

# Engaging Middle Level Students with Science Text: Promoting Literacy through Exemplary Trade Books

A Strategies Workshop for Practitioners

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## Alphaboxes

Alphaboxes (Hoyt, 1999) is a strategy used to reflect on a unit after reading. This strategy requires students to think of words/concepts from the unit for each letter of the alphabet and record the words in the appropriate boxes on the form. Students need to justify their word selections, thus providing rich opportunities for class discussion and vocabulary extension. L'Allier and Elish-Piper (2007) have identified additional ways to use alphaboxes in the classroom: as a culminating activity, as a prereading activity to determine prior knowledge, and as a bulletin board theme for collecting words during a lengthy unit of study.

The Alphaboxes format created by Hoyt (1999) includes the boxes in a form similar to that shown below.

A	B	C	D
E	F	G	H
I	J	K	L
M	N	O	P
Q	R	S	T
U	V	W	XYZ

An extension of alphaboxes used in my classroom is a poster incorporating the boxes around the outside of the paper with two larger sections in the middle of the poster: one section for a summary of the learning and one section for an illustration and caption. See the example below.

A	B	C	D	E	F	G	H	I	J	
Z	Summary					Illustration with caption				K
Y										L
X										M
W	V	U	T	S	R	Q	P	O	N	

## Anticipation/Reaction Guide

Herber (1978) introduced the idea of reasoning guides to help students learn the reasoning process. Johns and Berglund (2002) adapted the idea of reasoning guides and developed anticipation/reaction guides. For this strategy, the teacher identifies concepts from the text and creates a statement for each concept that will either challenge or support the students' preconceived ideas about the concept. The students respond to each statement **before** reading the text. While reading, students look for the anticipated concepts and compare them with their preconceived ideas. Students complete the reaction portion of the guide by responding again to the concepts with information gained from the text. Group discussion about the student anticipations can clarify ideas or arouse interest before the students read or be used to discuss new learning after the reading.

### Directions:

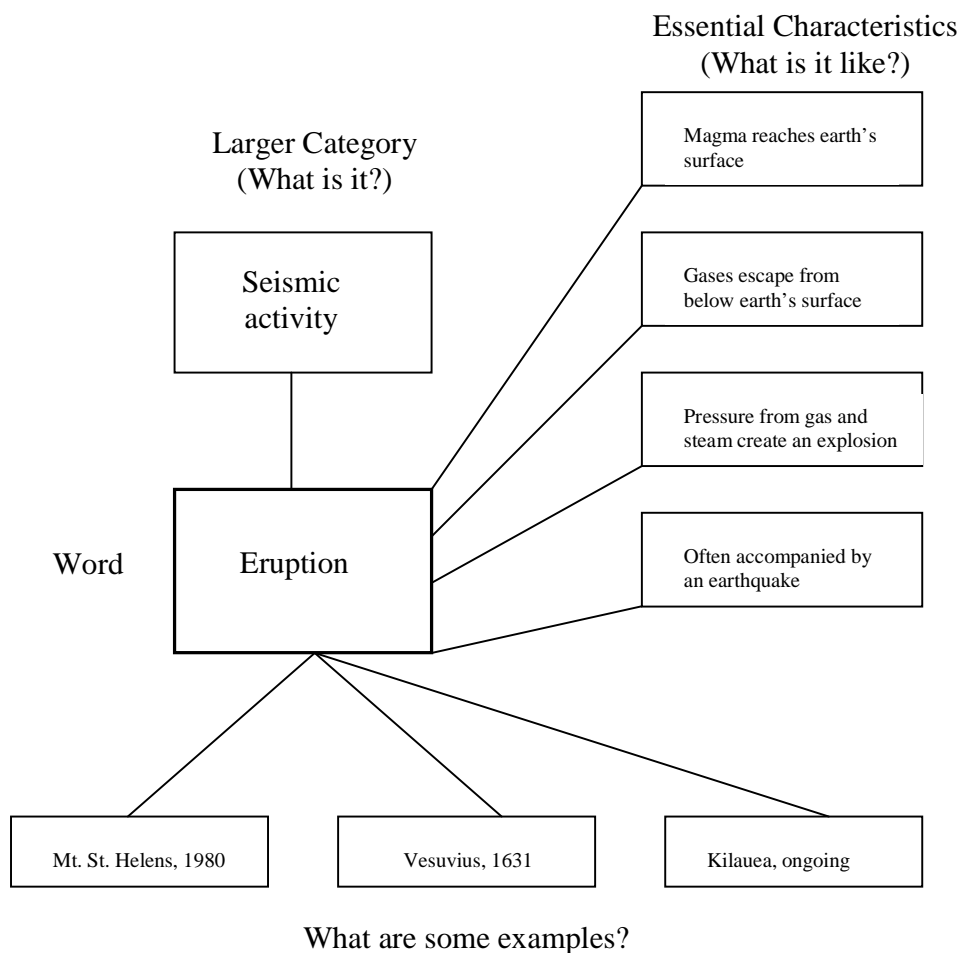
Before you read the text on comets, mark each statement true or false on the blank to the left of each statement. As you read the text, mark the blanks on the right side true or false, based on what the author says. If any statements are false, make corrections to the statements to make them true.

What I think		What the author says
_____	1. Historically, the appearance of a comet was perceived by some people to be the precursor of a terrible disaster, such as a plague or war.	_____
_____	2. Edmond Halley concluded that the reappearance of a single comet was responsible for comet sightings that occurred at 76-year intervals.	_____
_____	3. Aristotle believed that comets orbited the sun.	_____
_____	4. Most comets can be seen with the unaided eye.	_____
_____	5. Comets travel in space between the earth and the moon.	_____

## Concept of Definition Word Map

The concept of definition word map is a key to improving student vocabulary. Introduced by Schwartz and Raphael (1985) and revisited by Johns and Berglund (2002), this strategy asks students to create a graphic representation of a word definition. It requires students to move beyond a simple definition to include multiple components: the word, the larger category the word belongs to, essential characteristics of the word, and examples. This strategy works best with critical concepts that are necessary for understanding the content. It is not a strategy for use with smaller ideas or simple definitions.

The word to be defined is placed in the middle box marked “Word.” In the box above the word, students need to write a larger category that fits the word. Essential characteristics, which can also be described as qualities or descriptors, are put in the boxes on the right side of the diagram. Finally, examples are included in the bottom row of boxes. A completed diagram is provided below as an example.



## Vocabulary Self-Selection

The Vocabulary Self-Selection (VSS) strategy is well known and frequently included in content area textbooks (Harmon, Hedrick, Wood, & Gress, 2005). It supports the idea of student choice in learning. The strategy is simple to implement; students are asked to select words they think are important for the whole class to learn. The students then share where they found their words, the definitions, and their rationale for why everyone should know their selected words. As students share their words, the teacher scaffolds understanding, providing clarification and other support as needed. Once the entire class has shared their words, the class comes to consensus on which of the many words presented will be included on the final class list of vocabulary words. Once the words are selected, then other vocabulary strategies must be used to help students learn the words and make connections between concepts.

## Save the Last Word for Me

This strategy based on Short, Harste, and Burke (1996) and adapted by Johns and Berglund (2002) invites students to select sections of the text that are significant to them. The student selects text that is particularly interesting or that stimulates some kind of reaction—positive or negative. Students read the text independently and take note of three or more small sections from the text that cause a question, connection, or other reaction. Students record three of their text quotes and their responses to them on small note cards. When all students are finished with their responses, they meet in small groups to share their quotes.

The group sharing protocol is important for this strategy.

- One person shares her first text quote, but not her response to the quote.
- Group members take turns commenting about the quote until all members have taken a turn.
- The person who shared the quote then completes the commentary by sharing her response to the quote. Thus, the person who shared the quote can have “the last word.”
- Next, another member of the group reads his quote. The group follows the response protocol. Continue until all group members have shared their quotes and had the last word for each.

If providing note cards is not possible, a form similar to the example below can be distributed.

Quote One                      Page \_\_\_\_\_

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My response to the quote:

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## **Internet Sources for Science Content Area Trade Books**

<http://www.nsta.org/ostbc>

Notable science trade books for children put together by the National Science Teachers Association

<http://www.ncte.org/elem/awards/orbispictus>

This website gives information about the Orbis Pictus award for nonfiction children's literature given annually by the National Council of Teachers of English.

<http://www.dawcl.com/awards.html>

This website is the Database of Award-Winning Children's Literature. This searchable database allows the user to select books by genre, award, year of publication, and many other variables.

[http://www.reading.org/association/awards/childrens\\_ira.html](http://www.reading.org/association/awards/childrens_ira.html)

This is the children's book award site for the International Reading Association.

Content Area Trade Book Evaluation Form

Book Title \_\_\_\_\_

Author \_\_\_\_\_

Publisher \_\_\_\_\_

Date of Publication \_\_\_\_\_ ISBN \_\_\_\_\_

Subject Area \_\_\_\_\_

Intended age or grade level \_\_\_\_\_

	Yes	No	NA
<b>Visual Presentation</b>			
Appealing cover art and illustrations			
Format appropriate for intended audience (font size, page layout, amount of text per page)			
Illustrations/Photos credited and captioned			
<b>Writing Style and Organization</b>			
Vivid, clear language and writing style maintain reader interest			
Concept load is appropriate for the intended audience			
Background knowledge provided as needed			
Specialized or technical vocabulary defined in context			
Specialized or technical vocabulary clarified with pictures, illustrations, or examples			
Major ideas are easily identified and supported with details			
Themes logically connected throughout the text			
Avoids stereotypes in text and illustrations			
<b>Credibility of Content</b>			
Up-to-date and accurate information (recent publishing date, information matches current knowledge in the field, information can be verified using other sources)			
References cited either in the text or at the end			
Reference aids provided as necessary (table of contents, index, glossary, headings and/or subheadings, charts, graphs, maps)			
Author expertise or experience is noted			

Notes about the book:

Recommended?    Yes    No

# Alphaboxes

Name \_\_\_\_\_

Date \_\_\_\_\_

Reading \_\_\_\_\_

A	B	C	D
E	F	G	H
I	J	K	L
M	N	O	P
Q	R	S	T
U	V	W	XYZ

# ALPHABOXES

Name \_\_\_\_\_

Date \_\_\_\_\_

Reading \_\_\_\_\_

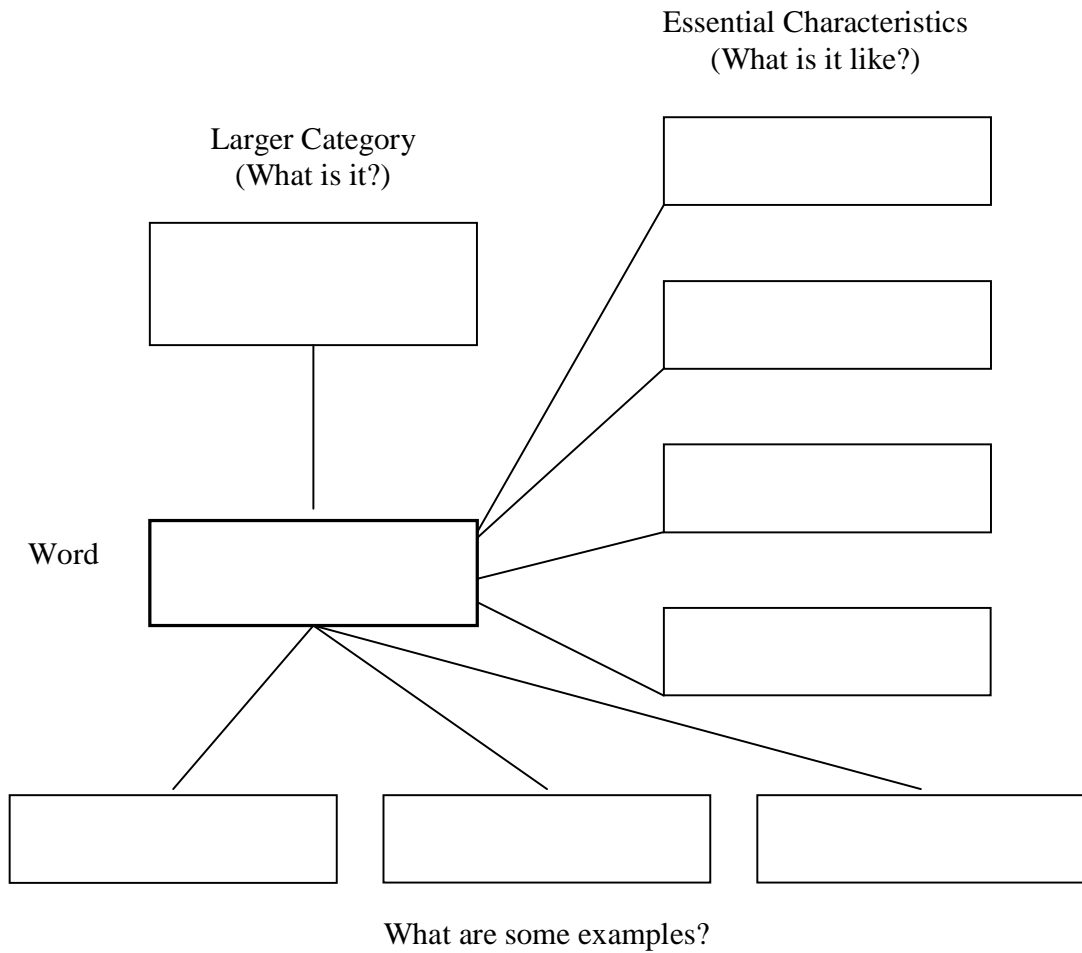
A	B	C	D	E	F	G	H	I	J
Z	Summary				Illustration with caption				K
Y									L
X									M
W	V	U	T	S	R	Q	P	O	N



# Concept of Definition Map

Name \_\_\_\_\_

Date \_\_\_\_\_



## Save the Last Word for Me

Name \_\_\_\_\_ Date \_\_\_\_\_

Reading \_\_\_\_\_

Quote One Page \_\_\_\_\_

\_\_\_\_\_

My response to the quote:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Quote Two Page \_\_\_\_\_

\_\_\_\_\_

My response to the quote:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Quote Three Page \_\_\_\_\_

\_\_\_\_\_

My response to the quote:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## References

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