

“Hands On” Doesn’t Mean “Minds Off”: Using Foldables™ to Promote Content Learning



Nancy Frey, Ph.D.
San Diego State University

How often do you do this?

- Everybody got that?
- Any questions?
- Does that make sense?
- OK?



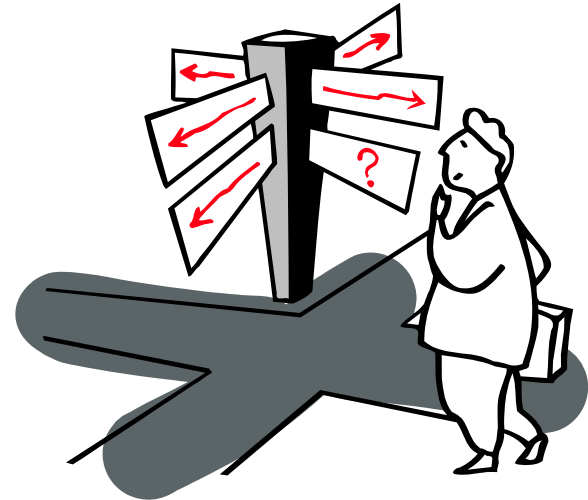
Too often, we accept the answers of a few to serve as a check for understanding of all students.

Checking for Understanding is...

- Formative
- Systematic
- Planned

It is not...

- Left until the end of the unit



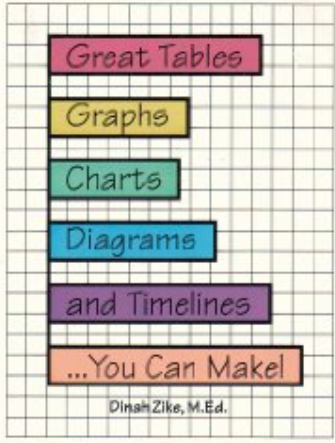
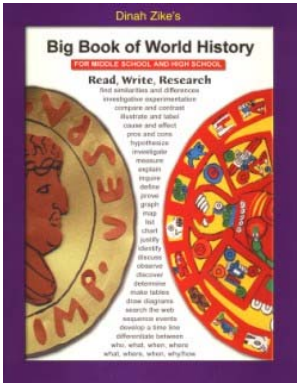
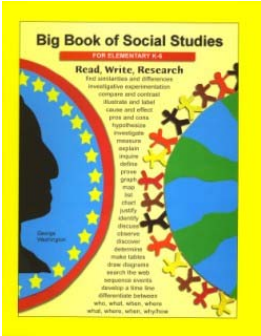
What Practices Make A Difference?



National Research Council (2005) identified factors critical to teaching and learning Mathematics, Science, and History:

- *Understand initial understandings and anticipate misconceptions*
- *Develop solid foundation of factual knowledge*
- *Teach for metacognition so they can be active learners*

Foldables™ by Dinah Zike



www.dinah.com



Let's Make a Foldable™

Two-tab foldable: Good for lists

- Applications
- My Ideas

QuickTime™ and a
decompressor
are needed to see this picture.

List causes

• Explain the positive and negative effects of the Industrial Revolution...

Effects
• The Industrial Revolution

CAUSES


EFFECTS


BIOLUMINESCENCE

Causes


Effects

The Suffragist Movement

Foldables™ in Geography

QuickTime™ and a
decompressor
are needed to see this picture.

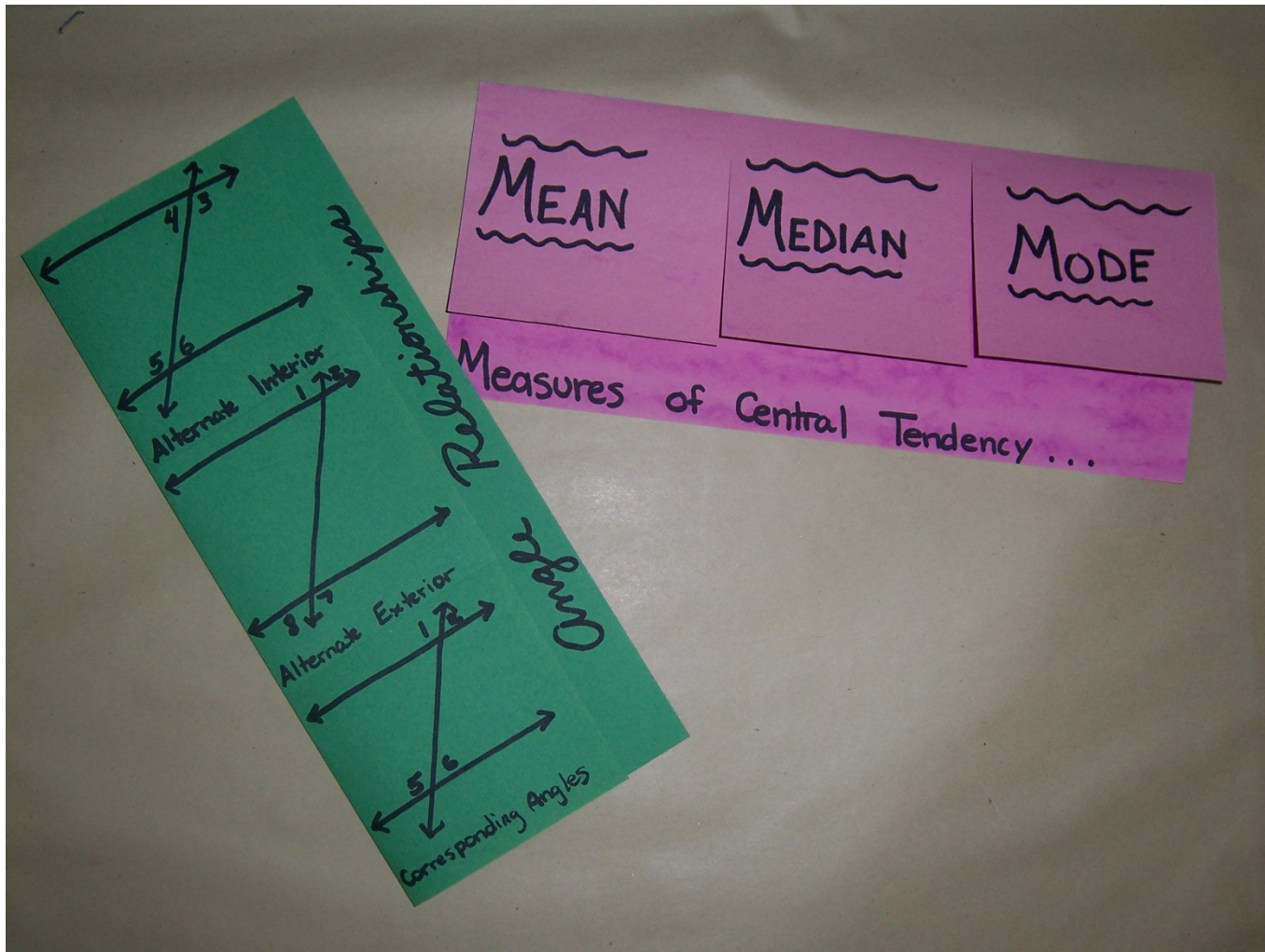
Foldables™ in Social Studies

QuickTime™ and a
decompressor
are needed to see this picture.

Foldables™ in U.S. History

QuickTime™ and a
decompressor
are needed to see this picture.

Foldables™ in Math



Using a Foldable™ to Support Your Learning

Increase Instructional

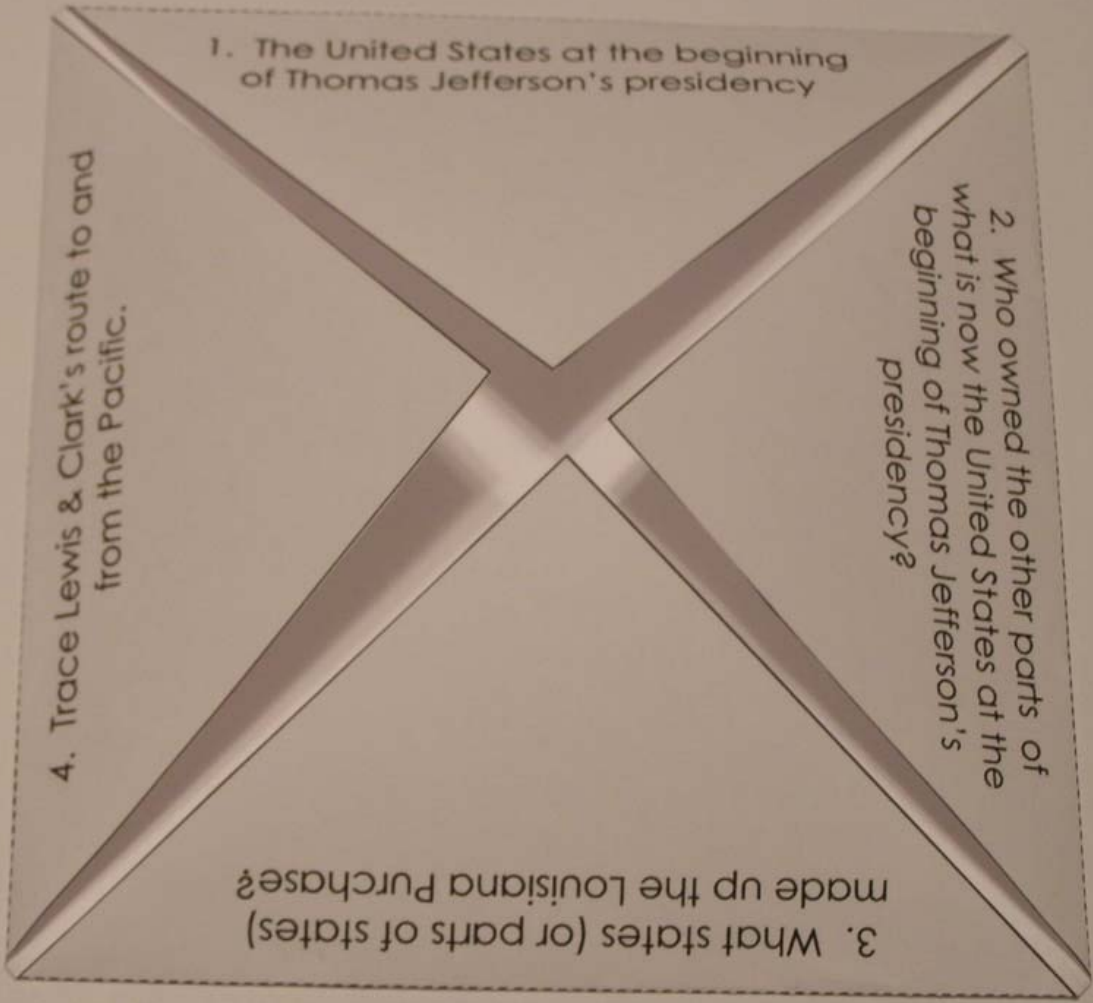


Let's Make a Foldable™

Envelope fold: Good for 4 non-sequenced concepts

- Focus Lesson
- Guided Instruction
- Collaborative Learning
- Independent Learning





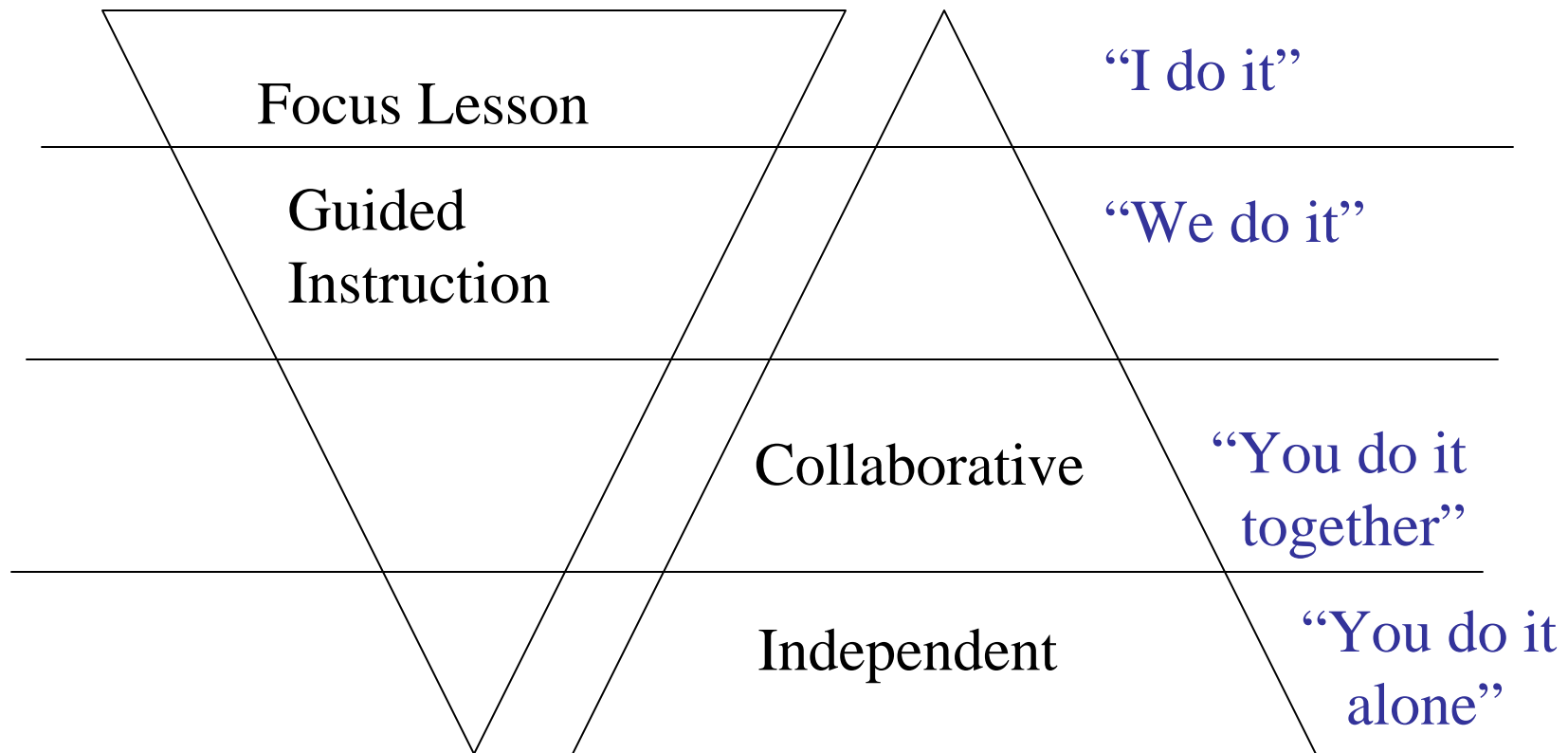
1. The United States at the beginning of Thomas Jefferson's presidency

2. Who owned the other parts of what is now the United States at the beginning of Thomas Jefferson's presidency?

3. What states (or parts of states) made up the Louisiana Purchase?

4. Trace Lewis & Clark's route to and from the Pacific.

TEACHER RESPONSIBILITY



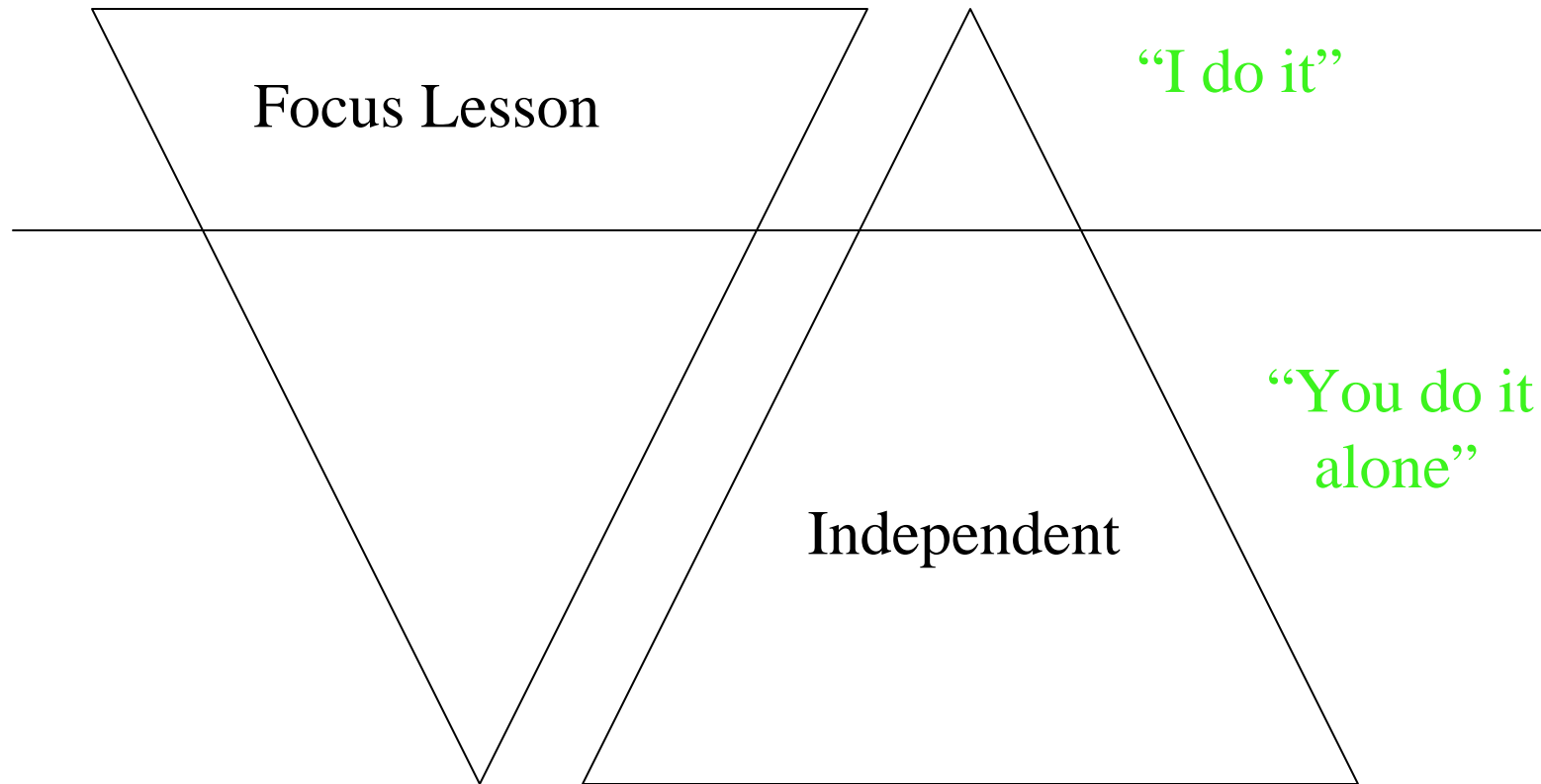
STUDENT RESPONSIBILITY

A Structure for Instruction that Works

(c) Frey & Fisher, 2008

In some classrooms ...

TEACHER RESPONSIBILITY

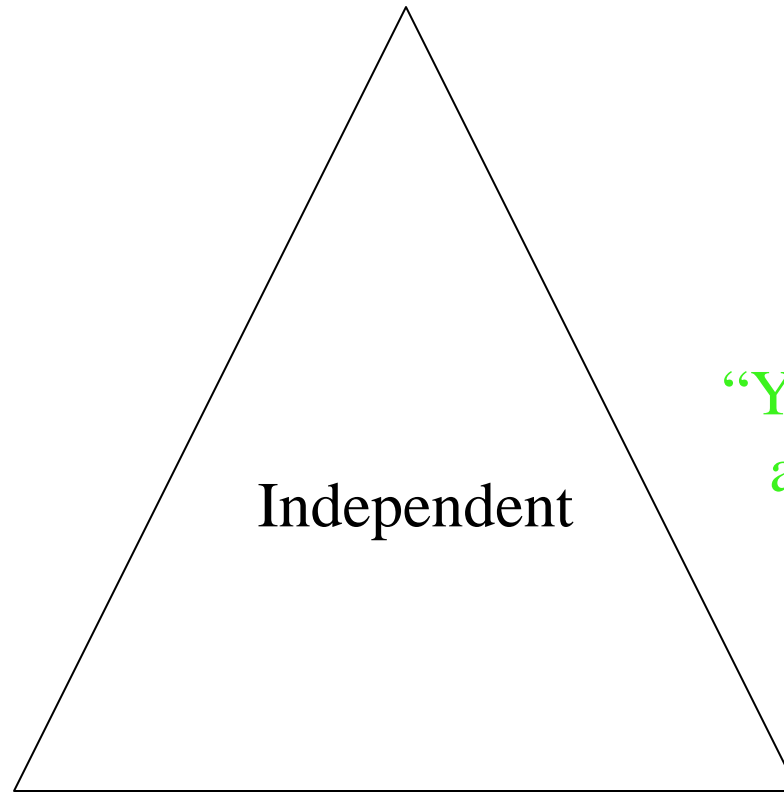


STUDENT RESPONSIBILITY

(c) Frey & Fisher, 2008

In the worst classrooms ...

TEACHER RESPONSIBILITY



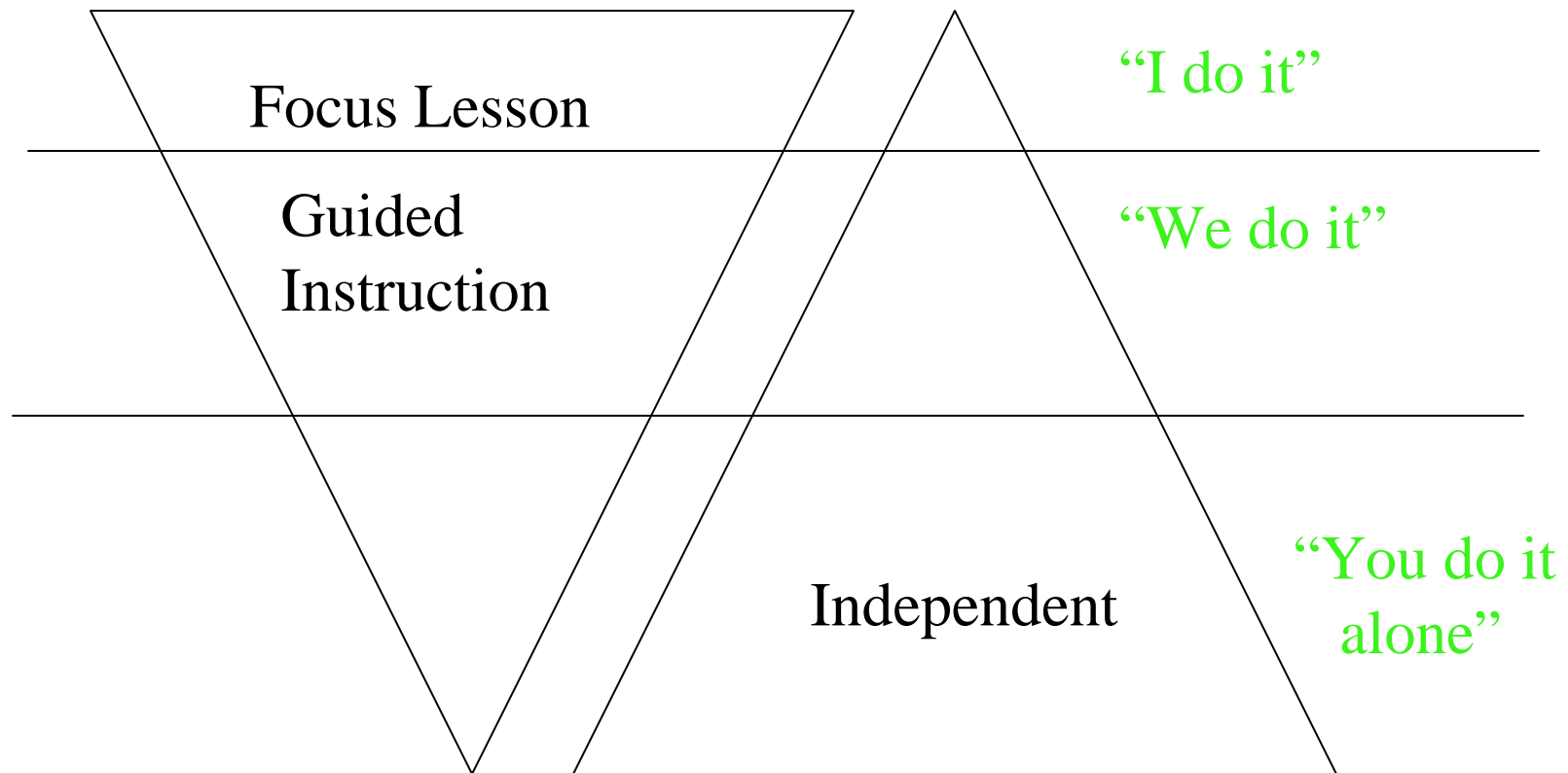
“You do it
alone”

STUDENT RESPONSIBILITY

(c) Frey & Fisher, 2008

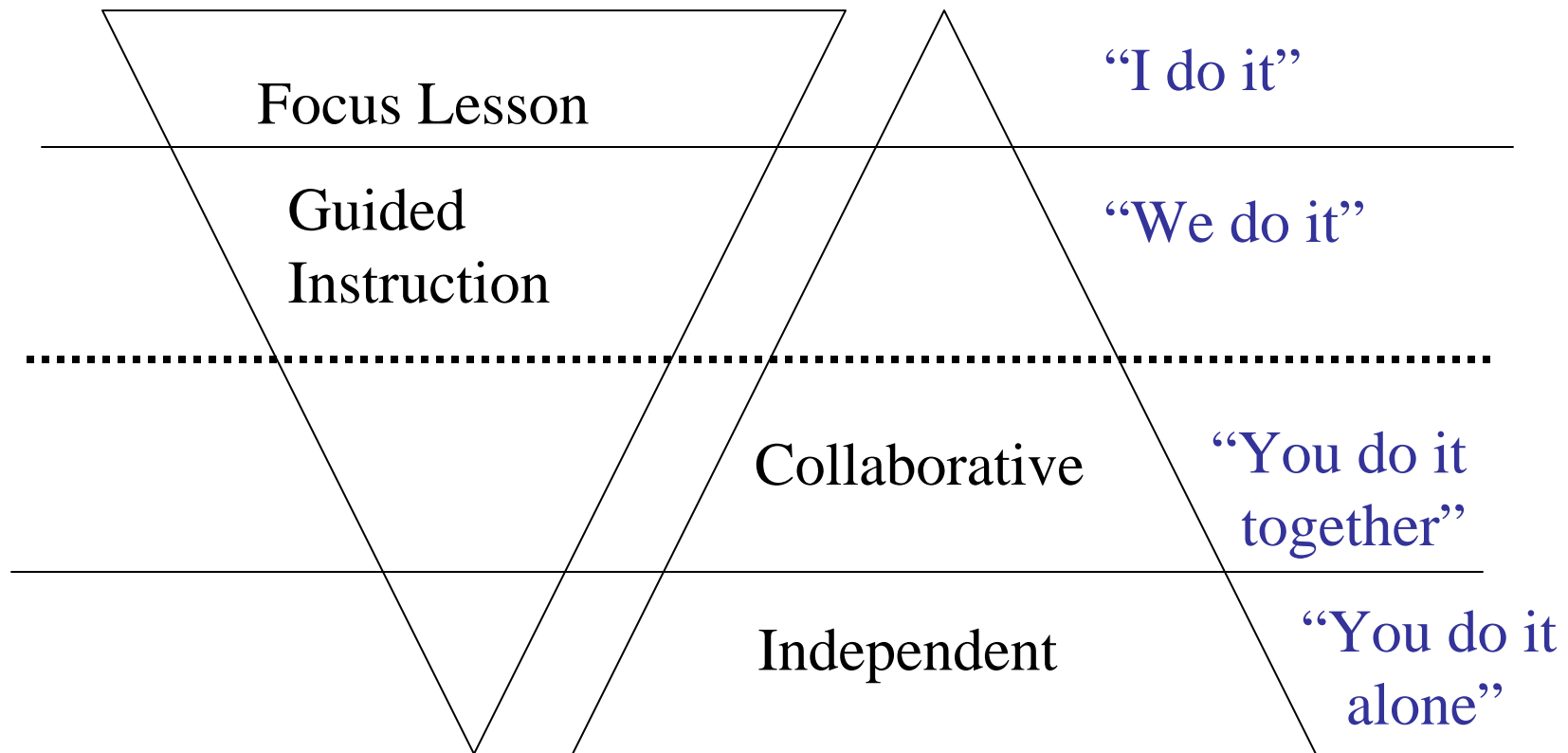
The “good enough” classroom

TEACHER RESPONSIBILITY



STUDENT RESPONSIBILITY

TEACHER RESPONSIBILITY



STUDENT RESPONSIBILITY

A Structure for Instruction that Works

(c) Frey & Fisher, 2008

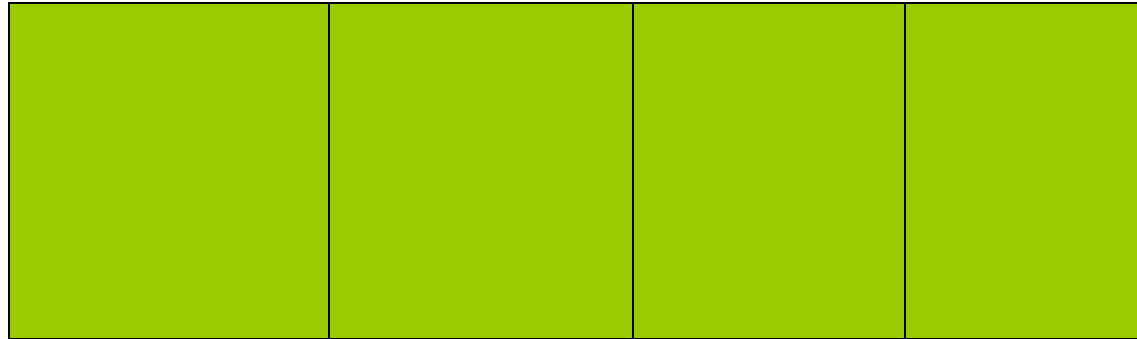
Using a Foldable™ to Support Your Learning

Model Reading Comprehension

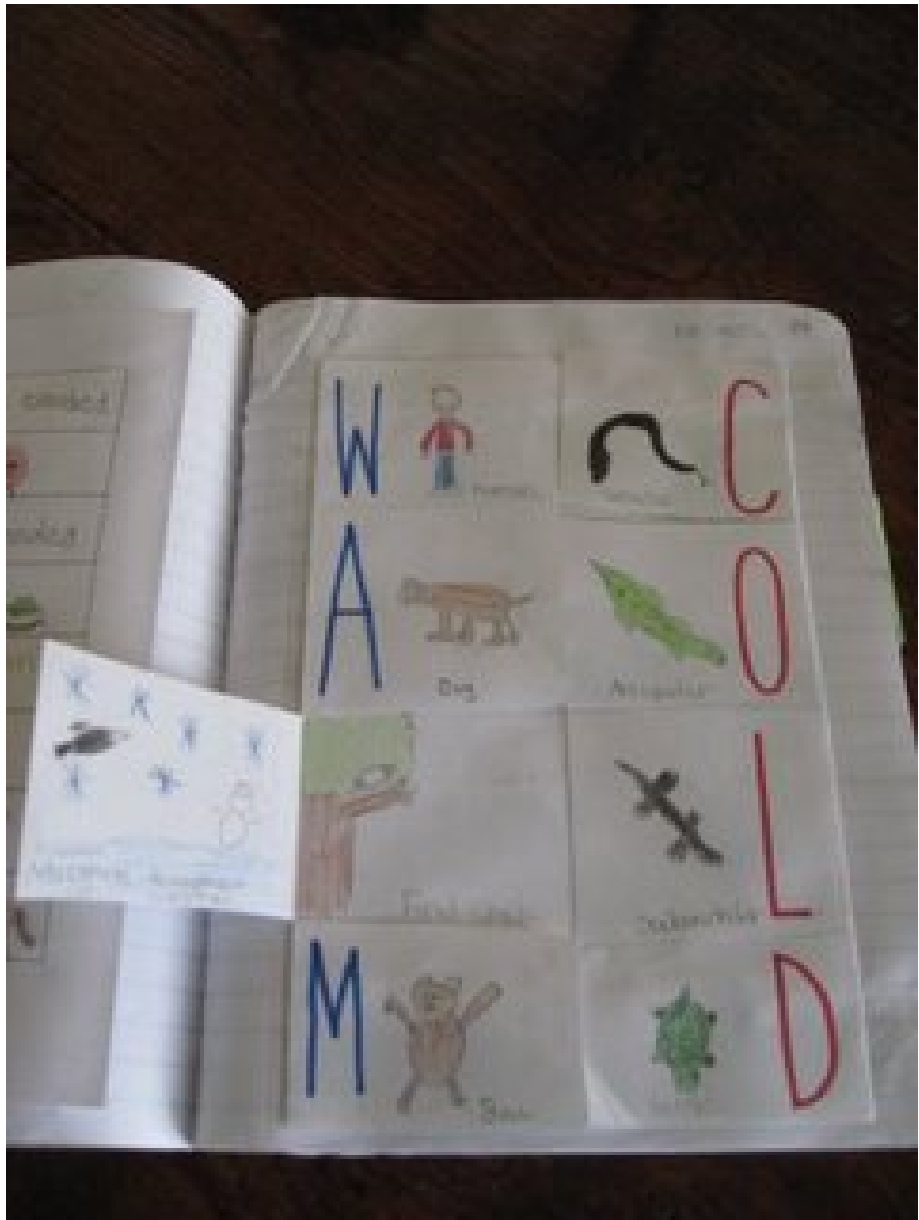


Let's Make a Foldable™

4-tab: When you need a sequence



- *Reading comprehension*
- *Word solving*
- *Text structures*
- *Text features*



W



C

A



Dog



Leaf

O

M



Tree



Lizard

L

M



Bear



D



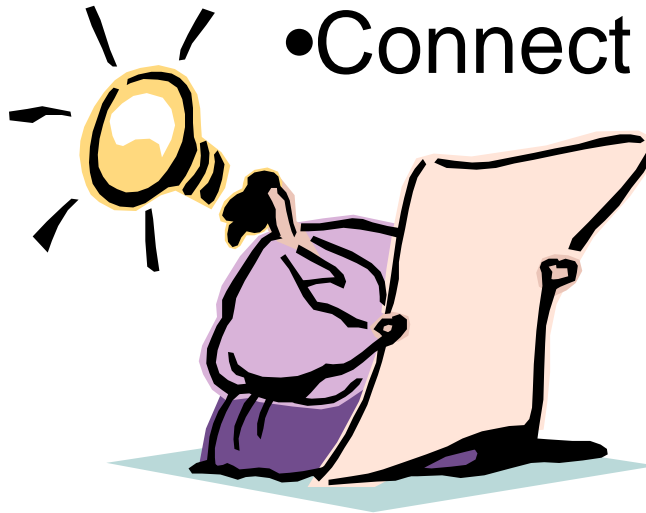
Modeling

- Why?
 - Humans mimic or imitate
 - Students need examples of the type of thinking required
 - Facilitates the use of academic language

QuickTime™ and a
TIFF (Uncompressed) decompressor
are needed to see this picture.

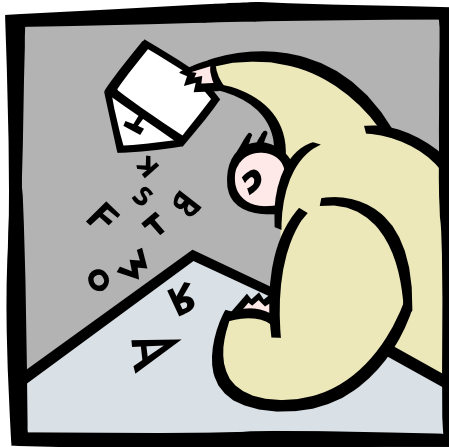
Modeling Comprehension

- Inference
- Summarize
- Predict
- Clarify
- Question
- Visualize
- Monitor
- Synthesize
- Evaluate
- Connect



Word Solving

- Context clues
- Word parts (prefix, suffix, root, base, cognates)
- Resources (others, Internet, dictionary)



Using Text Structure

- *Informational Texts*
 - Problem/Solution, Compare/Contrast, Sequence, Cause/Effect, Description
- *Narrative Texts*
 - Story grammar (plot, setting, character)
 - Dialogue
 - Literary devices



Using Text Features

- Headings
- Captions
- Illustrations
- Charts
- Graphs
- Bold words
- Table of contents
- Glossary
- Index
- Tables
- Margin notes
- Italicized words



The Nuts n' Bolts of Foldables™



Supplies Needed

- **Brightly colored paper**
- Glue (liquid, not stick)
- Scissors
- Samples: make these before attempting to do them in class
- Zipper bags for storage - Snip corners to get air out easily
- Copy of one of Dinah Zike's books is helpful



Let's Make a Foldable™

Venn Diagram: For comparing and contrasting

QuickTime™ and a
decompressor
are needed to see this picture.

Let's Make a Foldable™

***Flip Book: For
organizing
large amounts
of information***

QuickTime™ and a
decompressor
are needed to see this picture.

SHREDDERMAN

1 SECRET IDENTITY

by WENDELIN VAN DRAHEI

5th Grade Classroom - Cedar Valley - Around 2004

Determined, Annoyed Nolan - Disrespectful Bubba

Bubba Bixby bullies kids and noone stops him.

The story is told by Nolan.

The climax is when Nolan spreads the confetti that gets everyone to see his website about Bubba.

Bubba gets in trouble for bullying. Nolan starts to understand why Bubba is a bully.

Seek to understand people's perspective before judging and/or drawing conclusions

Pythagorean Theorem
 $a^2 + b^2 = c^2$

converse

triples

(square numbers) Radicals

Solving EQNS → examples

45-45-90 30-60-90

DISTANCE FORMULA

Return to CIRCLES

TRIG

GRAPHS

UNIT CIRCLE

ODE to Pythagoras

r	r^2
1	1
2	4
3	9
4	16
5	25

$\sqrt{12} = 2\sqrt{3}$
 $\sqrt{45} = 3\sqrt{5}$
 $\sqrt{20} = 2\sqrt{5}$
 $\sqrt{75} = 5\sqrt{3}$
 $\sqrt{18} = 3\sqrt{2}$
 $\sqrt{50} = 5\sqrt{2}$
 $\sqrt{27} = 3\sqrt{3}$
 $\sqrt{16} = 4$
 $\sqrt{9} = 3$
 $\sqrt{4} = 2$
 $\sqrt{1} = 1$



$r_4 = 2$
 $r_4 = 3$
 $r_{16} = 4$

IRRATIONAL NUMBERS
 Solving EQNS
 30-60-90
 45-45-90

Supplicating Radicals

DISTANCE FORMULA

Pythagorean Theorem
 UNIT CIRCLE

Let's Make a Foldable™

*Three-quarter book: For
displaying related categories of
information*

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decompressor
are needed to see this picture.

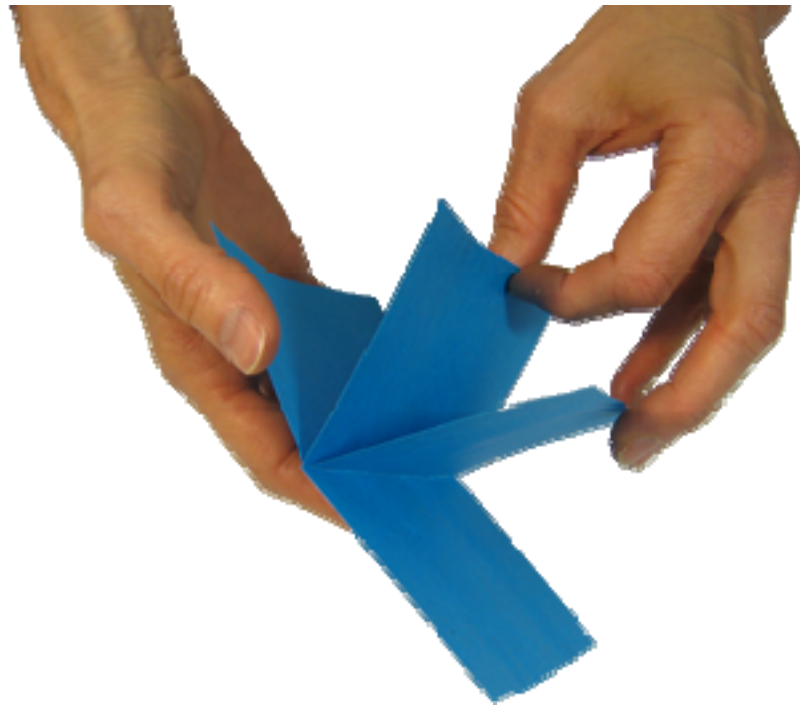
Let's Make a Foldable™

*Pocket book: For keeping notes
together*

QuickTime™ and a
decompressor
are needed to see this picture.

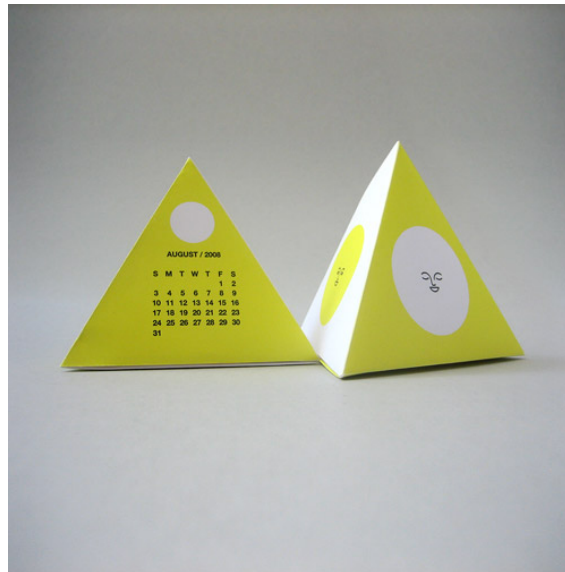
Let's Make a Foldable™

*Bound Book; Anytime you need
pages*



Let's Make a Foldable™

Pyramid: For displaying different aspects of a core concept





Tab Top Book



Our true purpose?

Our goal is not to find out *how smart children are*, but rather to find out *how our children are smart*.

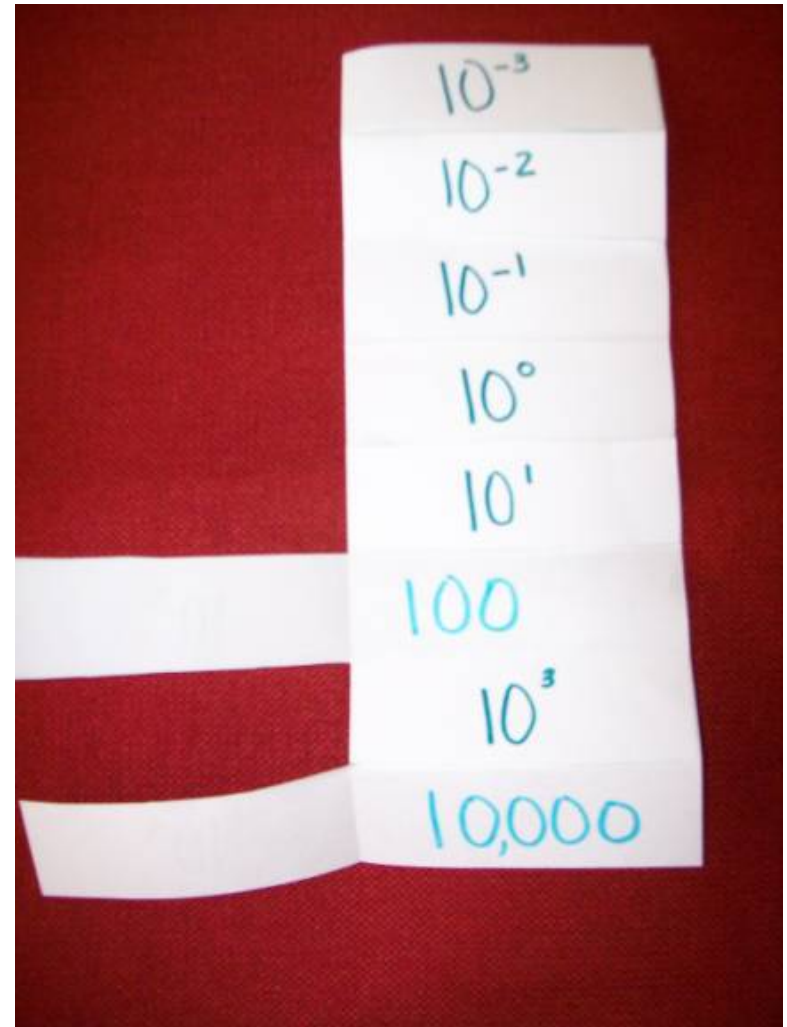


Let's Make a Foldable™

Zip Strip

*Good for vocabulary
terms and definitions*





Let's Make a Foldable™

- **Shutter Fold**



$(-, +)$

$(-3, 2)$

$(+, +)$

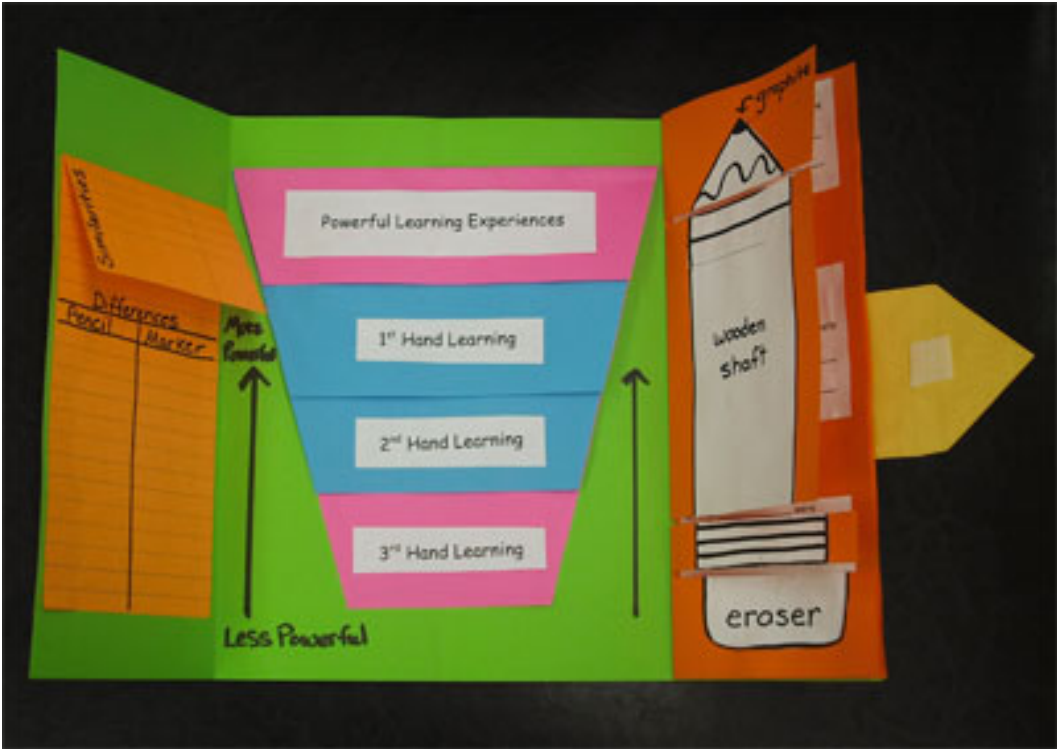
$(2, 4)$

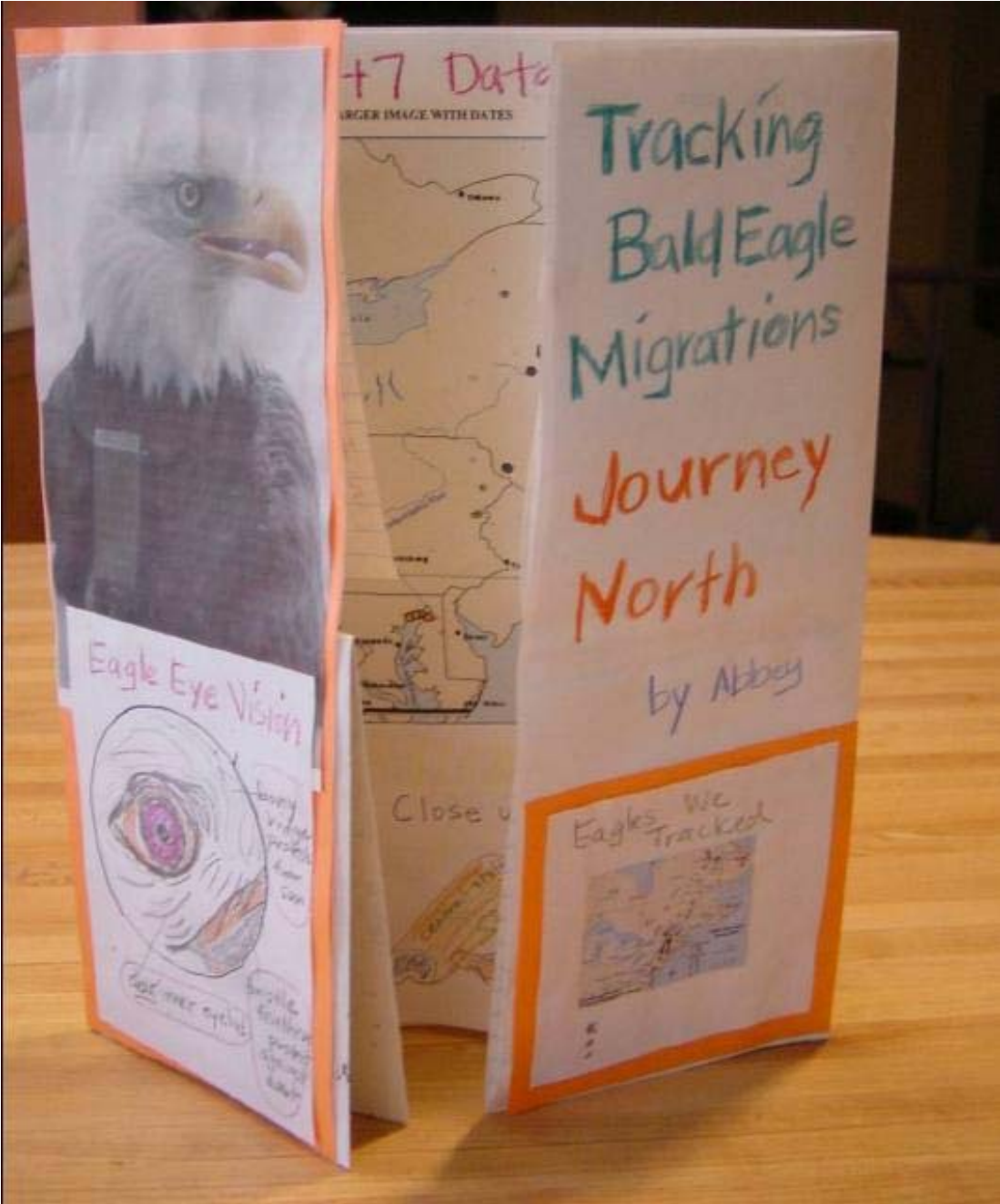
$(3, -2)$

Quadrant
III

$(2, -1)$

$(+, -)$





+7 Data
LARGER IMAGE WITH DATES



Tracking Bald Eagle Migrations

Journey North

by Abbey

Eagle Eye Vision



Close u
Eagles We Tracked

Eagles We Tracked



Snowflake Bentley Biography Top Pocket Foldable®

Layered Look Book Timeline Foldable®

Layer 1: Key events in the person's life, such as birth, death, initiating events, turning points, celebrations

Layer 2: Popular culture such fashion, music, entertainment, recreation, and famous people
Under the flap: what these things were, like for music, it could be classic, jazz, blues. For recreation, it could be attending theater, gathering around the hearth for a story, needlework, movies, dancing.

Layer 3: Key events (things that would make major headlines) in the region and the world during the person's lifetime including medical, technological and historic events, inventions and discoveries.
Under the flap: A brief description of the event, the where, and the why.

In the Pocket

Researched and collected information that provides additional background about locations, the accomplishments, photos, maps, primary source documents, terminology, etc.

Two Tab It's All in the Details: Using Clues to Make Inferences Foldable®

Understanding the Character

Tab 1: External Influences

Inside: Envelope Foldable®

Four tab topics:

- People
- Places
- Events
- Experiences

Under the Flap:

A paragraph describing how the person's environment helped to shape who the person became, what the person cared about and what the person's beliefs.

Two Tab It's All in the Details: Using Clues to Make Inferences Foldable®

Understanding the Character

Tab 2: Character Traits

Inside: Envelope Foldable®

Four tab topics:

- What person does (actions)
- What they say or think (words and thoughts)
- How they look (appearance)
- How others respond to them (how others react them, how others feel about them, what others do for them)

Under the Flap:

Using inferencing and drawing conclusions, compile a list of character traits of the person based on his/her actions, words and thoughts, appearance and the reaction of others.

The Life and Times of Snowflake Bentley

Year	Age	Event	Location
1869	1	Born	Andover, Massachusetts
1871	3	Family moves to Berlin, Massachusetts	Berlin, Massachusetts
1873	5	Attends school in Berlin	Berlin, Massachusetts
1875	7	Family moves to Andover, Massachusetts	Andover, Massachusetts
1877	9	Attends school in Andover	Andover, Massachusetts
1879	11	Family moves to Berlin, Massachusetts	Berlin, Massachusetts
1881	13	Attends school in Berlin	Berlin, Massachusetts
1883	15	Family moves to Andover, Massachusetts	Andover, Massachusetts
1885	17	Attends school in Andover	Andover, Massachusetts
1887	19	Family moves to Berlin, Massachusetts	Berlin, Massachusetts
1889	21	Attends school in Berlin	Berlin, Massachusetts
1891	23	Family moves to Andover, Massachusetts	Andover, Massachusetts
1893	25	Attends school in Andover	Andover, Massachusetts
1895	27	Family moves to Berlin, Massachusetts	Berlin, Massachusetts
1897	29	Attends school in Berlin	Berlin, Massachusetts
1899	31	Family moves to Andover, Massachusetts	Andover, Massachusetts
1901	33	Attends school in Andover	Andover, Massachusetts
1903	35	Family moves to Berlin, Massachusetts	Berlin, Massachusetts
1905	37	Attends school in Berlin	Berlin, Massachusetts
1907	39	Family moves to Andover, Massachusetts	Andover, Massachusetts
1909	41	Attends school in Andover	Andover, Massachusetts
1911	43	Family moves to Berlin, Massachusetts	Berlin, Massachusetts
1913	45	Attends school in Berlin	Berlin, Massachusetts
1915	47	Family moves to Andover, Massachusetts	Andover, Massachusetts
1917	49	Attends school in Andover	Andover, Massachusetts
1919	51	Family moves to Berlin, Massachusetts	Berlin, Massachusetts
1921	53	Attends school in Berlin	Berlin, Massachusetts
1923	55	Family moves to Andover, Massachusetts	Andover, Massachusetts
1925	57	Attends school in Andover	Andover, Massachusetts
1927	59	Family moves to Berlin, Massachusetts	Berlin, Massachusetts
1929	61	Attends school in Berlin	Berlin, Massachusetts
1931	63	Family moves to Andover, Massachusetts	Andover, Massachusetts
1933	65	Attends school in Andover	Andover, Massachusetts
1935	67	Family moves to Berlin, Massachusetts	Berlin, Massachusetts
1937	69	Attends school in Berlin	Berlin, Massachusetts
1939	71	Family moves to Andover, Massachusetts	Andover, Massachusetts
1941	73	Attends school in Andover	Andover, Massachusetts
1943	75	Family moves to Berlin, Massachusetts	Berlin, Massachusetts
1945	77	Attends school in Berlin	Berlin, Massachusetts
1947	79	Family moves to Andover, Massachusetts	Andover, Massachusetts
1949	81	Attends school in Andover	Andover, Massachusetts
1951	83	Family moves to Berlin, Massachusetts	Berlin, Massachusetts
1953	85	Attends school in Berlin	Berlin, Massachusetts
1955	87	Family moves to Andover, Massachusetts	Andover, Massachusetts
1957	89	Attends school in Andover	Andover, Massachusetts
1959	91	Family moves to Berlin, Massachusetts	Berlin, Massachusetts
1961	93	Attends school in Berlin	Berlin, Massachusetts
1963	95	Family moves to Andover, Massachusetts	Andover, Massachusetts
1965	97	Attends school in Andover	Andover, Massachusetts
1967	99	Family moves to Berlin, Massachusetts	Berlin, Massachusetts
1969	101	Attends school in Berlin	Berlin, Massachusetts
1971	103	Family moves to Andover, Massachusetts	Andover, Massachusetts
1973	105	Attends school in Andover	Andover, Massachusetts
1975	107	Family moves to Berlin, Massachusetts	Berlin, Massachusetts
1977	109	Attends school in Berlin	Berlin, Massachusetts
1979	111	Family moves to Andover, Massachusetts	Andover, Massachusetts
1981	113	Attends school in Andover	Andover, Massachusetts
1983	115	Family moves to Berlin, Massachusetts	Berlin, Massachusetts
1985	117	Attends school in Berlin	Berlin, Massachusetts
1987	119	Family moves to Andover, Massachusetts	Andover, Massachusetts
1989	121	Attends school in Andover	Andover, Massachusetts
1991	123	Family moves to Berlin, Massachusetts	Berlin, Massachusetts
1993	125	Attends school in Berlin	Berlin, Massachusetts
1995	127	Family moves to Andover, Massachusetts	Andover, Massachusetts
1997	129	Attends school in Andover	Andover, Massachusetts
1999	131	Family moves to Berlin, Massachusetts	Berlin, Massachusetts
2001	133	Attends school in Berlin	Berlin, Massachusetts
2003	135	Family moves to Andover, Massachusetts	Andover, Massachusetts
2005	137	Attends school in Andover	Andover, Massachusetts
2007	139	Family moves to Berlin, Massachusetts	Berlin, Massachusetts
2009	141	Attends school in Berlin	Berlin, Massachusetts
2011	143	Family moves to Andover, Massachusetts	Andover, Massachusetts
2013	145	Attends school in Andover	Andover, Massachusetts
2015	147	Family moves to Berlin, Massachusetts	Berlin, Massachusetts
2017	149	Attends school in Berlin	Berlin, Massachusetts
2019	151	Family moves to Andover, Massachusetts	Andover, Massachusetts
2021	153	Attends school in Andover	Andover, Massachusetts
2023	155	Family moves to Berlin, Massachusetts	Berlin, Massachusetts
2025	157	Attends school in Berlin	Berlin, Massachusetts

Match Book Hall of Fame Foldable®

- (Accomplishments, Achievements and Recognitions)
- Title on short flap, medal/image on large flap, and inside, a write up of the what and when.

On the Back

Sources cited

Three Tab Response to Challenges/Situations Foldable®

On the Tabs:

- Problems/Issues/Conflicts
- Actions Taken
- Internal and External Motives (Attitudes)

Under the Flaps:

- List at least one problem/issue or Conflict and why it was a problem.
- A description of what the person did about the situation.
- Personal motives that lead to the actions taken.

Fostering Purposeful Learning with Foldables™

- Ascertain initial understandings
- Build factual knowledge through schema, strengthening neuronal networks
- Encourage metacognition through active learning



How can you use Foldables™?

- English language learners
- Students with IEPs
- Projects
- Displays
- Ultimate Foldables™ to assess

Extending Your Learning

- Share ideas for content with colleagues on the BOOST discussion board
- Go digital: BOOST is on Facebook and Flickr
- Check out discipline-specific products at www.dinah.com
- Join the Foldables Wikispace on Google
- Attend Dinah Zike Academy in Comfort, TX for a 3-day training of trainers

CLASSROOM NOTES

Plus

A QUARTERLY OF TEACHING IDEAS

AUGUST 2007

THINKING ON PAPER

IN THIS ISSUE:

Foldables: Improving Learning with 3-D Interactive Graphic Organizers 1

by Douglas Fisher, Dinah Zike, and Nancy Frey

Here's an innovative way to use graphic organizers to encourage critical thinking and meaningful interaction with ideas and information.

Sneak Peek—Multiple Intelligences: Identifying and Using Learning Styles 13

by Chris Jennings Dixon

In this approach, students use a web survey to identify their learning styles, and then choose a writing assignment geared to their own strengths.

Graphic organizers are more than a convenient tool—they can also be a valuable asset for fostering literacy skills, when they're used with an eye to authentic learning.

In our feature article, the authors outline benefits and possibilities for an innovative type of graphic organizer called the Foldable™, and illustrate how Foldables can be used in meaningful ways.

Some sample activities for using Foldables in the English language arts are provided, but these are just the beginning. Once you're familiar with Foldables and their versatility, you'll doubtless develop new ideas of your own! And these activities can all be used to enhance learning in other disciplines, so you may find you'll want to share them with your colleagues.

This issue also includes a sneak peek at an activity from a new NCTE book—*Lesson Plans for Teaching Writing*.

We want your feedback on this issue of *Classroom Notes Plus!* Send email to notesplus@ncte.org, with August 2007 in the subject line, and tell us what you like, what you'd like to see more of, and how you'll use these ideas in your classroom.

Foldables: Improving Learning with 3-D Interactive Graphic Organizers

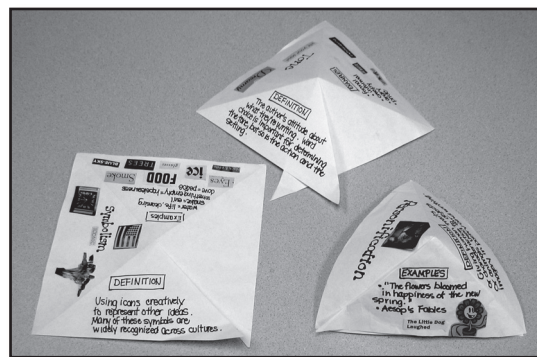
by Douglas Fisher, Dinah Zike, and Nancy Frey

Who hasn't heard that graphic organizers help students learn and remember?

Graphic organizers can be an effective and enjoyable learning tool. They work for several reasons:

- Graphic organizers help students see the connections among different items of information.
- Graphic organizers are consistent with current thinking about brain-based education and the importance of visual-kinesthetic learning.
- They serve as a note-taking aid because students can use graphic organizers to externally store information (Katayama & Robinson, 2000).
- Over time, when graphic organizers are used right, they become part of students' habits for learning (Fisher, Frey, & Williams, 2002).

While the research on the effectiveness of graphic organizers is clear, the actual use of graphic organizers is not.



To be effective, the following must be true:

- Students must be taught a number of different graphic organizers and then be invited to choose the best ones for use in the context of authentic learning tasks.
- Graphic organizers should be used in ways that promote interaction among students (Egan, 1999).

It's part of the learning process for students to be involved in thinking about the information they are working with and how best to use a graphic organizer to record it and present it. If students are simply asked to fill out two-dimensional graphic organizers that have been photocopied, the thinking has all been done by the teacher.

In this piece we highlight a graphic organizer called a Foldable™; we describe some basic types that we have found effective and give recommendations for using them to promote meaningful learning. (More information on Foldables is available at www.dinah.com.)

Foldables are a type of graphic organizer that students manipulate with their hands and minds. They are multi-dimensional and often colorful. Students cut, fold, and glue as they transform information and learn. You don't have to purchase Foldables—they are an innovation that any teacher can use with her students to help them interact meaningfully with ideas and information.

Overview of Steps for Introducing Foldables

Students are quick to master the folds needed for constructing Foldables, but it is wise to introduce one at a time. Here are some recommendations for a successful experience. It typically takes no more than ten minutes to do the actual construction, and experienced students will do this in less time.

Creating the Foldable

Gather and distribute the necessary materials to students. This usually consists of 8 1/2" x 11" paper and scissors. Certain Foldables may also require glue.

Show students samples of each completed Foldable and state a common purpose for each type, such as comparing

and contrasting, summarizing, notetaking, etc.

Model each step of the construction for each Foldable, using clear terminology. For example, say "fold the paper lengthwise" rather than "like this." Encourage students to help one another and talk through the instructions. After the Foldable is constructed, ask students to put away their supplies.

Using a Foldable with a Lesson

The teacher now models the use of a Foldable with a specific task. For instance, if students are in the middle of a reading assignment, the teacher might use this as an opportunity to model notetaking strategies using a Foldable, or to demonstrate how a Foldable can be used to record questions about plot, characters, or motivations during reading.

If students are studying an aspect of writing or grammar, the teacher might model using a Foldable to compile and organize examples of proper usage. The completed Foldable might also be used as a tool to foster classroom discussion of a topic, or to warm up to a summary- or essay-writing assignment.

Once the assignment has been introduced, students should have a chance to look over the sample Foldables, talk about their purposes, and select the Foldable they want to use in organizing their information. The more involved students are in thinking about their purpose and planning how they will achieve it, the more benefits they will obtain from their work with Foldables.

Students should also be encouraged to collaborate on the creation of the Foldables and to work in pairs or small groups, as appropriate, as they pursue the assignment. The communication and interactions involved can be as enriching to students' literacy and language learning as the achievement of the specific lesson goals.

CLASSROOM NOTES *Plus*

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The Benefits of Foldables

We used Foldables with a group of 10th- and 11th-grade students who enrolled in an afterschool intervention program designed to help them pass the English language arts portion of the California High School Exit Exam.

Foldables were an effective tool for student learning in this case; but the benefits of these interactive graphic organizers are certainly not limited to the English language arts. Foldables can also be valuable tools across content areas because they foster the kinds of thinking and writing skills required in all academic learning.

While “literacy enables learning in a variety of disciplines in complex and important ways” (National Council of Teachers of English, 2006), a significant number of adolescents struggle with the discourse needed in science, mathematics, history, and English. To advance their literacy skills, adolescents need instructional experiences that are motivating and foster comprehension by transforming concepts and ideas in their minds and on paper (Fisher, Schell, & Frey, 2004). Teaching students to manipulate information, record, and transform that information using Foldables costs nothing other than some paper, scissors, and maybe a bit of glue.

Sample Activities for Using Foldables for Authentic Learning in the English Language Arts

Here are examples of specific learning tasks involving reading and writing which use graphic organizers in ways that can promote authentic learning.

A Pre-Reading Aid

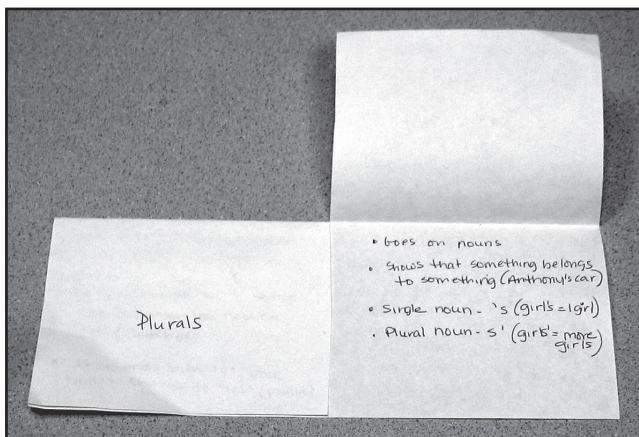
Before or early on in the reading of a story, novel, or book chapter, have students use a graphic organizer to record ideas and information that they will update after

reading further.

The specific categories requested can be easily adapted to the grade level and ability level of the students. Younger students or students at lower levels of English language proficiency might be asked to record questions or predictions related to the characters and the action. More advanced or proficient students might be asked to note what they anticipate or observe about the themes, plot, and style.

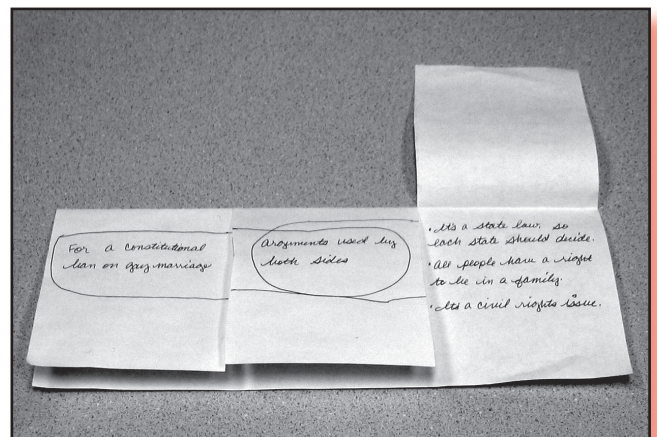
A

Foldable A can provide an effective way to store information on two different ideas or concepts, and is handy for notetaking.



B

Foldable B incorporates a Venn Diagram, and so makes an effective tool for looking at the similarities and differences between two ideas, two characters, two books, etc.



Model the creation of several Foldables and help students create their own. (Foldables such as D, E, and F, which have more spaces to write, work best with these activities.)

Ask students to jot their questions, predictions, or observations on the outside flaps of their Foldable before reading further. Then as they read, students use the inside flaps to record findings that relate to or answer their questions or predictions, along with page numbers where the information is found.

While in progress, the Foldables can be used by students in collaborative sharing and discussion throughout the reading. Completed Foldables can provide an aid to follow-up review, as well as helping teachers assess how well students understand their reading.

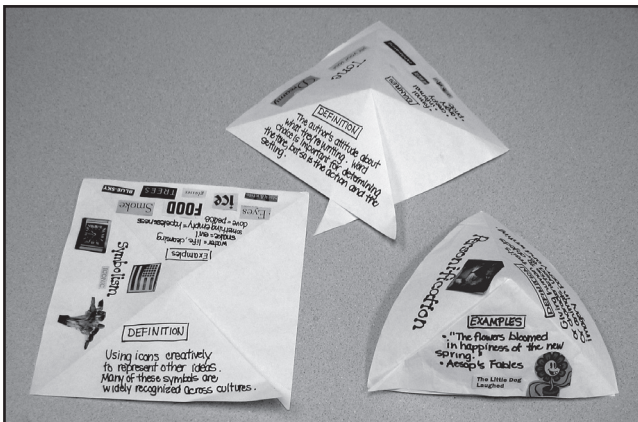
A Convenient Reading Response Tool

Simpler graphic organizers can serve as unthreatening tools for responding to reading and interacting with peers, both with native speakers and with English language learners.

A graphic organizer such as Foldable B, which has three flaps for writing, can be labeled *what I like most about this poem/story/chapter* (left flap), *what I don't understand or have questions about* (middle flap), and *what I like least about this poem/story/chapter* (right flap), with short responses recorded underneath the flaps.

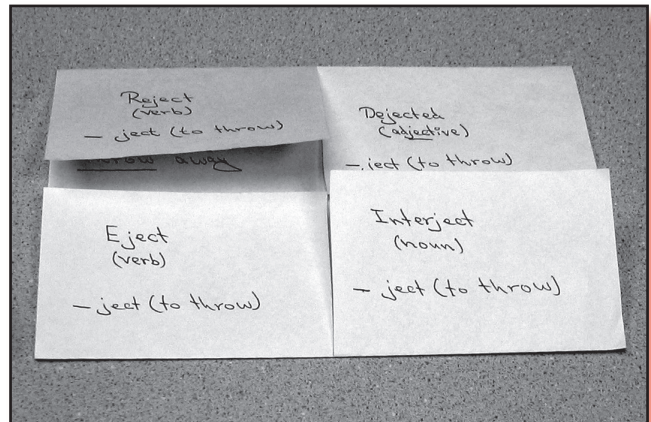
C

Foldable C—the pyramid—is a bit more complex to create, but the final product is a pleasing 3-D form that lends itself not only to organizing information but to artistic embellishment. It is useful for organizing information on three concepts, characters, or other items.



D

Foldable D is used when students have four concepts to think about or compare, or four topics to respond to, such as who, what, when, and where. It's fairly easy to create.



A graphic organizer with four flaps such as Foldable D could be used to record who/what/when/where details about a reading.

Introduce several styles of Foldables to students before the reading, and help students select and create their own. Explain that students will use these as tools to record responses during and after their reading.

When students have completed the reading and filled out their Foldables, ask them to share their results with a partner. Depending on the grade level, ability level, and assignment, follow-ups might include presenting responses to the whole class, reading from notes in a group discussion, or using the notes as prewriting for a short response paper or other type of writing.

A Vocabulary Companion for Reading

Before students read a text with unfamiliar words or content-specific vocabulary, show students how to create a Foldable with multiple tabs on which to write, such as Foldable E or F.

Ask students to use the outside flaps of the Foldable to jot down phrases or sentences that contain unfamiliar words as they read.

As they read or as a separate step, students look up the unfamiliar words they've identified and write the definitions underneath the flap. (The tabs of Foldable E provide

enough space for illustrations too, if desired.) Students may then share words from their lists in class discussions or in student-led sessions in which they teach the words to others. These lists can be handy references for students' use, and can help the teacher in planning follow-up work on unfamiliar words.

Help with Grammar and Mechanics

When students are learning and practicing concepts related to grammar and mechanics, it may sometimes help to reinforce these through the use of graphic organizers. Foldables can be used to record new concepts and definitions, along with illustrative examples from students' reading and/or writing. Either Foldables with a few spots to write or Foldables with many spots may be used, depending on the purpose.

For example, with a mini-lesson on using quotation marks with dialogue, you could ask students to choose two or three main characters from a class reading and, using Foldable A or B, to write the characters' names on the

top of the flaps and a quotation from each character that seems to sum up his/her personality beneath the flap. This gives students the benefits of seeing the quotation marks used in the context of their reading as well as reinforcing both the correct usage and their sense of how a character is conveyed through dialogue.

To help reinforce concepts from writing revision, you could ask students to use a Foldable to record sentences and passages from a favorite book or magazine which illustrate the concept they've learned. They could also pick successful examples from their own writing to illustrate the concept. For example, if students have been learning how to use strong verbs, descriptive adjectives, or relative clauses, they could use Foldable A, with two spots to write, to write "Example from———" on the left flap and "My Example" on the right flap, and then record the sample sentences or passages beneath. To include more examples, a different Foldable with more spaces to write could be used.

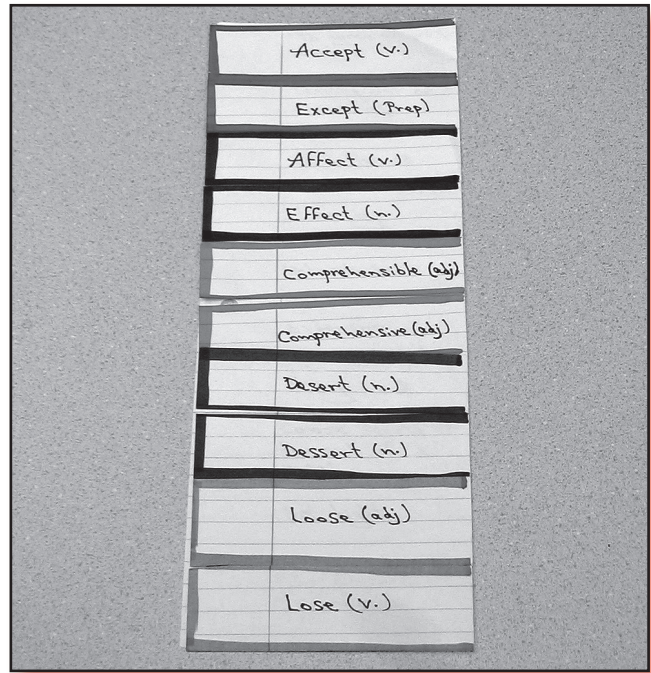
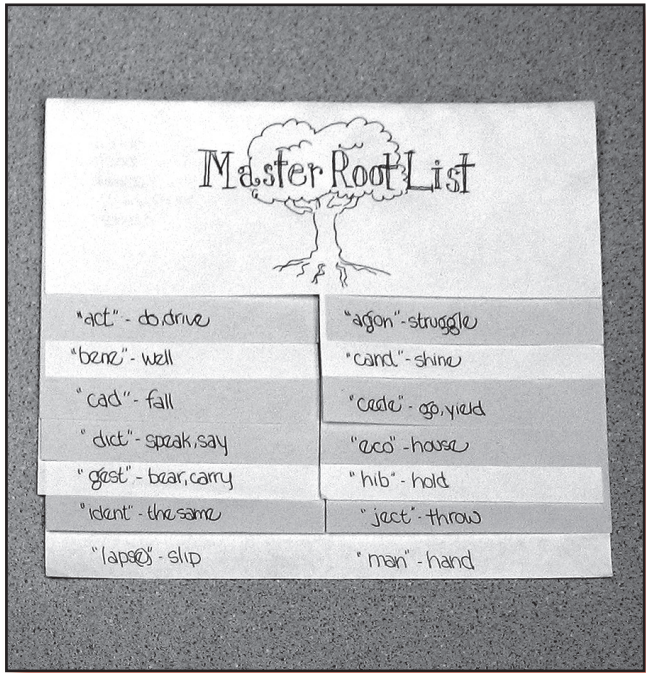
These Foldables then serve as quick references during writing revision, providing examples of usage both from published writings and from students' own writing.



Foldable E is sometimes called a flip book, and is one easy way to keep track of many bits of related information, such as when students are taking notes on characters or other details from a reading assignment.



Foldable F is used when students have multiple concepts to think about or compare or when students want to reinforce facts, words, dates, or other types of information they've been studying and want to retain.



Assessing Students' Understanding and Following Up to Reading

Foldables can also provide a means to check on students' understanding of their reading and to move into other assignments. Foldables with at least three spots to write will probably be most useful for these purposes.

Try using a Foldable such as D, E, or F to explore students' understanding of the characters and their actions in a story or novel. Ask students to record the main characters' names on the top of the tabs, using as many tabs as they need to, and, beneath the tabs, to jot notes on each character's importance to the story or action of the novel.

Students could alternatively be asked to record for each character one important choice or decision he or she had to make during the course of the story, what lesson that character had to teach the protagonist, or some other pertinent piece of information.

Another way to use Foldables to explore characterization and observe how well students understand character development is to use Foldable C to record three primary quotes that reveal the protagonist's personality. Ask students to create Foldable C and then add on each side of the pyramid one primary characteristic of the protagonist as well as a supporting quote and an illustration that reveals this aspect of the character's personality. This exercise could also be done with any one of the other Foldable types, depending on how much writing space is desired.

You can also help students warm up to a writing assignment by asking students to use a Foldable to record main themes, the main characters and their motivations, the questions students have about the reading, and so on. Whether you intend to spark a discussion, check on understanding of particular points, or warm up to a writing assignment, the Foldable format can provide a fun and friendly way to get students thinking and organizing their thoughts about the reading.

Specific Foldables and How to Create Them

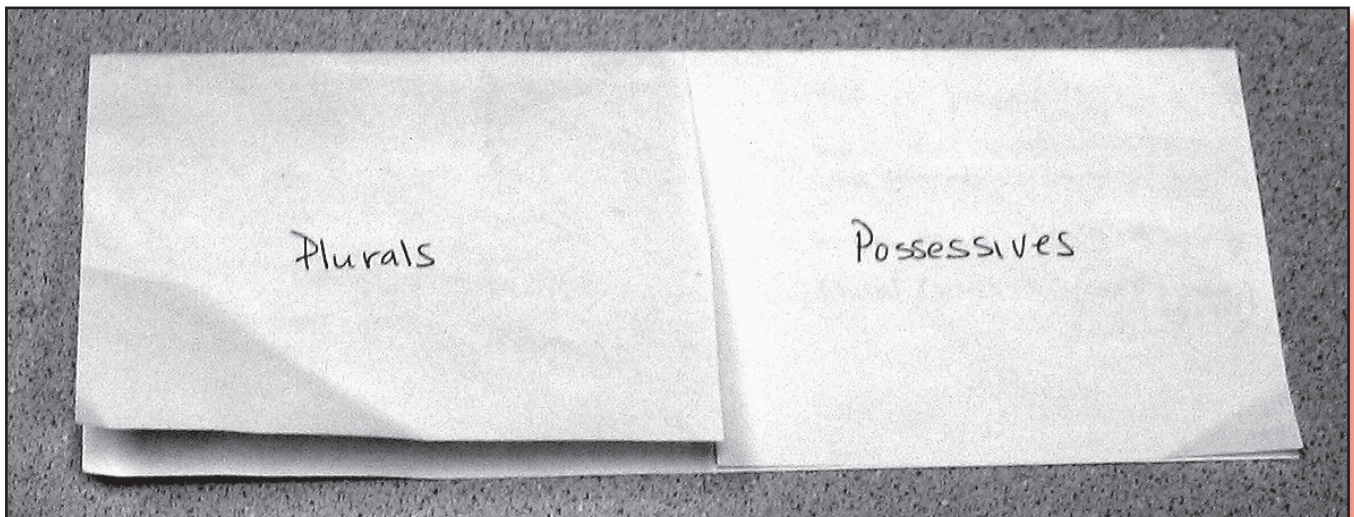
They say a picture is worth a thousand words, so let's look in detail at some Foldables created by the students we worked with. The section for each type includes instructions for creating the Foldable as well as a student example.

Foldable A (two flaps)

Foldable A can provide an effective way to store information on two different ideas or concepts, and is handy for notetaking.

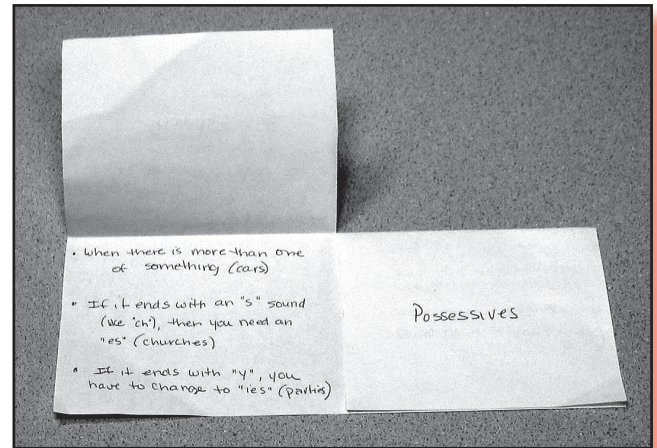
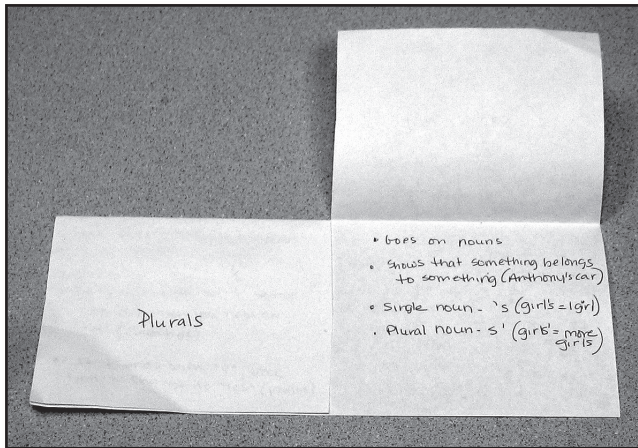
How to Create It

1. Fold a sheet of 8 1/2" x 11" paper in half lengthwise so that the long edge on one side meets the long edge on the other side. (Some of your students may know this as a "hotdog fold.") Press to create a crease.
2. From the middle of one long edge, cut horizontally across to the middle to create two sections, each with a flap that can be raised and lowered.



Example of Foldable A:

In the example shown, Anthony took notes on the uses of possessives and plurals with -s. Under the flap, he wrote the rules for each in his own words and listed several examples that would help him remember.

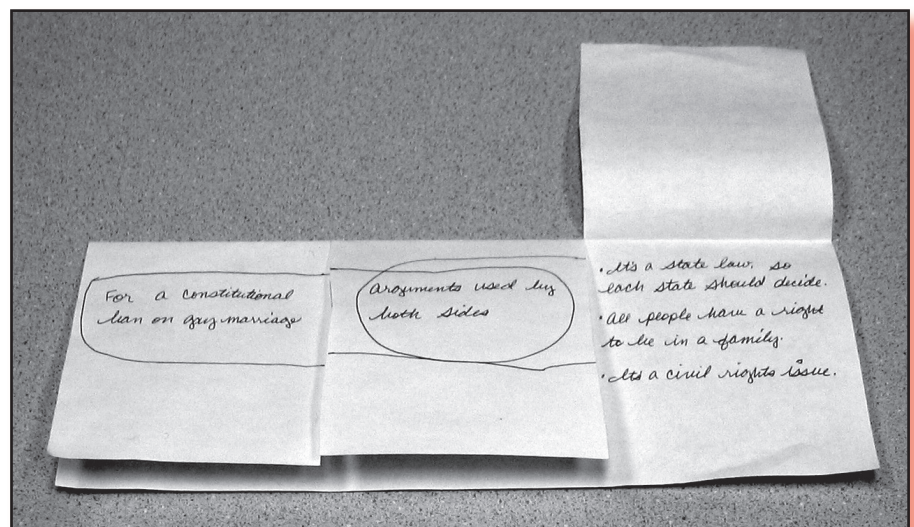
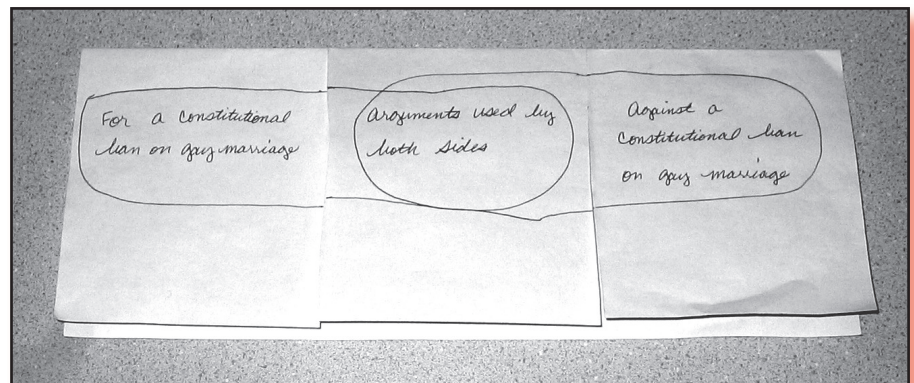


Foldable B (three flaps)

Foldable B incorporates a Venn Diagram, and so makes an effective tool for looking at the similarities and differences between two ideas, two characters, two books, etc.

How to Create It

1. Fold a piece of paper in half lengthwise (the "hotdog fold") as with Foldable A, but before cutting it, draw a Venn diagram on the top flap.
2. Then, instead of making one cut, make two cuts, resulting in three flaps of equal size. The two end flaps provide space to record the unique features of each item while the center flap provides space for a listing of the characteristics that the two items have in common.



Example of Foldable B

Jessica used this Foldable to compare the perspectives of two different sides of an argument, in this case the constitutional ban on gay marriage. She kept notes about the arguments for and against the ban on the ends and arguments that both sides use in the middle.

Foldable C (pyramid)

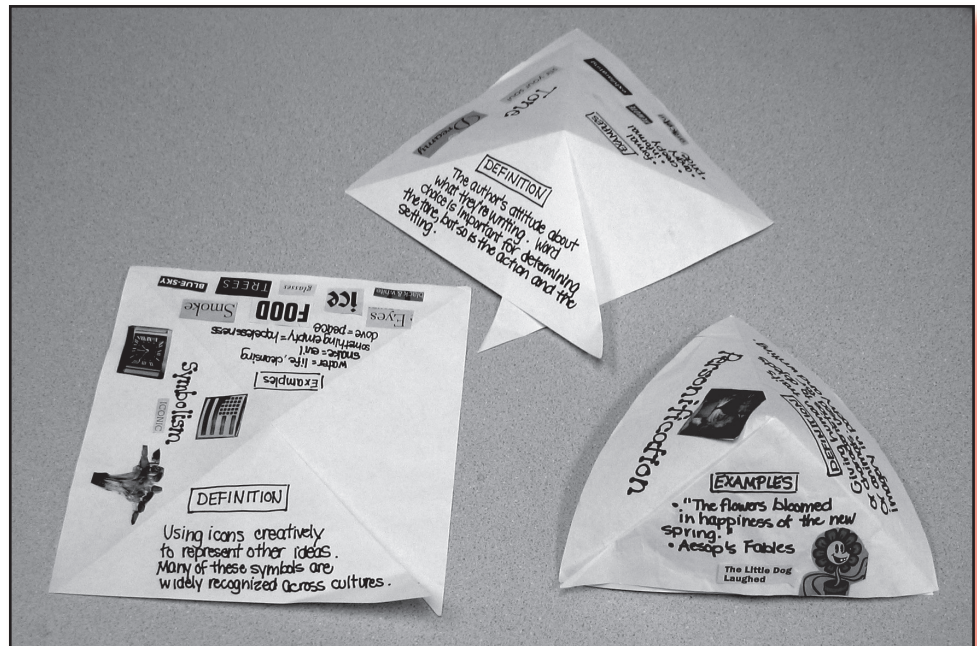
Foldable C—the pyramid—is a bit more complex to create, but the final product is a pleasing 3-D form that lends itself not only to organizing information but to artistic embellishment. It is useful for organizing information on three concepts, characters, or other items.

How to Create It

1. Take an 8½" x 11" inch piece of paper and fold it so that one corner on the shorter side touches the longer side.
2. Fold the paper and cut off the excess. The resulting square with a diagonal fold is shaped like a taco, and is sometimes called a "taco fold."
3. Open the "taco" and fold the paper in the opposite direction of the existing diagonal crease, to create a second diagonal crease.
4. You should have four triangles inside the folds of a square piece of paper. Cut one of the creases to the center point.
5. Two flaps are created as a result of the cut. They will be folded one on top of another to create a pyramid. But first, the desired information should be recorded on three of the four sides. One side will be covered by another—mark this one side to remember not to write on it.
6. Once you've recorded the information, glue the flaps to keep the pyramid shape.

Example of Foldable C

Emilee used the pyramid Foldable to take notes on different literary devices. The pyramids shown in the example contain her notes on personification, tone, and symbolism as well as illustrations and pictures cut from magazines to help her remember these terms. Emilee stacks her completed pyramids one on top of the other to store them.



Foldable D (four flaps)

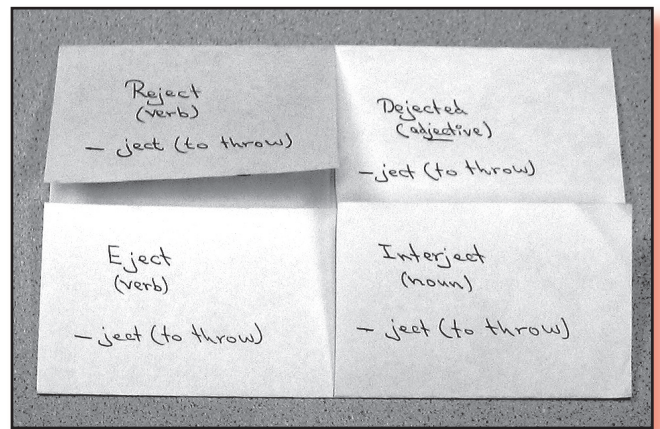
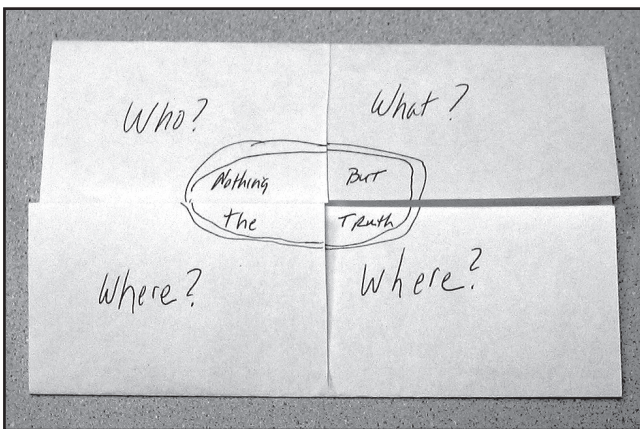
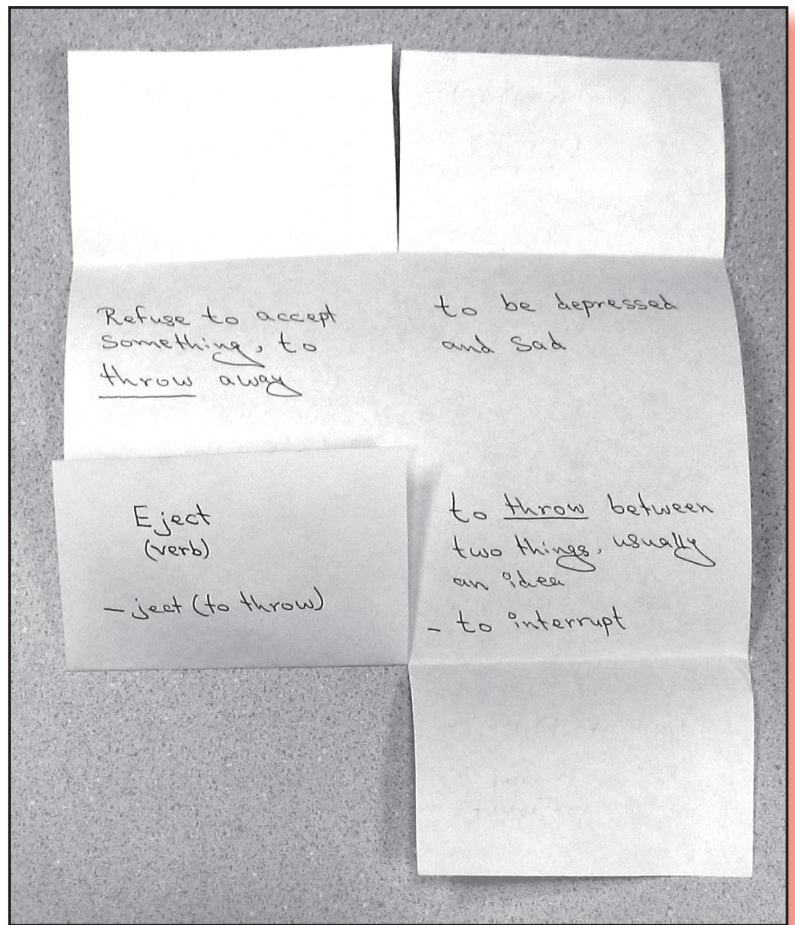
Foldable D is used when students have four concepts to think about or compare, or four topics to respond to, such as who, what, when, and where. It's fairly easy to create.

How to Create

1. Fold, but do not crease, a piece of paper lengthwise (the "hotdog fold").
2. Pinch the top to mark the mid-point of the short edge. Then fold each long side in so that each long edge meets the mid-point to create "shutters." (This type of fold is sometimes called the "hamburger fold.") Press to crease.
3. With the page oriented horizontally in front of you, fold the left end so it meets the right edge, creating a fold halfway along the longest side of the paper. Open this back out and cut along the new fold from each edge to the first crease, creating a total of four flaps or "shutters."

Example of Foldable D

Jeffrey used this type of Foldable to record who, what, where, and when information for the book he was reading, while Dominic used this fold to focus on words with a common root.

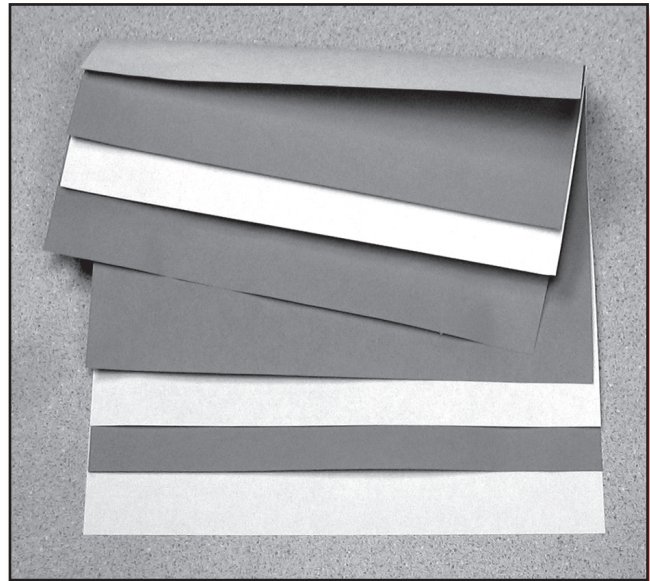


Foldable E (flip book)

Foldable E is sometimes called a flip book, and is one easy way to keep track of many bits of related information, such as when students are taking notes on characters or other details from a reading assignment.

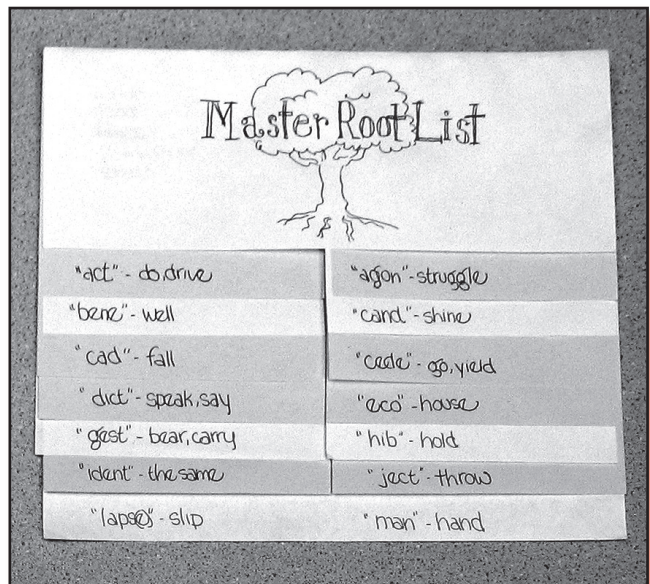
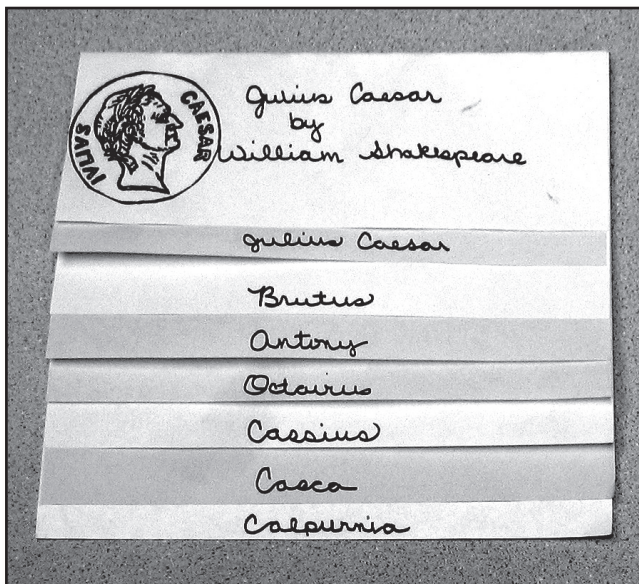
How to Create

1. Take several sheets of paper (alternating sheets of different colors works nicely) and lay them on top of one another so that the end of each is separated from the next by a gap of about a half inch.
2. Fold the papers over to make tabs, crease them, and glue the sheets together inside each fold, at the very top.
3. The uppermost flap provides a large spot to write a title for the Foldable, such as the name of the book, character, or topic under study, and to add visual elements if desired.



Example of Foldable E

Erik used this Foldable to keep track of the characters in the Shakespeare play he was reading (Julius Caesar, Marcus Antonius, Marcus Brutus, Cassius, Casca, Trebonius, and so on). Maria used this to create a high-frequency prefix, suffix, and root word list.

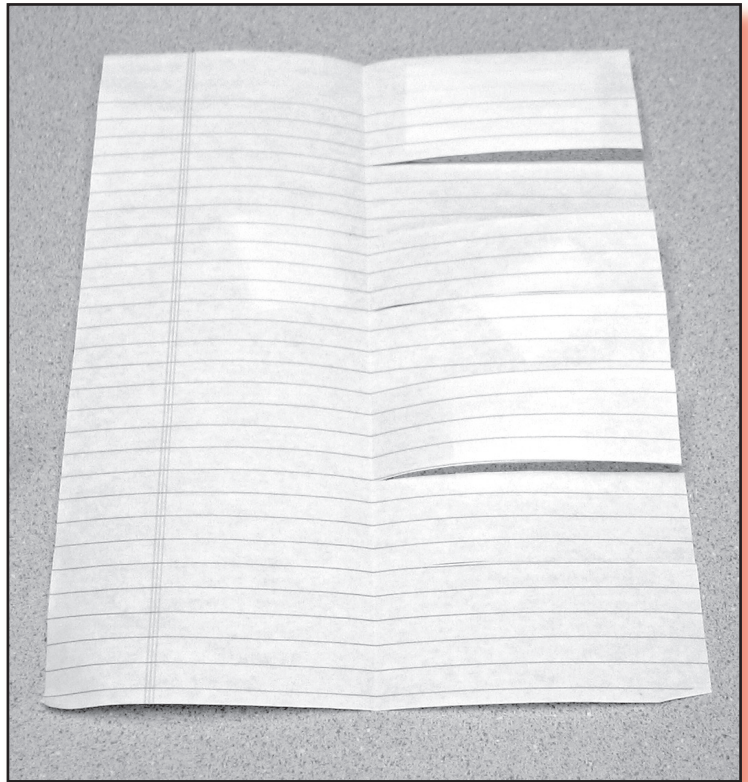


Foldable F (10 or more flaps)

Foldable F is used when students have multiple concepts to think about or compare or when students want to reinforce facts, words, dates, or other types of information they've been studying and want to retain.

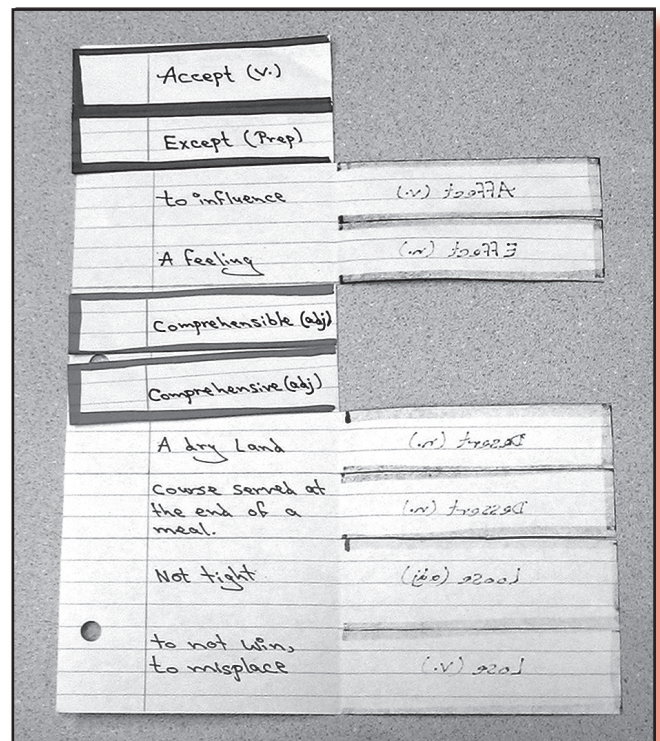
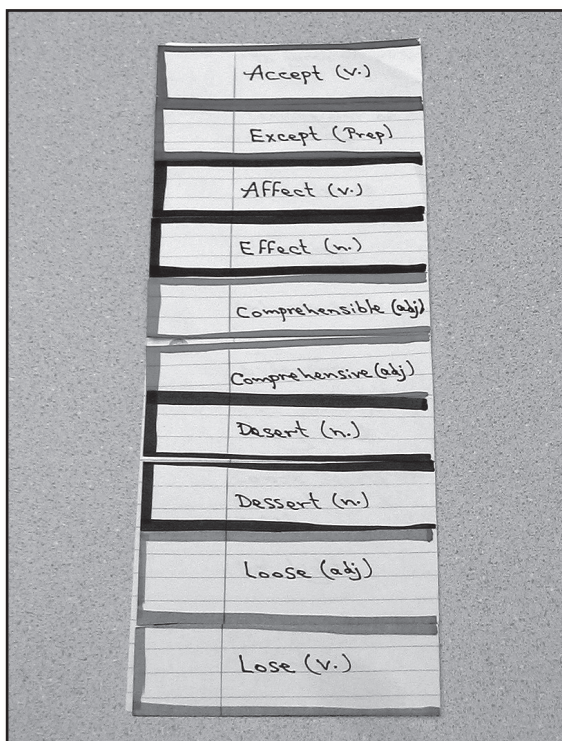
How to Create

1. Fold a piece of lined notebook paper in half (the "hotdog fold").
2. On just one half of the page, cut across the page from edge to center on every third line. (Or you could cut across on every fourth or fifth line, depending on how many tabs for writing you want to create, and how much space you want to leave to write on each tab.)
3. Label the top of each flap with the chosen word or concept, and beneath each flap, record the definition of the word or concept (or its usage, or an example, or whatever information you're focusing on).
4. As with Foldable E, if desired, the uppermost flap can be used to write a title for the Foldable, indicating the purpose it's being used for.



Example of Foldable F

Trenea used this fold for her study of confusing word pairs, as shown below. Another student, Paulo, used this fold to keep track of multiple meaning words.



A Powerful Learning Tool

Of course there are still more ways to fold a sheet of paper, and still more ways to use such devices to record information. The important thing is to get these useful tools into the hands of students and to teach them authentic ways to use them in order to maximize their critical thinking and improve their literacy skills.

When students are provided with tools to learn, they process information at increasingly complex levels and their test scores show it. Graphic organizers are a powerful learning tool, and Foldables are an innovation that ensures that this tool is personally owned by the learner, is manipulative, and is interactive.

Douglas Fisher is Professor of Language and Literacy Education in the Department of Teacher Education at San Diego State University, a former high school English teacher, and the author of many articles and books, including *Improving Adolescent Literacy: Strategies at Work*, with Nancy Frey, and the forthcoming *NCTE book Language Learners in the English Classroom*, with Carole Rothenberg and Nancy Frey. Fisher is also a member of the NCTE Professional Development Consulting Network—visit his consulting page at <http://www.ncte.org/profdev/onsite/consultants/fisher>

Dinah Zike is an award-winning author, educator, educational consultant, and inventor, known internationally for inventing three dimensional hands-on manipulatives and graphic organizers known as *Foldables*. Based in San Antonio, Texas, Zike is a frequent keynote speaker and conducts seminars for over 50,000 teachers and parents annually. For more information, visit www.dinah.com

Nancy Frey is Associate Professor of Literacy in the School of Teacher Education at San Diego State University, and teaches a variety of courses in elementary and secondary literacy in content area instruction and supporting students with diverse learning needs. She has co-authored several

books on literacy, including *Improving Adolescent Literacy: Strategies at Work*, with Douglas Fisher, and the forthcoming *NCTE book Language Learners in the English Classroom*, with Douglas Fisher and Carole Rothenberg.

For more information on the Consulting Network, including a listing of consultants by topic, visit: <http://www.ncte.org/profdev/onsite/consult>

Graphic Organizers Online

Graphic organizers aren't limited to paper and pen anymore—check out the interactive resources offered on the **ReadWriteThink** site, including a Flip Book that's designed to let users type and illustrate tabbed flip books up to ten pages long. The Flip book is used in the following two lessons:

You Know the Movie Is Coming—Now What?

In this lesson, students read a literary text with the eye of a director, selecting scenes from the text and putting a cinematic spin on them

http://www.readwritethink.org/lessons/lesson_view.asp?id=854

Cooking Up Descriptive Language: Designing Restaurant Menus

Students explore the genre of menus by analyzing existing menus from local restaurants, establish the characteristics of the genre, then work in groups to choose a restaurant and create their own custom menus.

http://www.readwritethink.org/lessons/lesson_view.asp?id=842

ReadWriteThink's Student Materials use free browser plug-ins. These are downloadable from the Technical Support page of the ReadWriteThink site.

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Multiple Intelligences: Identifying and Using Learning Styles

by Chris Jennings Dixon

Purpose

To identify and recognize learning styles to nurture thinking and writing

Preparation

Based on Howard Gardner's theory of multiple intelligences in *Frames of Mind*, we know that students have tendencies to solve problems using distinct learning styles. Encouraging students to identify and recognize their learning styles can promote improvements in thinking.

Using props on a table representing different approaches to learning, discuss the concept of how each person constructs meaning in response to varied stimuli, such as visually with photographs, verbally with books, musically with recordings, or kinesthetically with paint or clay.

Props/Materials

Resources

"7 Intelligences Checklist"

www.mitest.com/o2ndary.htm

"Assessment: Find Your Strengths"

www.literacyworks.org/mi/assessment/findyourstrengths.html

"Multiple Intelligence Inventory"

www.surfaquarium.com/MI/inventory.htm

Sample Projects

A Hodgepodge of Ideas handout (See handout on page 14, this issue)

The Stranger Project handout (See figure 3.9 in *Lesson Plans for Teaching Writing*)

Novel Project: Brave New World handout (See figure 3.10 in *Lesson Plans for Teaching Writing*)

Bio-Poem handout (See figure 3.11 in *Lesson Plans for Teaching Writing*)

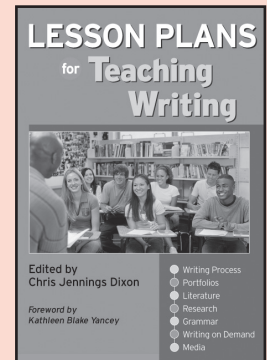
Shakespearean Plays: *Othello* Project/*Hamlet* Responses handout (See figure 3.12 in *Lesson Plans for Teaching Writing*)

Process/Procedure

Students survey and identify their types of intelligence, using one of the suggested websites. After students determine the mental learning styles with which they are most comfortable, remind them that most people are strong in only a few types of intelligences. Adapt or use the Sample

★ Sneak Peek ★

Enjoy this sneak peek at Lesson 42 from *Lesson Plans for Teaching Writing* (NCTE, 2007), edited by Chris Jennings Dixon. This collection of innovative writing approaches was developed by a group of middle, high school, and college teachers in Writing Coalition workshops. The resulting lessons are designed to make writing fun as well as an integral part of the curriculum. To order this book, call NCTE Customer Service at 1-877-369-6283, or visit the NCTE Store at <http://www.ncte.org/store>.



Projects to provide alternative approaches to classroom activities. As a follow-up to reading a work of literature, ask students to select an approach to completing a project individually or collaboratively that best demonstrates their learning style.

Pointers or Pitfalls

Many of the project ideas can be adapted to individual curriculum. Students should be encouraged to develop more than one approach to multiple intelligences. You may, however, relate that Albert Einstein used all of his intelligences to solve a problem. Varying instructional approaches provides a nurturing climate for all students. Grading multiple intelligence projects requires establishing introductory rubrics or requirements with the students. Because many of the projects are to be presented to the class, students should be involved in developing criteria and evaluating other students' work.

Ponderings

The majority of students surveyed in our schools were identified as "music smart." This, of course, is no surprise given that the favorite pastime of many students is listening to music. Internet sites such as <http://www.rockhall.com/programs/institute.asp>, The Rock and Roll Hall of Fame, may be accessed for further instructional activities related to musical/rhythmic intelligence.

A Hodgepodge of Ideas Using Multiple Intelligences

After you have read the assigned novel, select one of the following approaches to completing your project. Be prepared to hand in your materials and to present your project to the class:

1. **"That's Entertainment"**—Compile a collection of ten songs that a character in your novel would choose as his or her favorites based upon plot, theme, and character analysis. Create a tape using the music and rhythms of those pieces.
2. **"Now A Word from Our Sponsor"**—Use a well-known advertisement's refrain to demonstrate the actions and personality of one character in your novel. Present the commercial in costume.
Example: McDonald's "I'm Lovin' It" sung by Romeo.
3. **"Unfolding Character"**—Use a graphic organizer, such as mapping, to depict the relationships between characters in the novel.
4. **"News from the Front"**—Using themes and situations related to the novel, research the facts of the time period. Then create a more detailed, factually-based characterization of a main character using that information.
5. **"You Know What I'm Saying"**—Using dialogue from the novel, update the language to convey meaning for contemporary audiences.
6. **"You Were There"**—Imagine that you are a character in the novel. Write a scene including components of the book with you as a part of the setting and plot.
7. **"A Space Odyssey"**—Create a timeline for the actions and plot of the novel.
8. **"In the Eye of the Beholder"**—Draw or sketch or paint five significant scenes from the novel. Include captions for each scene.
9. **"What's On?"**—Find five media articles that connect to the novel's theme. Place them on a poster with an accompanying paragraph explaining the connection of each article.
10. **"Do Not Pass 'GO'"**—Create a board game using characters, plot, conflict, theme, and setting of the novel.

from Lesson Plans for Teaching Writing, edited by Chris Jennings Dixon © 2007 National Council of Teachers of English.

read·write·think

International
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Discover **ReadWriteThink.org** for FREE lesson plans and online resources that will help you use Internet content to teach English language arts.

Lessons

These lessons are from ReadWriteThink.org, a website which provides educators and students access to the highest quality practices and resources in reading and language arts instruction. The lessons are written by classroom teachers, and are linked to English Language Arts Standards from the International Reading Association and the National Council of Teachers of English.

Standards

A great activity for the beginning of the school year is working with students on goal setting. The ReadWriteThink lesson plan “A Poem of Possibilities: Thinking about the Future” invites students to ponder their future. Inspired by John Updike’s poem “Ex-Basketball Player,” students write poems or prose poems intended for a real audience—themselves, five years in the future. http://www.readwritethink.org/lessons/lesson_view.asp?id=943

Web Resources

At the start of the school year, invite students to review their school website and use a graphic organizer to analyze various aspects of their school environment. Then, using Walt Whitman’s list poem “I Hear America Singing” as a model, students create list poems that reflect a representation of their own school community. Finally, they reflect upon those individuals or groups who might have been omitted from their poems. Visit the ReadWriteThink lesson plan “Walt Whitman as a Model Poet: ‘I Hear My School Singing’.” http://www.readwritethink.org/lessons/lesson_view.asp?id=989

Student Materials

To build connections and community within the classroom, students need to share and celebrate their unique interests and talents. The ReadWriteThink lesson plan “The Feature Story—Fifteen Minutes (and 500 Words) of Fame!” combines interviewing techniques and journalistic writing as it challenges students to write feature stories about their classmates. http://www.readwritethink.org/lessons/lesson_view.asp?id=987

Calendar

The ReadWriteThink lesson “It’s My Life: Multimodal Autobiography Project” allows students to express themselves verbally, visually, and musically by creating multimodal autobiographies. Students benefit from the open exchange of ideas with other students and share important events in their lives through a PowerPoint presentation. This is a great way to build classroom community at the beginning of the year. http://www.readwritethink.org/lessons/lesson_view.asp?id=1051

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