help students understand what text structure is, its importance and purpose. Before students can identify cause and effect, they must understand the concept.
- Explain how and when to use the strategy. Start with familiar topics and show examples to help students understand how authors organize their writing.
- Model and gradually diminish help on how knowing the text structure can aid with comprehension. The two key steps of teaching text structure are:
 - Defining the text structure and pattern.
 - Using the three key strategies (asking questions, identifying signal words, and using visual representations).
- Connect text structure learning from reading to writing.
- Assess students' learning throughout the process and re-teach when necessary.
- Use the two key steps to teach other text structures such as compare and contrast.

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Appendix A: Signal Words Anchor Card

Cause and Effect Signal Words

cause

(Why did it happen?)

because

since

as a result of

unless

for this reason

effect

(What happened?)

so

this led to

thus

consequently

therefore



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