

Using Content Enhancement Graphic Organizers to Support Essay Writing:

Compare-and-Contrast, Cause-and-Effect, Main Ideas, Argumentation and Critical Concepts

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OVERVIEW

Results of recent research will illustrate how students can use a Question Exploration Guide to write 5-paragraph essays according to 6-Trait Writing analysis guidelines.

Uses of the Cause-and-Effect Table, Concept Diagram, Concept Comparison Table, and Argumentation will also be considered as scaffolds for writing essays and other responses.

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CONTENT ENHANCEMENT ROUTINES AS A TIE TO COMMON CORE WRITING STANDARDS

1. Write arguments to support claims using reasoning and evidence.
2. Organize a topic, idea or concept, and explore connections (e.g., cause-and-effect, compare and contrast, concept, main idea, or argument).
3. Explore and explain the topic, idea or concept with well-chosen facts, definitions, details, prior knowledge, and examples.
4. Provide a synthesizing or evaluating statement that follows from and supports an explanation.

Question Exploration as Support for Written Responses

- Results of research will illustrate how students can use a Question Exploration Guide to write 5-paragraph essays according to 6-Trait Writing analysis guidelines.

This study was published in *Reading and Writing Quarterly*, 25:271-289, 2009
(Effectiveness of Question Exploration to Enhance Student Written Expression of Content Knowledge and Comprehension).

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Text Reference: Chapter 7, pages 104-114 Name: _____
 Course: _____ Title: Our Environment
 Question: _____

1. What is the critical question?
How do problems with the ozone layer teach us about human effects on our environment?

2. What are the key terms and explanation?
 What is our environment? All the things surrounding us (air, land, living things)
 What is the ozone layer? Invisible layer of gas that shields us from UV radiation
 What is UV? Ultraviolet radiation, or harmful rays from the sun

3. What are the main questions and answers?
 What has happened in the past? Chlorofluorocarbons-chemicals with chlorine
 In the past, a protective ozone layer was formed when UV rays hit the oxygen in the air around the earth.

4. What has caused PROBLEMS?
 The problem is that the ozone layer around the earth is being destroyed by CFCs (products cleaning products, foam containers, refrigerator coolants and spray cans).

5. What are the EFFECTS?
 The effects include:
 1. physical harm to humans (skin cancer and cataracts)
 2. environmental harm (crops and ocean plants)
 3. change in weather patterns
 4. greenhouse warming of the earth

6. What are SOLUTIONS?
 Solutions include:
 1. voluntary cutbacks of CFC products
 2. alternative products
 3. world conferences to cut CFCs

7. Evaluate and use the main idea.
 How can we explore the issue?
 Some people still don't think it's a problem.
 Experiments with balloons show that oxygen can be changed to ozone.
 We can research on which products cause damage to ozone layer.
 An individual can decide to do research on which products cause damage to ozone layer.

8. Add insights to conclusion in Paragraph 6 with generalizations.

People can harm the environment without intending to or even believing it.

Figure 1. Question Exploration Guide for the question, "How do problems with the ozone layer teach us about human effects on our environment?"

Human Effects on the Ozone Layer

Problems with ozone can teach us about human effects on our environment. The ozone layer is an invisible layer of gas that shields us from UV radiation. UV radiation is ultraviolet radiation, or rays of the sun that can harm living things. One problem today is that the protective ozone layer around the earth is being destroyed (PROBLEM).

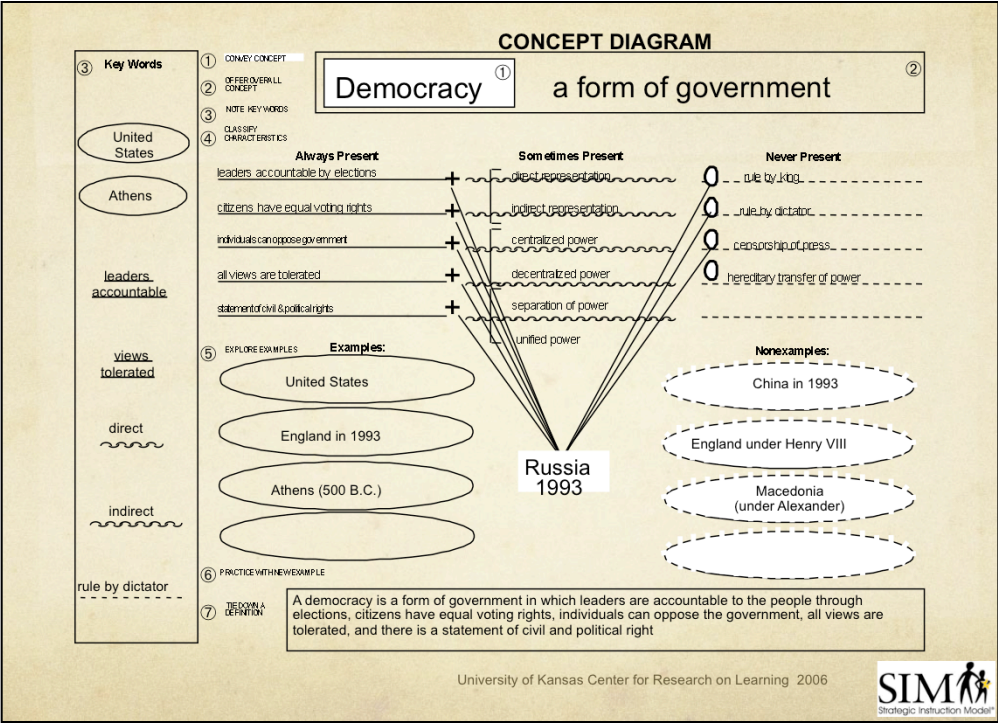
In the past, the ozone layer protected the earth from UV rays. Now, the ozone layer is being destroyed by CFCs or chlorofluorocarbons, which are chemicals we may not even know about in products we use (CAUSE). For example, CFCs are used to manufacture common cleaning products, foam plastic containers, refrigerator coolants and spray cans we use everyday.

There are several effects of this destruction (EFFECTS). First, physical harm such as skin cancer and cataracts can happen. Second, there can be environmental damage to crops and also to plants in the ocean food chain. Third, weather patterns can be disrupted. In addition, the Earth can be heating up; this is also called the greenhouse effect.

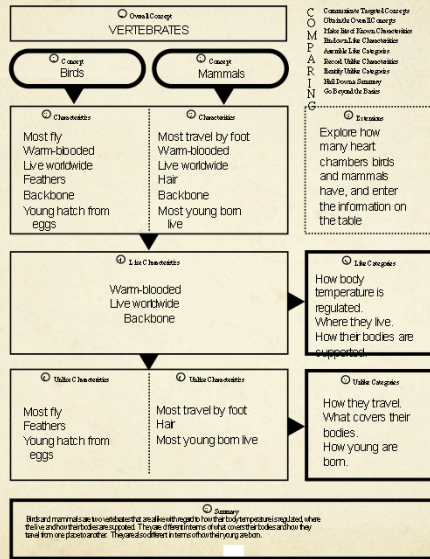
Several solutions have been tried (SOLUTIONS). First, there have been voluntary cutbacks on the use of products containing CFCs. For example, Macdonald's stopped using foam containers. Second, alternatives are being explored, such as HCFCs. And third, world conferences are being held, and agreements are being made to find solutions and limit the use of CFCs. However, some people still don't think it's a problem.

Therefore, people can harm the environment without intending to harm it, or even believing it is happening (GENERAL MAIN IDEA STATEMENT). However, they can learn about the situation by conducting experiments such as with balloons to show that oxygen can be changed to ozone, or doing research on products that cause damage to the ozone layer.

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Comparison Table



Name: _____ Date: _____
Unit: _____ Topic: _____

Cause-and-Effect Guide

1 Restated question:
What causes farmers in South America to slash and burn the tropical rain forest, and what is the effect of that practice?

2 Key Terms:
Tropical rain forest: dense forest, usually in hot, rainy area
Habitat: natural home

4 Causes & Connections:

People need land for growing crops and raising cattle.

Leading to →

3 Event & Background Information:

Slashing and burning the tropical rain forest

Forest trees are cut down (slashed)

Remaining forest foliage is burned

Ashes provide short-term nutrients for growing crops and grazing cattle

Resulting in

5 Effects & Connections:

Plowing and grazing cause soil erosion

↓
Land quickly loses all nutrients; plants and grass won't grow

↓
Land is abandoned, and new land has to be slashed and burned for growing more crops and grazing cattle

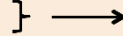
↓
Unique habitat for plants and animals is lost

6 Answer:
Farmers in South America slash and burn the tropical rain forest to obtain land for farming and cattle grazing. The land quickly becomes unusable, creating the need for slashing and burning more land. The practice destroys the habitat of many plants and animals.

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TOOL BOX: Take one of these shapes and drag to use in your organizer.
You can drag, resize and place these shapes however you'd like.



Verb label box

Figure 1: Argumentation & Evaluation Guide

Topic: _____ Name: _____
 Title: _____ Class: _____
 Source: _____ Date: _____

<p>1 What is the Claim, including any Qualifiers? Are there qualifiers? Yes/No. (If yes, underline them.) Drinking more than 3 colas a day may weaken bones in women.</p>	
<p>2 What Evidence is presented? In column 3, identify the type of evidence with the letter: Data (D), Fact (F), Opinion (O), Theory (T).</p> <p>For women or girls who drank 3 or more colas a day: Harvard study with 2,400 high school girls found less bone in those who drank over 3 sodas a day. D Another study of 2,500 women found the same. D Tufts Univ. study found 3% less density for women. D Phosphoric acid in colas interferes with ability to use calcium to build bones. T</p>	<p>3 What chain of reasoning (warrant) connects the evidence to the claim? In column 6, identify type of reasoning with the letter(s): for AUTHORITY (A), THEORY (T), or type of LOGIC: Analogy (AN), Correlation (C), Cause-Effect (CE), Generalization (G).</p> <p>Studies conducted by reputable institutions found that drinking 3 or more sodas a day caused women to have less bone density than those who didn't. A This cause-and-effect relationship is supported by the theory that phosphoric acid weakens bones. CE</p>
<p>4 Evaluate the quality of the evidence as poor, average or good. Explain your evaluation.</p> <p>Reliable Good – there were different studies. Valid Good – they studied women and drew conclusions Objective (no bias) Good – reputable institutions Methodology Good – many subjects</p>	<p>7 Evaluate the quality of the chain of reasoning as poor, average or good. Explain your evaluation.</p> <p>Strength of Authority Good – reputable Institutions Application of Theory Good – accepted theory Type of Logic Good – cause and effect logic</p>
<p>8 What are your concerns about the believability of the claim? (your counterarguments, rebuttals or new questions?) The claim seems believable, but I would like more studies with men.</p>	
<p>9 Accept, reject, or withhold judgment about the claim. Explain your decision. I accept the claim because good studies by reputable institutions found a cause-and-effect relationship between drinking soda and bone loss in women.</p>	

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Figure 1: Sample Argumentation and Evaluation Guide