Title: Text Structure Strategies for Improving Expository Reading Comprehension

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Teaser Text:

Students have difficulty comprehending expository text. This article presents practical applications of research-based strategies for using text structures to improve students' expository text comprehension.

Pause and Ponder

1. Why is it important for students to learn how to comprehend expository text?

2. What are some reasons why expository text reading is challenging for students?

3. Which of the text structure learning objectives are most appropriate for your students?

4. How might you assess students' progress towards the learning objectives?

5. Where might you get the necessary reading material for text structure instruction?

Expository (or informational) text is the primary source of reading material used to present academic content (e.g., science, social studies). As such, it is essential that students are able to comprehend it. The importance of comprehending expository text is recognized in the Common Core State Standards for English Language Arts, which states that students as young as kindergarten should be able to engage with "informational" text in multifaceted ways, such as identifying the main topic, asking and answering questions about key details, and describing connections between pieces of information (National Governor's Association Center for Best Practices & Council of Chief State School Officers, 2010).

The problem faced by teachers is that expository reading tends to be more difficult for students than typical story reading (McCormick & Zutell, 2015). Several characteristics of expository text may contribute to this difficulty, such as:

- technical vocabulary

- a high density of facts

- unfamiliar content

- cognitively demanding concepts

Another reason that expository text can be challenging is because its structure is different from the typical story structure familiar to students. Structure refers to the way that information is organized within a text. Meyer (1975) was the first to describe the different types of expository text structures. Five text structures that show up the most consistently in the literature are: *description*, *compare/contrast*, *sequence*, *cause/effect*, and *problem/solution*, although the terms and definitions for these structures have varied across researchers (e.g., compare/contrast has also been referred to as adversative; Englert & Hiebert, 1984), and are sometimes imprecise. Therefore, for teachers planning to use the text structures in their instruction, it may be most useful to use more frequent terms along with child-friendly definitions, such as the ones used by Bohaty (2015; Table 1).

Table 1
Child-friendly Descriptions of Five Text Structures

Text Structure	Description
Simple Description	The author's intent is to tell us about something. They use characteristics or facts to describe it.
Compare/Contrast	The author's intent is to tell us about two things. The author tells us how they are the same and different.
Sequence	The author's intent is to tell us the order things happen. There are three types of Sequence: steps, cycle, and timeline. Regardless of the type, the author is putting information in an order.
Cause/Effect	The author's intent is to tell us how an event leads to an outcome. The cause always results in the effect.
Problem/Solution	The author's intent is to tell us how a problem might be solved. The solution may or may not be used.

Note. The text structure names and definitions were taken directly from Bohaty (2015).

Although the structure of expository text may be one of the characteristics contributing to its difficulty, it is also a characteristic that students can use to meet the demands of content text. Knowing the structure of an expository text may provide students with a mental framework for thinking about it. The purpose of this article is to present practical, evidence-based solutions for teaching students how to use text structure strategies to improve their expository reading comprehension.

Interpreting education research and putting it into practice can be challenging and time consuming. In this article, we do that work for teachers by translating the most effective practices from the text structure literature into recommendations for teachers. Hebert, Bohaty, Nelson, and Brown (2016) conducted a meta-analysis on text structure instruction, concluding that it is an effective way to improve expository reading comprehension. The literature interpreted in this article comes from this meta-analysis. We hope our article helps to narrow the research-to-practice gap. The recommendations are organized into four sections:

1. Learning Objectives

2. Instructional Strategies

3. Assessments

4. Reading Materials

These recommendations are offered as springboards for teachers to begin thinking about how to implement some effective text structure strategies into their classroom instruction so that students are better able to comprehend expository text.

Learning Objectives

As with all instructional units, planning for text structure instruction should begin with clear learning objectives that outline the skills teachers want their students to demonstrate by the

end of instruction. In reviewing descriptions of text structure activities and assessments within the extant literature, we determined there are four frequently recurring learning objectives:

1. Students will be able to identify the structure of an expository text.

2. Students will be able to select and organize the most important information in an expository text.

3. Students will be able to summarize an expository text.

4. Students will be able to write their own expository text.

Take Action!

The following is a framework for thinking about text structure instruction:

1. Decide what the specific learning objectives will be for the text structure unit.

2. Plan out the instructional strategies that will help students meet the objectives.

3. Develop a plan for assessing students' progress towards the objectives.

4. Prepare the expository reading materials to be used for instructing and assessing students.

Instructional Strategies

After teachers decide on the learning objectives for their text structure unit, their next step is to plan specific instructional strategies to help students achieve them. To that end, we describe effective strategies related to each of the objectives listed above.

Identification Strategies

Learning to recognize the structure of expository text may help students focus on the important information in a particular passage, and serve as a foundation for attaining the other text structure objectives. There are two possible goals of identification strategies: 1) to recognize a single text structure or 2) to discriminate among several possible text structures. The choice a

teacher makes may depend on whether teachers choose to teach a single text structure or multiple text structures at a time. There are several strategies teachers can use to help students identify the text structure of the passages they read.

Introducing the concept of structures without reading materials. It may be useful to introduce students to the concept of text structures outside of written text using group discussions to activate prior knowledge. Examples of discussion starters for each text structure include:

- Simple Description: Describe how this classroom looks to somebody who has never visited.

- Compare/Contrast: Note the similarities and differences between an apple and an orange (e.g., Alvermann, 1981; Coleman, 1983).

- Sequence: Explain how to tie your shoelaces.

- Cause/Effect: What might happen if you are late for school?

- Problem/Solution: What are some problems that occur in school and some solutions? (McDermott, 1990).

Students should be the ones who actively generate the ideas. After the group discussion, teachers should provide the text structure definitions and then transition into pointing out examples of text structures in expository text.

Teaching signal words. Another strategy is to have students look for signal words in expository text (e.g., Wijekumar, Meyer, & Lei, 2012). As the label suggests, signal words are words that *signal* the text structure to the reader. Other terms for "signal words" include clue words, cue words, or *key* words. To help keep track of the signal words in a passage, students can highlight or underline them as they read (e.g., Hoffman, 2010). Table 2 provides examples of signal words for each text structure.

Signal words can be very effective for helping students identify the structure of expository text. However, we find it necessary to offer a few words of caution. First, signal words can be misleading. There are times when a signal word may appear in a passage and not reflect its overall structure. Second, students may end up paying more attention to the signal words than they do to the actual content of the passage.

It should not be forgotten that the purpose of teaching signal words is to help students identify the structure of a text, which then provides a framework for understanding the content within it. Using signal words to identify the structure of a text is a strategy, not an end goal. Therefore, it is best if this strategy is paired with additional instruction.

Table 2
Examples of Signal Words for each Text Structure

Text Structure	Signal Words
Simple Description	Looks like, sounds like, [*shape, size, color, number*], for example, for instance, specifically, such as, in particular
Compare/Contrast	Compare: Same as, similar(ly), both, have in common, likewise, alike Contrast: different, in comparison, in contrast, however, but, on the other hand
Sequence	First, second, third…, initially, preceding, before, next, then, finally, now, following, after
Cause/Effect	Because, as a result, outcome, so, thus, consequently, leads to, is caused by, if… then, produces, therefore
Problem/Solution	the problem/issue/difficulty is, solution, solve, one answer is, a reason for the problem

Discrimination training. Discrimination training involves studying more than one text structure at a time. For example, when teaching 4th and 5th grade struggling readers, Bohaty (2015) introduced both the simple description and compare/contrast text structures in the same lesson. Students then read passages and determined which text structure was being used. This required students to think about the content of the passage and the intent of the author. By

introducing different text structures in close proximity, teachers can highlight the elements that distinguish each text structure from the others, which may help students to discriminate among them (Bohaty, 2015).

Selection and Organization Strategies

Students' ability to select and organize the *most important information* in a text may keep them from becoming bogged down by less important details. Being able to identify the structure of a text is a helpful precursor to this objective, because students learn that the important information is based on the text's structural elements (e.g., the "problem" and "solution" in a problem/solution passage, or the "similarities" and "differences" in a compare/contrast passage). We first present strategies for selecting and then for organizing information from passages.

Asking guiding questions. To help facilitate the selection of important information from passages, students can learn to ask themselves guiding questions. The questions should help students focus on the structure-related elements. For example, 2nd graders were taught to focus on the "cause" of a cause/effect paragraph by asking themselves, "What is the cause?" (Williams, Nubla-Kung, Pollini, Stafford, Garcia, & Snyder, 2007) or "What happened?" (Williams, Pollini, Snyder, Garcia, Ordynans, & Atkins, 2013). Similarly, to focus on the "effect" they were taught to ask themselves, "What is the effect?" (Williams et al., 2007) or "Why?" (Williams et al., 2013).

Students can use the guiding question technique with other text structures as well. Some appropriate questions when reading a compare/contrast passage might be, "What two things is this paragraph about?" "How are they the same?" "How are they different?" (Williams, Stafford, Lauer, Hall, & Pollini, 2009). See Table 3 for more examples of guiding questions for each text structure.

Table 3
Examples of Guiding Questions for Each Text Structure

Text Structure	Guided Questions
Simple Description	What is the author describing? What are the details used to describe it?
Compare/Contrast	What objects are concepts are being compared? What categories are you comparing? How are they the same? How are they different? What features are being compared?
Sequence	What is the first thing that happened? What is the next step? What happened last?
Cause/Effect	What are the cause(s) and related effect(s)? What happened? Why?
Problem/Solution	What are/were the difficulties or questions? What were the attempts or possible actions to solve them? How was it or might it be solved? What are/were the consequences of the options. What was the result of actions?

Using signal words (again). Another way to help students select the key information in text is to have them pay attention to the signal words. Williams et al. (2013) used signal words to teach 2nd grade students select structure-related information from cause/effect passages. Students analyzed a target paragraph by first circling the *cause* word (e.g., because) and *effect* words (e.g., therefore) in blue or green, respectively. For sentences containing a *cause* word, students learned that the "cause" came after the signal word and the "effect" came before it. The reverse was true for sentences with *effect* words.

Using graphic organizers. Graphic organizers can also aid in the selection of important information, while also illustrating how information can be organized in a meaningful way, by providing spaces to record the structure-related information from the passage (see Figure 1). Teachers can supply empty graphic organizers for students to fill-in or teach students to create their own.

For simple description passages, teachers may consider using graphic organizers called topical nets (e.g., Newman, 2007; Russell, 2005; Whittaker, 1992; Scott, 2011). Topical nets consist of a center circle (or other shape) with additional circles branching out from the middle.

Students write the main topic in the center circle and write the characteristics and facts in the outside circles.

Students can organize passages with a compare/contrast text structure into matrices (e.g., Hall, Sabey, & McClellan, 2005; Williams et al., 2009; Whittaker, 1992; Williams, Hall, Lauer, Stafford, DeSisto, & deCani, 2005). A matrix has the topics listed across the top and the categories on which the topics are being compared/contrasted listed down the left side. Organizing the information in this manner makes the similarities and differences more apparent.

An effective option for organizing sequence passages is to use linear strings (e.g., Newman, 2007; Russel, 2005; Reese, 1988; Scott, 2011). Linear strings are made up of a series of boxes that are connected in the middle with lines or arrows. Starting in the first box, students write down each event from the sequence with each box containing a different event. The arrows indicate the direction of the sequence.

Graphic organizers for cause/effect text structures should highlight the relationship between the cause(s) and the effect(s). One way to do this is to have two side-by-side text boxes with the causes written in the left box and the effects written in the right (e.g., Gentry, 2006; Gould, 1987; Williams et al., 2013). Arrows can be drawn to specify the direction of the relationships.

We recommend that students use a similar graphic organizer for problem/solution passages. In this case, the problems would go in the left box and the solutions would go in the right. Of course, teachers can make variations to this basic structure, such as adding boxes for information about *why* the problem happened (McDermott, 1990), attempts to solve the problem, or *possible* solutions.

Using note frames. As an alternative to taking notes in graphic organizers, students can use note frames. Figure 2 provides an example of a note frame for a compare/contrast passage about plant and animal cells. Note frames are helpful because they provide students with a simple framework for recording structure-related information from texts onto typical lined paper. Students should practice recording information into teacher-created note frames before learning how to create their own frames (Bohaty, Hebert, Nelson, & Roehling, 2016).

Summarizing Strategies

Like graphic organizers or note frames, summaries should include the structure-related information from a text. Consequently, if students have already completed a graphic organizer for a passage, they can use it to help write their summary (e.g., Hall et al., 2005; Newman, 2007; Scott, 2011; Williams et al., 2009). With the important information already picked out, it then becomes a simpler task of teaching students to rewrite their notes into a paragraph and add a topic sentence.

If students need more support learning to write summaries, they can use paragraph frames (e.g., Hall et al., 2005; Williams et al., 2005; Williams et al., 2009). Paragraph frames have a cloze format that prompt students to include certain information in their summaries (see Table 4). This strategy is most helpful when students are first learning to write summaries. As students become more practiced with this task, teachers should attempt to fade away the frames (Hall et al., 2005)

Table 4

Example of Paragraph Summary Frame for a Compare/Contrast Passage

This paragraph is about _____ and _____. In some ways they are the same. _____. In some ways they are different. _____.

Note. Taken from Williams et al. (2005)

Writing Strategies

Teachers can adapt many of the previously identified *reading* strategies as *writing* strategies to help students create their own expository passages (e.g., Hammann & Stevens, 2003; Hickerson, 1986; Raphael, Englert, & Kirschner, 1986). Using these strategies may strengthen their understanding of text structures for reading, as writing has been shown to improve reading comprehension (Graham & Hebert, 2011). Before teaching the specific strategies, it may be helpful to show students examples of well-written expository passages (e.g., Raphael et al., 1986), as the study of models (or mentor texts) is an effective tool for writing instruction (Graham & Perrin, 2007). We present a few example strategies below in abbreviated form because they have been presented previously as reading strategies.

Writing with guiding questions. One writing strategy is to provide students with worksheets that contain guiding questions (Raphael et al., 1986). The purpose of guiding questions is to remind students of the structure-related information that should be included in their text. For example, if students are writing a cause/effect paragraph, some guiding questions might be, "What happened?" and "Why?" (refer back to Table 3 for more examples).

Responding to structure-related questions can help students plan their writing. Teachers can then model how to turn the responses to questions into statements, and then how to structure the statements into a cohesive passage. Students should be given guided practice opportunities to scaffold their understanding.

Writing with graphic organizers. The same graphic organizers that students use to take notes about reading materials can also help them organize their own writing (see Figure 1; Hammann & Stevens, 2003; Raphael et al., 1986). As an example, if students are supposed to

write a paragraph with a sequence structure, they could first organize their thoughts into a linear string. Filling in graphic organizers provides students with a framework for thinking about the information they need to include in their text.

To increase students' understanding and flexible use of text structures, teachers can also use graphic organizers to have students reorganize expository texts into different structures. For instance, Hammons and Stevens (2003) taught students how to reorganize two simple description paragraphs into a compare/contrast passage. To help with this transformation, students first put the information from the simple description paragraphs into a compare/contrast planner (or organizer). A major difficulty with asking students to write expository text is that they may not have sufficient content knowledge to do so adequately. Using pre-existing text bypasses this problem.

<div align="center">**Assessments**</div>

After planning and implementing text structure instruction, teachers need to know whether it was effective. More specifically, they need to determine whether students have met the learning objectives and also whether their expository reading comprehension has improved as a result of it. Assessments are a tool for gaining this knowledge.

Assessing Student Progress towards Learning Objectives

For each of the learning objectives in their text structure unit, teachers should have a plan for assessing whether students have reached it. In this way, teachers are figuring out whether students have learned the different skills intended to improve their expository reading comprehension.

Assessing identification skills. Teachers may simply want to assess whether students are able to identify the structure of text. For example, Williams and colleagues (2009) wanted to

determine whether 2nd graders could correctly identify compare/contrast passages. To administer the assessment, an interviewer read a paragraph to the student and asked, "Does this paragraph tell a story about animals, compare and contrast animals, or tell about an animal's problems?" (pg. 19). Students earned one point for correctly identifying the structure.

Of course, teachers can make the assessment more challenging for older students. As another example, Bohaty (2015) assessed fourth and fifth graders' identification skills with a 15-item measure. Each item consisted of a short passage followed by five multiple-choice options (i.e., simple description, compare/contrast, sequence, cause/effect, or problem/solution). Students first read the passage and then decided which of the five text structures it best represented.

Assessing skills for selecting and organizing information. Teachers can develop rubrics to assess whether students can successfully select and organize the important information in a passage (e.g., Newman, 2007; Scott, 2011). The rubric should have two main considerations: 1) Are the students including the relevant information? and 2) Is information organized according to the appropriate text structure elements? However, there are a variety of ways that these two considerations could be integrated into the rubric. A graphic organizer rubric adapted from Scott (2011) shows one example of how this could be done (see Table 5).

Table 5
Example of Graphic Organizer Scoring Rubric

Score	Explanation of Score
5	A graphic organizer using the appropriate text structure that displays the topic plus all the text's subtopics with related details.
4	A graphic organizer using the appropriate rhetorical pattern that includes the topic (may not be clearly stated) plus all the text's subtopics with some related details.
3	A presentation of information which does not use the appropriate rhetorical pattern but demonstrates some awareness of text organization including some subtopics and some related details.
2	List of details

1	Incorrect content and/or little or nothing related to text; copying
0	No response

Note. Adapted from Scott (2010).

Assessing summarizing skills. We also recommend developing rubrics to assess students' ability to summarize expository text (e.g., Newman, 2007; Scott, 2011; Ulper & Akkok, 2010). A good summary might include a topic sentence and key details based on the structure of the original text, while also leaving out unessential parts. However, teachers may vary in their definition of a good summary, and their rubrics should vary accordingly. Table 6 provides an example of a rubric for summary writing adapted from Ulper & Akkok (2010).

Table 6
Example of Summary Scoring Rubric

Summarizing Rules	None	Inadequate	Acceptable	Adequate
	0	1	2	3
Summary included a reconstructed title.				
Summary included the thesis of the source text.				
Summary included supporting idea(s) of the source text.				
Summary was the reconstructed form of the source text by original sentences.				
All necessary text was chosen and placed in summary.				
There was no trivia and redundancy in the summary.				
Summary was satisfying/long enough to represent the source text.				

Note. Adapted from Ulper & Akkok (2010).

Assessing writing skills. When evaluating whether students can write expository text with appropriate text structures, teachers can use techniques similar to those that students used to revise their writing. That is, they can use rubrics that contain questions that the text should

answer based on its intended structure. The rubric could also take into account whether students included signal words to improve the clarity of their writing. Because the purpose of the writing objective is for students to gain a deeper understanding of text structures, we advise placing less emphasis on spelling and grammar.

Assessing Expository Reading Comprehension

The assessments we have mentioned so far are meant to check whether students have met the learning objectives for the text structure unit. If students have met the learning objectives, it means they have demonstrated the ability to use text structure strategies that are *intended to* improve their expository reading comprehension. However, teachers still need to monitor whether using text structure strategies actually helps students better comprehend expository text, which is the ultimate goal of text structure instruction.

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Reading Materials

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The instructional strategies and assessments that we have described require multiple expository passages for each text structure that is taught. Teachers could write their own passages (e.g., Williams et al., 2005), or extract passages directly from expository reading material (e.g., Duffy, 1985; Bartlett, 1978). However, extracted passages do not always have an obvious text structure. Armbruster (1984) referred to these as "inconsiderate" text. If they so choose, teachers can modify "inconsiderate" text (e.g., Bakken et al., 1997). Modifying may involve rewriting the text to make the structure more distinct or selecting portions of the text that already have a distinct structure.

Our recommendation is that teachers start out using modified passages that provide a strong model for how text should be structured. We believe that starting with well-structured passages may make it easier for students to learn the text structure strategies. Once students feel

comfortable using the strategies with well-structured passages, teachers can begin to incorporate more authentic passages that may have ambiguous text structures. At this time, teachers can begin to teach students to use these strategies with multiple passages within the same text source. The benefit of incorporating authentic text into instruction is that students may able to generalize the text structure strategies more easily to everyday reading materials they encounter in school and beyond.

Conclusion

Knowing how to read and comprehend expository text is an essential skill in today's society. Educators should not assume that students will automatically learn this skill over time. Rather, educators need an explicit, research-based method for teaching expository reading. In this article, we have presented one such method: text structure instruction.

Text structure instruction is versatile; there is not one set way that it should be implemented. It is this versatility that makes it an advantageous instructional method. Teachers can adapt text structure instruction to make it appropriate to the skills and needs of their students. To conclude, tables 7 and 8 provide examples of how teachers of two different grade levels might combine some of the strategies we presented in this article to develop a cohesive unit on text structure instruction that meets the needs of their students.

Table 7
Example of Text Structure Unit Plan for Second Grade

Objectives	1. Students will be able to identify sequence passages. 2. Students will be able to select and organize the most important information in simple description and sequence passages.
Instruction	*To meet the objectives, the teacher developed a cohesive sequence of text structure activities.* To meet objective 1: 1. Introduce the concept of sequence text structures with a group discussion (e.g., how to make a peanut butter and jelly sandwich). 2. Introduce signal words

3. Model discriminating between passages with and without a sequence text structure.
4. Have students practice identifying sequence passages, with support and independently.

To meet objective 2:
1. Model organizing sequence passages into linear strings by asking questions about the text (e.g., What happens first?)
2. Have students practice organizing sequence passages into linear strings, with support and independently.

Assessment	*The teacher developed a plan to assess whether students had met the objectives.* To assess the 1st objective: 1. Read aloud ten passages as students followed along with their own copies. 2. Have students write "yes" if they thought it was a sequence passage and "no" if they do not. 3. Have students explain their decisions using evidence. To assess the 2nd objective: 4. Students read two sequence passages and organize them into linear strings. 5. Check the linear strings to see if each box contains one of the main events without extraneous details.
Reading Material	Passages were adapted from trade books to provide a clear example of a single text structure.

Table 8

Example of Text Structure Unit Plan for Fifth Grade

Objectives	1. Students will be able to select and organize the most important information from cause/effect and problem/solution passages. 2. Students will be able to write their own problem/solution passage.
Instruction	*The teacher developed a plan to assess whether students had met the objectives.* To meet objective 1: 1. Model organizing cause/effect and problem/solution passages into graphic organizers by using signal words to select the structure-related information. 2. Have students practice organizing cause/effect and problem/solution passages into graphic organizers, with support and independently. To meet objective 2: 1. Model filling out a problem/solution graphic organizer using a topic relevant to students' lives (e.g., not enough allowance money). 2. Model writing a passage using the information in the graphic organizer, making sure to add signal words for clarity. 3. Think of a new problem. With input from the class, create a new graphic organizer and then write a passage based on the information within it. 4. Provide students with example problems to write about. Have them practice creating graphic organizers and then writing a passage from the information within it.
Assessment	*Teachers used assessments to check whether students had met the objectives.* To assess the first objective: 1. Have students read three cause/effect and three problem/solution passages and put

ideas into graphic organizers.
2. Check the graphic organizers to make sure they include the appropriate structure-related information without extraneous details.

To assess the 2nd objective:
1. Provide students with a few examples of problems to write about.
2. Have students select a topic, identify resources and read information on their topic.
3. Have students create a graphic organizer and then write a passage from it.
4. Use a rubric to score the writing for communicative clarity.

Reading Material	Passages were taken directly from textbooks to make it easier for students to adapt the strategies to future expository text.

More to Explore

ITSS: Intelligent Tutoring for Structure Strategy- https://itss.psu.edu/itss/
- Learn about a web-based intelligent tutoring system that teaches students to use the text structure strategy.
- Developed by Dr. Wijekumar, professor of Teaching, Learning, and Culture at Texas A&M.

A Structure Strategy: Problem and Solution- https://www.youtube.com/watch?v=IkPKtZlxrjI
- Watch a You-Tube video from Dr. Wijekumar that describes how problem/solution and cause/effect text structures often appear within the same expository passage.

Navigation: E-Reading Worksheets- http://www.ereadingworksheets.com/text-structure/
- Access materials specifically designed to give students practice identifying the text structure of expository passages and then putting the information into graphic organizers.

Looking for additional expository reading material for your students? Check out the following free sites:
- Newsela- https://newsela.com
- Smithsonian: TweenTribune- http://microsite.smithsonianmag.com/tweentribune/

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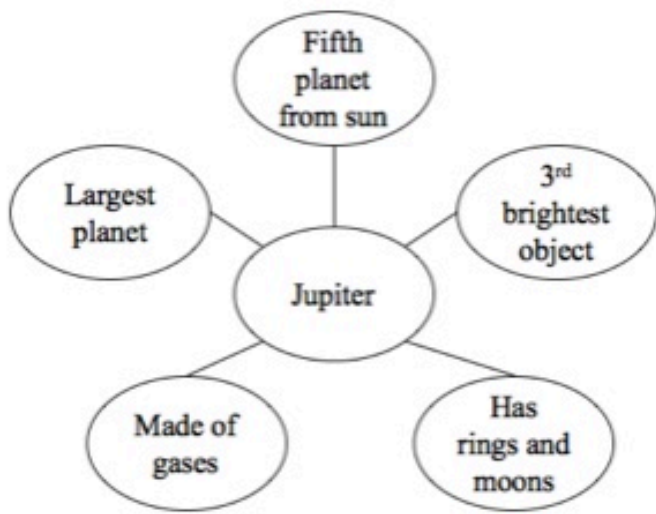
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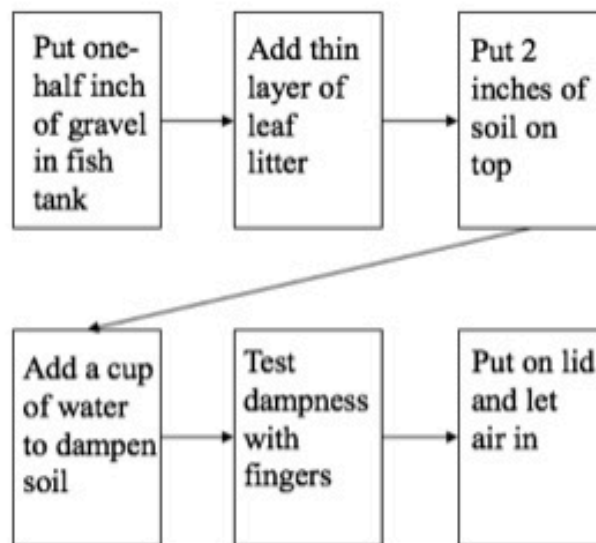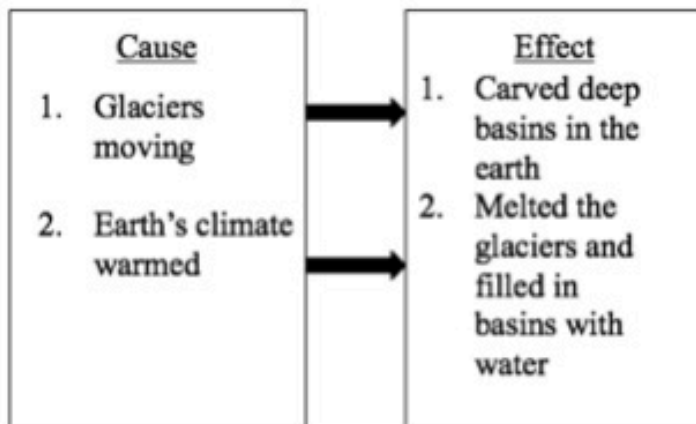
Topical Net for Jupiter

- Fifth planet from sun
- Largest planet
- 3rd brightest object
- Jupiter
- Made of gases
- Has rings and moons

Topical Net for Jupiter

Categories	Topics	
	Horses	Oxen
Speed	Horses faster	
Strength		Oxen stronger
Cost		Oxen less expensive
Food	Grain and hay	Grass

Matrix for Comparing and Contrasting the Benefits of Using Horses vs. Oxen for Pioneers

Put one-half inch of gravel in fish tank	→	Add thin layer of leaf litter	→	Put 2 inches of soil on top

Add a cup of water to dampen soil	→	Test dampness with fingers	→	Put on lid and let air in

Linear String for Making a Terrarium

Cause	Effect
1. Glaciers moving 2. Earth's climate warmed	1. Carved deep basins in the earth 2. Melted the glaciers and filled in basins with water

Cause/Effect Organizer about the Formation of the Great Lakes

Problem	(Potential) Solutions
Static electricity can cause clothes to cling to your body or stick together.	• Use dryer sheets • Use a spray • Let clothes air dry
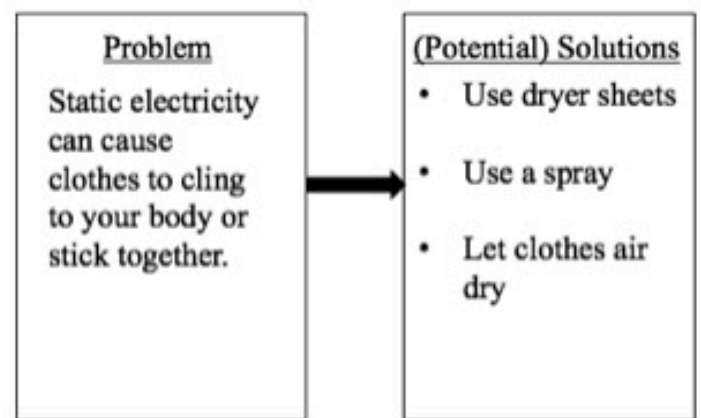
Problem/Solution Organizer about Static Cling

Figure 1. Graphic Organizers for each Text Structure
Note. Each one of these text structures has multiple variations. One example is provided of each for illustrative purposes.

Plants and animals are both made of cells. Their cells are similar. Cells of plants and animals both have a nucleus in the center. They both also have cytoplasm, a jelly-like substance around the nucleus. In contrast, plant and animal cells have some differences. Plant cells are rectangular. They also have cell walls. Animal cells have a rounded shape. They do not have cell walls.

Structure: C/C Topic: Plant cells vs. animal cells
Similarities▼
Nucleus - in center
Cytoplasm - jelly-like substance
Differences▼
Shape - plants rectangular vs. animals round
Cell walls - plants have vs. animals don't have

Figure 2. Example of a compare/contrast note frame. Adapted from Bohaty et al. (2016).