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EASTERN NAZARENE COLLEGE

DIVISION OF GRADUATE STUDIES
DIVISION OF TEACHER EDUCATION

IMPROVING READING COMPREHENSION THROUGH VISUAL TOOLS

By

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Abstract

Reading comprehension in learning disabled students can be increased with the classroom implementation of visual tools. Student performance was measured using MCAS reading scores before and after the introduction of Thinking Maps, i.e., a set of visual tools which are centered on the development of eight thinking processes. By integrating this common visual language throughout the school's curriculum, it was projected that more effective and efficient learning would be achieved. Assessment results indicated that reading comprehension was increased; it was also observed by classroom teachers that levels of performance rose overall in the following areas: concept attainment, reflective thinking, recall, retention, writing (quantity and quality), creativity, motivation, and cooperative learning skills. These findings are congruent with a multitude of research studies and support the position that student performance can be increased with the implementation of visual tools.

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List of Related Vocabulary

Massachusetts Comprehensive Assessment System (MCAS): a high stakes achievement test that determines eligibility for graduation in the state of Massachusetts (Massachusetts Department of Education, n.d.).

Fluency: "Reading smoothly, quickly, and with expression" (Tomkins, 2003, 506).

Graphic organizers: "Diagrams that provide organized, visual representations of information from texts" (Tomkins, 2003, 506).

Scaffolding: "The support a teacher provides to students as they read and write" (Tomkins, 2003, 507).

Visual tools: Visuals "such as organizers, webs, and thinking-process maps" (Hyerle, 2000, 1) which "show patterns of thinking" (Hyerle, 2000, vi).

Thinking Maps: "Eight visual tools based on [the eight] fundamental thinking skills" (Hyerle, 2000, book jacket); maps include Circle Map, Bubble Map, Double Bubble Map, Tree Map, Brace Map, Flow Map, Multi-flow Map, and the Bridge Map (Hyerle, 2000, 108).

Circle Map: Thinking Map used for "representing and brainstorming ideas, defining words by showing context clues, and identifying audience and author's point of view" (Hyerle, 2000, 108).

Bubble Map: Thinking Map used for "expanding descriptive vocabulary, describing characters using adjectives, and providing descriptive details for writing" (Hyerle, 2000, 108).

Double Bubble Map: Thinking Map used for "comparing and contrasting

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characters, prioritizing essential characteristics, and organizing a compare-and-contrast essay" (Hyerle, 2000, 108).

Tree Map: Thinking Map used for "identifying main idea, supporting ideas, details; organizing topics and details for writing; and taking notes for lectures and research papers" (Hyerle, 2000, 108).

Brace Map: Thinking Map used for "comprehending physical setting in stories, analyzing physical objects from technical reading, and organizing and writing technical manuals" (Hyerle, 2000, 108).

Flow Map: Thinking Map used for "sequencing story plot by stages and substages, analyzing and prioritizing important events, and sequencing paragraphs for writing" (Hyerle, 2000, 108).

Multi-flow Map: Thinking Map used for "analyzing causes-effects in literature, predicting outcomes from previous events, and organizing 'if-then' persuasive writing" (Hyerle, 2000, 108).

Bridge Map: Thinking Map used for "comprehending analogies, similes, and metaphors; preparing for testing using analogies; and developing guiding analogies for writing" (Hyerle, 2000, 108).

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Strategies for Improving Reading Comprehension

Reading is the foundation for life-long learning. One must be able to master this skill in order to facilitate the learning process. Yet reading is simply not enough; one must be able to understand what one has read and be able to apply the newly acquired knowledge for the benefits to be fully realized.

In America, reading is taught mainly using a basal approach, involving "teacher directed [methodology] with a significant reliance on worksheets, rote learning, and minimal interaction of students" (Kirylo and Millet, 2000, 179). This teaching method has been proven to be only minimally effective, as students do not retain much of what they have read and incorrectly comprehend the material. Two goals of a successful reading program are that students must be able to read on their own and understand what they have read. Teachers, likewise, must become better educators by learning and implementing reading comprehension strategies that will help students reach their goals (Kirylo and Millet, 2000, 180).

One of the challenges which teachers face is how to present information that can be processed successfully by students, particularly those who are categorized as *special needs*. Perhaps the most abstruse task for learning disabled students to execute is making connections with content in textbooks. Texts are not organized for the learning disabled; any student who is a passive learner, or one who "lack[s] skills for processing and organizing written and oral information" (DiCecco and Gleason, 2002, 306), requires explicit instruction and assistance with "making inferences, understanding relationships and connections, distinguishing main ideas from

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significant details, and understanding the gist of the passage" (DiCecco and Gleason, 2002, 306).

Students typically read a chapter and answer comprehension questions relating to that chapter. Rarely are they given guidance or strategies on how to "decipher text structure and interpret information" (DiCecco and Gleason, 2002, 306). Learning disabled students need a repertoire of strategies, coupled with explicit instruction, to assist with the comprehension of information.

Ciardello writes that, in 1999, an Adolescent Literacy Commission established by the International Reading Association announced that a study they conducted found students lacking in reading skills, including comprehension, summarization, and conceptualization. The commission recommended all middle school and high school teachers teach comprehension across the curriculum. Social studies specifically posed the most significant challenge, due to the abstract method in which complex information is presented in history textbooks. Students are not able to independently read and process a typical social studies textbook, as they have difficulty comprehending the generalized, conceptual patterns of text structure. Consequently, students perceive history to be a collection of non-related events and facts; because of insufficient comprehension, they cannot establish connections between these events and facts (2002, 31). The most common—albeit problematic—text structure patterns in textbooks which have emerged are "hierarchical, time order, cause/effect, description, and comparison/contrast"; according to Ciardiello, these five thinking processes pose the most significant obstacle to adolescent students

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(2002, 31).

Students must grow into independent learners; the role of a teacher is to facilitate the transfer of knowledge that makes this goal possible. Since most learning across the curriculum involves reading at various levels, comprehension strategies are particularly important, yet they are rarely taught in a regular classroom; it is assumed that students intuitively know how to understand what they are reading and that comprehension is an automatic skill. In addition, most textbooks present knowledge in a linear mode; in order for students to be able to perceive non-linear relationships, teachers must take advantage of newer, visual approaches (Chang, Sung, and Chen, 2002, 5).

A comprehension strategy promoted by Fournier and Graves is scaffolding, or "providing support to help learners bridge the gap between what they know and can do and the intended goal" (2002, 31). According to Bransford, Brown, and Cocking, scaffolding is one of the most effective instructional procedures. When teachers utilize scaffolding techniques in the classroom, they will cue, question, coach, corroborate, and provide basic information. If it were not for the teachers' facilitation, students would not otherwise be able to complete a task or activity by themselves (Fournier and Graves, 2002, 31).

For many learning disabled students, scaffolding alone is not adequate. Visuals can be an additional, powerful tool to help process and link facts with events. One visual tool that has been proven to work for over thirty years is the graphic organizer; this successful strategy helps sort information and breaks it down into

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manageable pieces which can then be processed by passive learners. Graphic organizers clearly portray connections between main categories and sub-categories that textbooks fail to establish explicitly (DiCecco and Gleason, 2002, 306). Research confirms their effectiveness when utilized in curriculum planning, assessment, determining student knowledge and misconceptions, and evaluating learning as well as instruction. They enable students and teachers to have an overall snapshot and make connections between concepts, ideas, or categories; another benefit is their flexibility and their ability to be modified or added to as necessary. Graphic organizers can be completed by each student working alone or in groups, or they can be used by an educator to teach a lesson (Irwin-DeVitis, Modle, and Bromley, 1990, 54-57). By creating these visual tools, students become "the engineers of their own investigation" (Irwin-DeVitis, Modle, and Bromley, 1990, 54). Irwin-DeVitis, Modle, and Bromley list six ways in which a teacher can make graphic organizers work in the classroom (1990, 54-57):

- Plan your teaching.
- Tap into students' interests.
- Uncover misconceptions.
- Record data.
- Assess learning.
- Evaluate your instruction.

Chang, Sung, and Chen (2002, 5-6) consider graphic organizers to be a highly beneficial, spatial learning strategy. They affirm that:

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> the structure of the whole text and the interrelations between concepts are illustrated with a visual method that gives the readers a clearer, more substantial understanding of what is being read.... Text structure and content is easier to retain and retrieve...; impressive results [are achieved] in assisting the reader in memorization and comprehension of text content.

Graphic organizers help students read better by making reading "an active process in which they can build a bridge between prior knowledge and new information" (Kirylo and Millet, 2000, 180). According to Kirylo and Millet,

> activating prior knowledge is critical to the success of obtaining meaning from the text.... Learners relate new knowledge to what they already know, thus assimilating the new information. The construction of graphic organizers encourages the organization of ideas, words, and concepts, assists in making meaningful patterns and connections, and facilitates comprehension and retention of new text. (2000, 182-183)

Spatial formats are a successful strategy that facilitate the integration of scaffolding with visuals in order that information may be sorted and broken down into manageable pieces, thus enabling it to be processed by passive learners. Such visual tools clearly portray connections between main categories and sub-categories that textbooks fail to establish explicitly. Or, by completing a graphic organizer as a pre-reading exercise, the teacher can assist the student in retrieving prior knowledge

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that is critical in establishing the connection between prior knowledge and new concepts. Students are likewise introduced to the reading material in a manner that develops interactive and interpersonal skills (DiCecco and Gleason, 2002, 306).

Research has proven that students retain and retrieve information better when a graphic organizer, rather than an outline, is used, since a graphic organizer is deposited in one's memory much like a picture is stored (Katayama and Robinson, 2000, 120). Kulhavy, Lee, and Caterino have found that "storing text information in both spatial and verbal formats... provide[s] the student with an additional retrieval path for recalling the information.... Two routes are better than one" (Katayama and Robinson, 2000, 120). For students who do not fill out a graphic organizer with useful or thorough information, an option is for the teacher to pass out a partially-constructed graphic organizer. The students know precisely what is expected of them, yet they benefit from constructing the organizer themselves (Katayama and Robinson, 2000, 123).

One needs to understand the importance of using graphic organizers before attempting to use them in the classroom. They "communicate both vertical, hierarchical concept relations... and horizontal, coordinate concept relations... that are essential for successful content application to occur" (Robinson, Katayama, DuBois, and Devaney, 1998, p. 17). Winn found that "students may extract more information from a quick glance at a spatial display than they can from a longer viewing of a linear display," such as an outline or general chapter notes; it was also discovered that students "found information needed to answer questions faster than

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when they searched outlines or texts" (Robinson, Katayama, DuBois, and Devaney, 1998, p. 18 and 21). Graphic organizers "facilitate learning of concept relations... in an efficient, spatial format that can be easily searched for information... like [an organized] library... [instead of] one where books are randomly stacked *in piles*" (Robinson, Katayama, DuBois, and Devaney, 1998, p. 21).

There are numerous methods that facilitate reading comprehension and assist students with determining the meaning of what has been read. Graphic organizers which address sequencing, summarization, questioning, and predicting skills are four of the most effective strategies (Bereiter and Bird, 1985). The Wisconsin Literacy Education and Reading Network (n.d.) have identified six essential reading strategies and graphic organizers that support these strategies (see Appendix E):

- *Making connections*: KWL (what do you know, what do you want to know, and what have you learned), brainstorming, and LINK (list, inquire, note, know)
- *Questioning*: KWL, "w" word charts
- *Visualizing*: guided imagery, story maps, story pyramids
- *Inferring*: questioning the author, question/answer columns
- *Determining importance*: KWL, story maps, highlighting
- *Synthesizing*: Thinking Maps, writing templates, column notetaking

Imagine if one had an innovative strategy that would raise test scores significantly, that would help one think more clearly and concisely, that would enable one to "construct, organize, assess, and convey knowledge" even better than a

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graphic organizer (Hyerle, 1995, 85). There exists a new visual tool published in 1995 called *Thinking Maps* that claims to accomplish these goals, although limited research has been conducted on their actual efficacy. Thinking Maps' creator, D. Hyerle, professes that these enhanced visual tools help students learn more effectively and efficiently; lessons reportedly can be taught in less time with increased retention (Hyerle and Curtis, 2001).

Fifteen years ago, Hyerle discovered that students could complete semantic maps such as brainstorm webs and graphic organizers, but they were unsure of what to do with this information once they had written it down, i.e., they were unable to develop it into a well-organized essay (1995, 85). He studied human thought process and established that spatial formats which address every thinking process could be utilized to "generate and organize... thoughts and ideas, either on paper or by using... software" (Hyerle, 1995, 85). He called these visual tools *Thinking Maps* and began implementing them as comprehension aids at all educational levels, in kindergarten through the twelfth grade (Hyerle, 1995, 85).

Hyerle writes:

> students may exit our schools with the ability to read text, but not build meaning. Our students' *cognitive skills* development—the foundation of every school's goals or mission statement—are randomly supported, rarely raised to the level of fluency, and nearly absent as a distinct dimension of assessment.... And, as we know from our brain research, we must facilitate the *patterning* of content knowledge as a foundation

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> for learning. Thinking Maps, as a language of visual tools based on fundamental thinking skills, has been proven as one route for unifying content and process instruction, and assessment of products. (2000, 102)

Hyerle had realized that humans no longer think exclusively in linear patterns. He acknowledges that Thinking Maps help students become independent, motivated learners and enable students and teachers to see what the students are thinking. Flexibility is one benefit to using the maps; they may be adapted in complexity for the student who is using them (Hyerle, 1995, 86-88). Hyerle believes that the principal reason for their success is due to the fact that that they are "a common visual language among students and between students and teachers" (1995, 87-88).

A relevant issue to explore is how Thinking Maps differ from other visual tools, including graphic organizers and brainstorm webs. Graphic organizers are geared towards isolated tasks, as they are highly structured and task-specific; students simply are required to fill-in a worksheet. Webs are more flexible than graphic organizers, allowing the student to record personal knowledge about a topic in an adaptable format. Thinking Maps combine the task-specific structure of a graphic organizer with the flexibility of a web, enabling the student to transfer thinking processes and develop a common visual language that is shared by other students and teachers (Hyerle and Curtis, 2001).

What exactly does this mean? Thinking Maps are based on the eight fundamental thinking skills that everyone possesses: define, describe, compare and

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contrast, classify, divide a whole into parts, sequence, cause and effect, and see relationships. Once students master these eight thinking skills, they are taught how to apply these thinking processes in order to solve problems using Thinking Maps; students then are able to transfer thinking skills across content areas. Thinking Maps are especially unique because, unlike graphic organizers and webs, maps can be used by teachers to teach lessons, they can be used by students as a learning activity, and they can be used as reflective or developmental learning assessment tools by students and teachers alike. Thinking Maps alone develop higher level, critical thinking skills because they complement and promote the eight thinking processes. A student does not just record information—he or she comprehends and manipulates it using metacognitive skills, i.e., a student is required to think about thinking in order to understand and complete the map (Hyerle and Curtis, 2001). "The consistency and flexibility of each of the Thinking Maps promotes student-centered and cooperative learning, concept development, reflective thinking, creativity, clarity of communication, and continuous cognitive development" (Hyerle, 1995, 89).

The question then arises: are Thinking Maps truly effective in aiding reading comprehension? Substantial research asserts the effectiveness of graphic organizers, yet little officially has been published on Thinking Maps. To be deemed credible, claims must be validated and backed up by proof. When directly asked as to why this dearth of empirical data exists, B. Singer of Innovative Learning Group responded that Hyerle's initial focus has been on promotion of the maps; she states

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that with increased funds will come the money to back research studies (personal communication, December 18, 2002).

The most substantial proof of Thinking Maps' effectiveness has been the considerable rise in test scores in many schools where Thinking Maps have been introduced, particularly when tracked over several years. At the Margaret Fain Elementary School in Atlanta, Georgia, reading scores on the 1996 Georgia State Test of Basic Skills improved by 40% in just one year, with mathematical scores showing a parallel rise of 31%. Thinking Maps achieve such optimal results when implemented comprehensively across the curriculum on a school-wide basis; many other schools have demonstrated similarly large gains in testing scores (Hyerle, 2000, 134).

One of these schools that recently has noticed substantial increases in test scores is a school in eastern Massachusetts. Children who have documented, moderate, language-based learning disabilities receive specialized educational services at this educational institution's elementary, middle, and high schools; currently there are over 300 students from 91 towns across Massachusetts, New Hampshire, and Rhode Island who attend classes there. In September 2002, Thinking Maps were introduced in every grade and in every subject, including counseling, speech, and occupational therapy sessions; shop classes; and electives. Each Thinking Map first was introduced in the students' Language Arts classes, allowing one week for introductory exercises; other content areas reinforced the map the following week after its introduction. Maps which addressed higher-level thinking

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processes with complex cognitive development typically took an additional week for further reinforcement across the curriculum; student progress was monitored continuously to ensure that students were able to internalize the maps and become fluent with the thinking processes.

By December 2002, the Massachusetts Comprehensive Assessment System (MCAS) Retest had been administered, and all but one Thinking Map (the Bridge Map, which the school's students found to be the most abstract and difficult) had been introduced. During the administration of the test, nearly every student used Thinking Maps to organize written information on Language Arts and Mathematics open response questions as well as on the Literature portion of the exam. When the MCAS Retest scores arrived in March 2003, the school's administrators were able to credit significantly improved test scores to Thinking Maps exclusively, as no other variables had been introduced during the academic year, and all classes followed the standard pattern which they have followed the last several years and to which returning students have grown accustomed.

After interpreting 2002 MCAS Language Arts Retest scores, administrators noted that reading comprehension was increased substantially, as evidenced by the rise in scores from *0* and *1* to *3* and *4* (ranging from low to high comprehension ratings); in previous years, out of a field of approximately 45 students, only a few students would score an occasional *3*, and a *4* was even more rare, if it even appeared at all. On the 2002 MCAS Language Arts Retest scores, out of a field of 41 students, 13 students scored at least one *3* (and no higher) on an open response

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question, and 20 students scored at least one *4*, indicating that comprehension had increased to passing levels for 33 out of 41 students.

With regards to the 2002 MCAS Mathematics Retest scores, out of a field of 56 students, 5 students scored at least one *3* (and no higher) on an open response question, and 24 students scored at least one *4*, indicating that comprehension had increased to passing levels for 29 out of 56 students.

The school's students had utilized Thinking Maps as tools for processing and organizing information on the MCAS exam, and the benefits were apparent in their overall scores (see Appendix A). In previous years, a minor percentage of students passed each test; the majority failed. On the 2002 MCAS Language Arts Retest, however, 28 students passed, and 13 failed. Out of the 13 who failed, 8 students came within two points of a passing score. Twenty-six students passed, and 31 failed the 2002 MCAS Mathematics Retest. Seven students came within two points of a passing score, out of the 31 who failed.

Since September 2002, student performance at this school has improved as demonstrated by an increase in vocabulary acquisition, concept attainment, an ability to make connections, and an ability to establish relationships (see Appendix C). The students' overall learning process has been facilitated by the use of these visual tools (see Appendix B). Using Thinking Maps, students have able to develop cognition and comprehension strategies in order that they may bridge the gap between current and projected abilities. As evidenced by the 2002 MACS Retest scores, Thinking Maps have proven to be an integral tool for students to retain and

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retrieve content, attain concepts, and forge connections. Teachers' fluency with Thinking Maps is tracked as well, to ensure that students are receiving the maximum benefit possible (see Appendix F).

In lieu of extensive published research, and in addition to increased test scores as reported by many districts, one also could interpret the fact that over 3,000 schools worldwide implement Thinking Maps into their curriculum as evidence that they must work to some degree (B. Singer, personal communication, December 18, 2002).

Reading is elemental for learning; one must be able to master comprehension in order to facilitate knowledge acquisition. Rote teaching methods have proven to be only minimally effective, as students typically do not retain much of what they have read and incorrectly decode the material. This dilemma necessitates that educators change their teaching methods to include strategies that address the development of reading comprehension skills, including retention and retrieval, thus helping students become independent learners.

The past thirty years have yielded a significant amount of research supporting the use of graphic organizers with all student populations to assist with reading comprehension and decoding text structure. Research has demonstrated that visual tools are a viable instructional strategy that enables students to attain concepts and establish connections requisite for proficiency, and that they are an integral component of successful teachers' repertoires of instructional methodologies.

Whichever strategy is utilized, one factor remains constant, the

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importance of using some kind of strategy. As students rarely are able to grasp key concepts and understand content independently, strategies can prove to be invaluable tools for helping students construct meaning from text. When educators are armed with such tools, research corroborates that students, in fact, can make substantial gains in reading comprehension.

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Appendix A

Following are an eastern Massachusetts school's MCAS results for the past three tests; MCAS results for Spring 2002 were unavailable.

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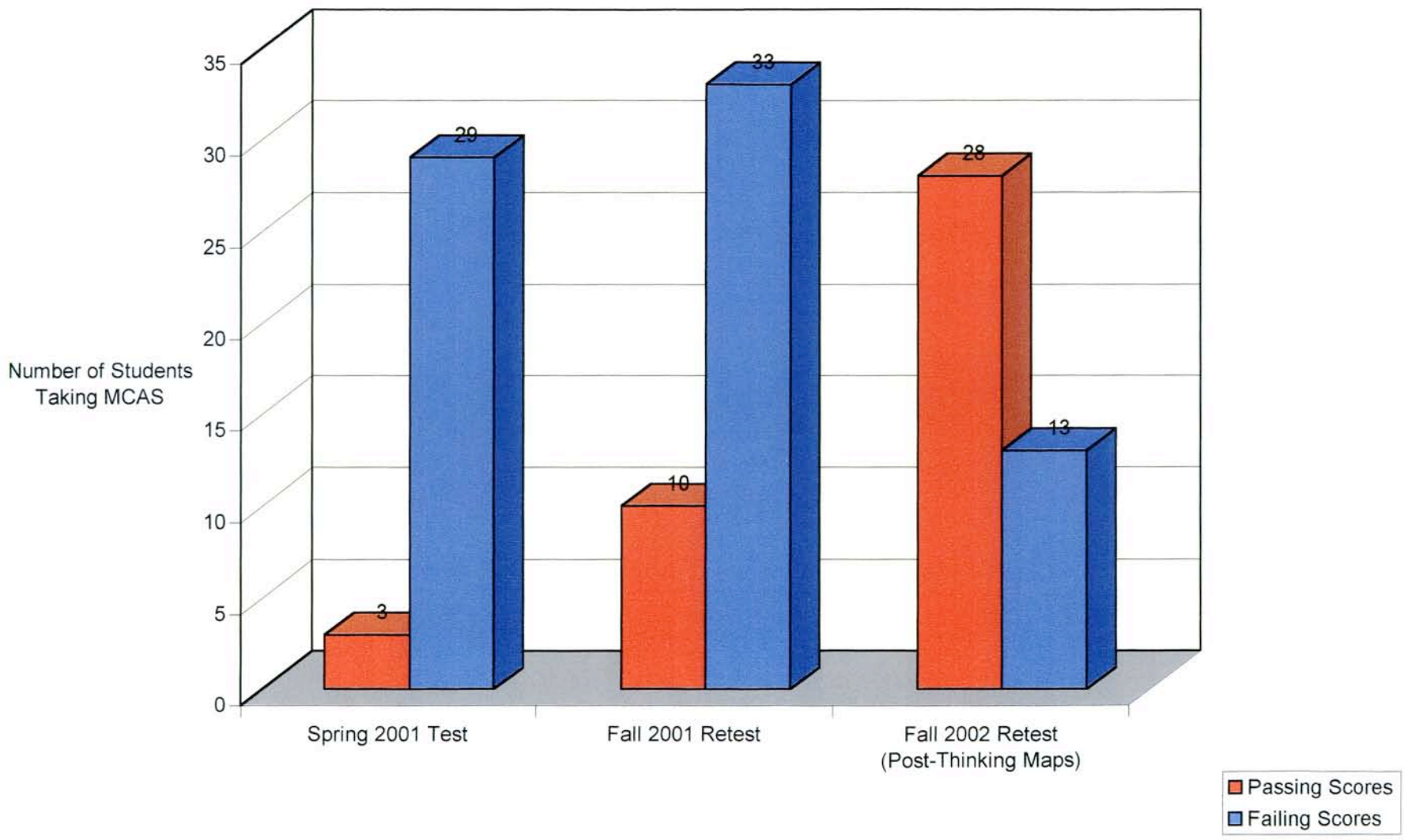
MCAS Results - English Language Arts



N.B.: Spring 2002 MCAS test results were not available

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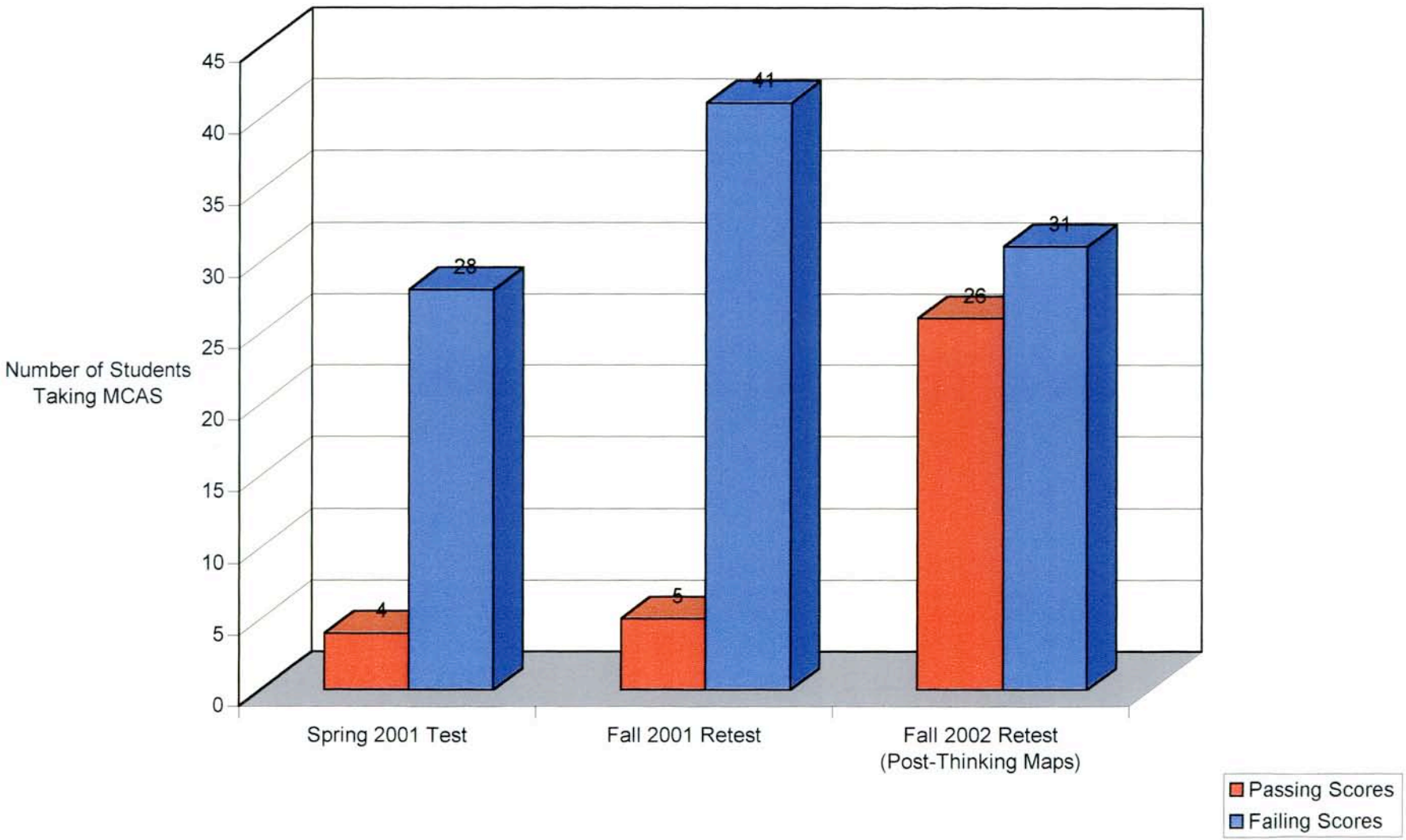
MCAS Results - Mathematics



N.B.: Spring 2002 MCAS test results were not available

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Appendix B

Sample Thinking Maps that were completed at the school in eastern Massachusetts follow; some maps have been constructed using "black line worksheets," or graphic organizer-type handouts. These starter maps were drawn during the introduction phase of Thinking Maps (September 2002 – January 2003). Most students now are expected to construct the maps independently; dysgraphic students are encouraged to utilize Thinking Maps software when drawing maps (samples of which also are included).

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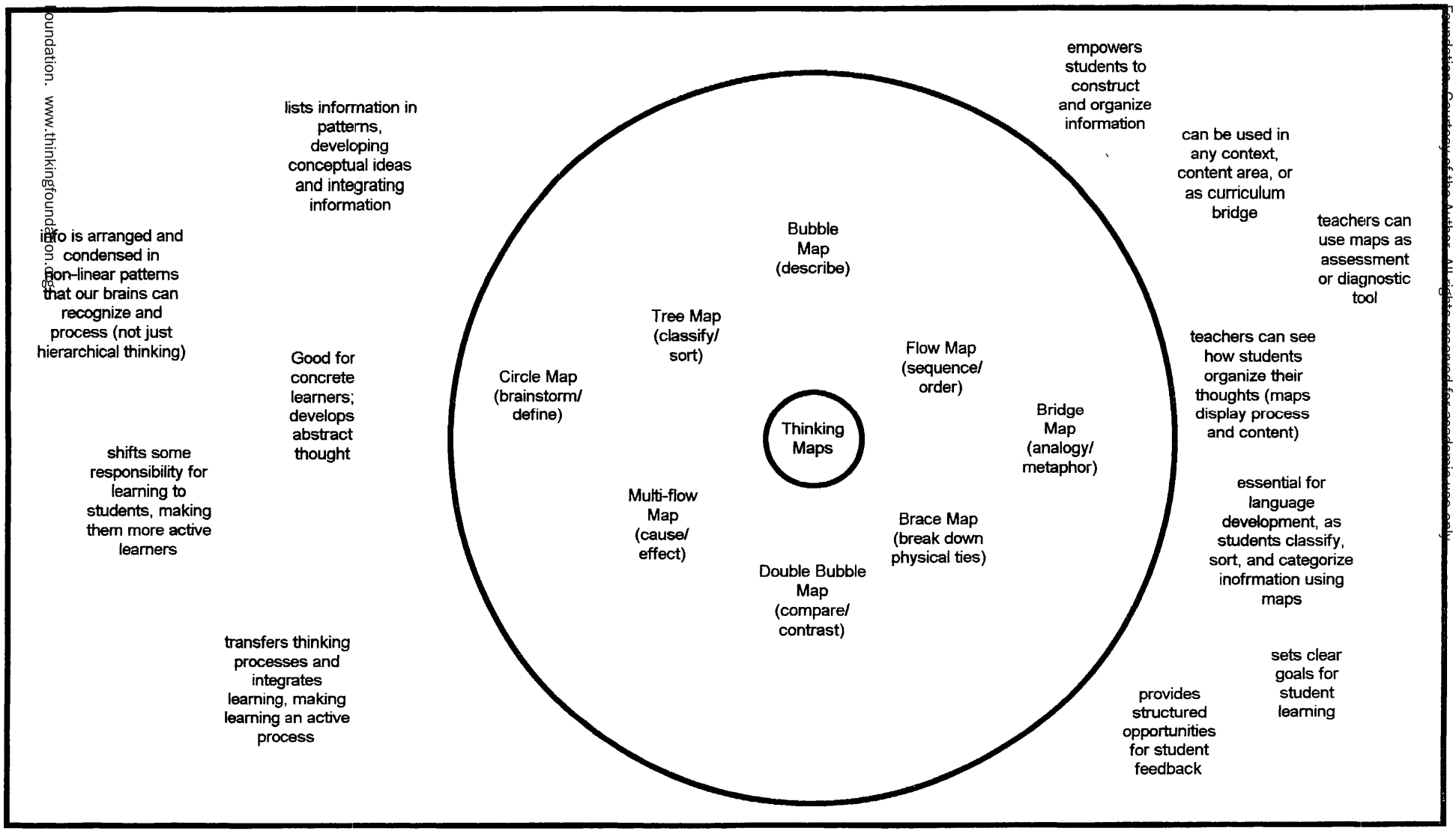

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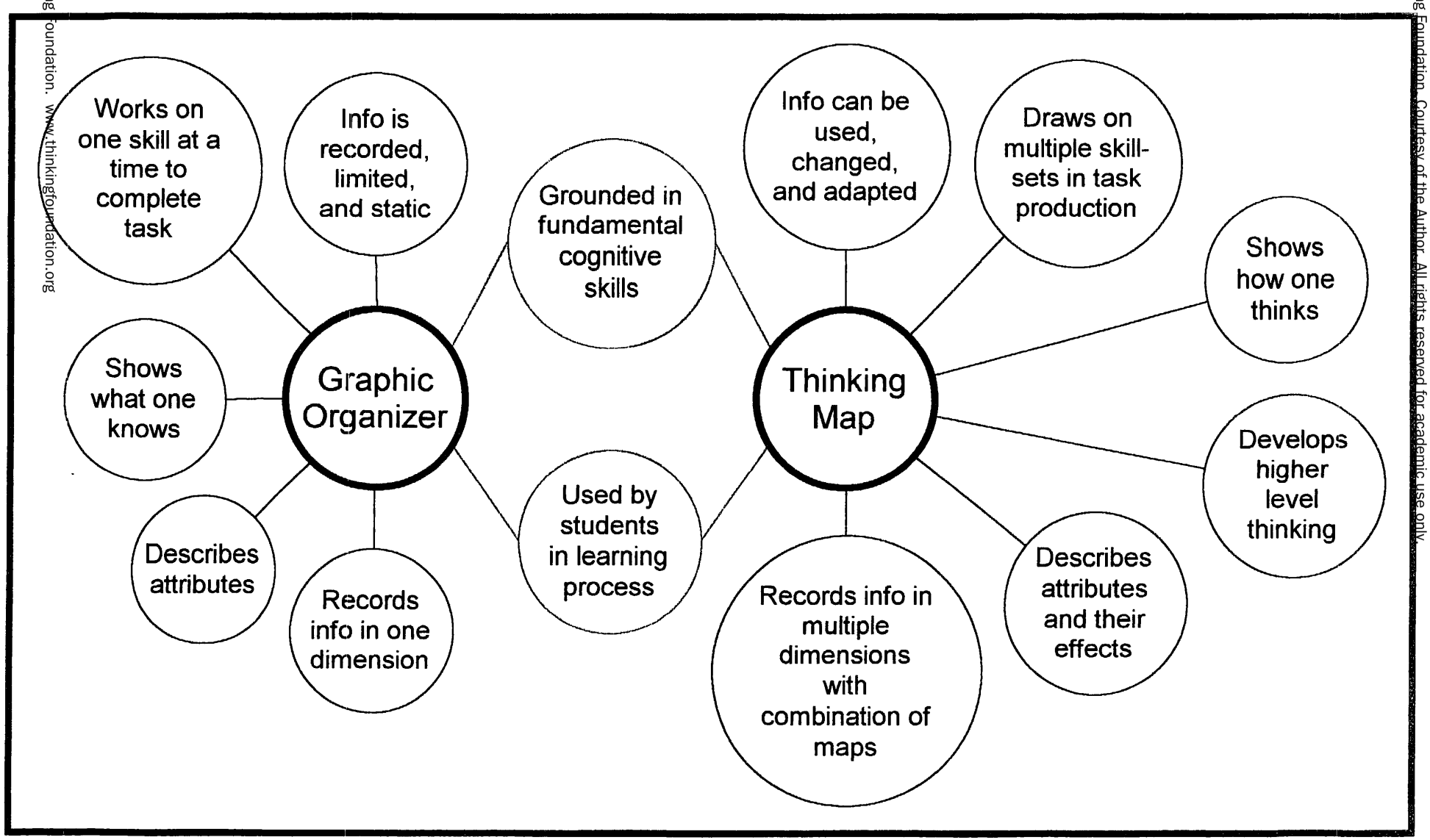

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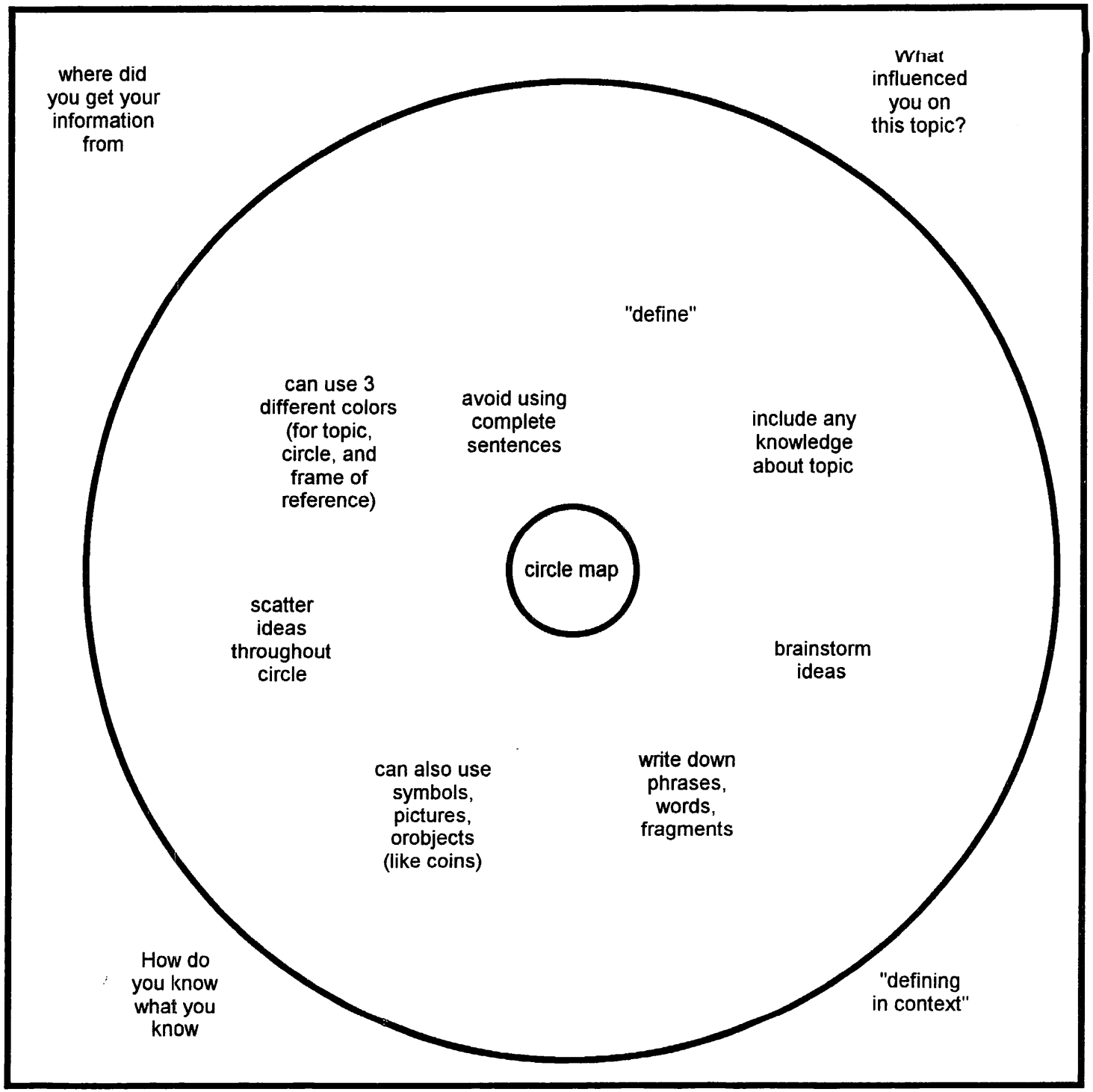

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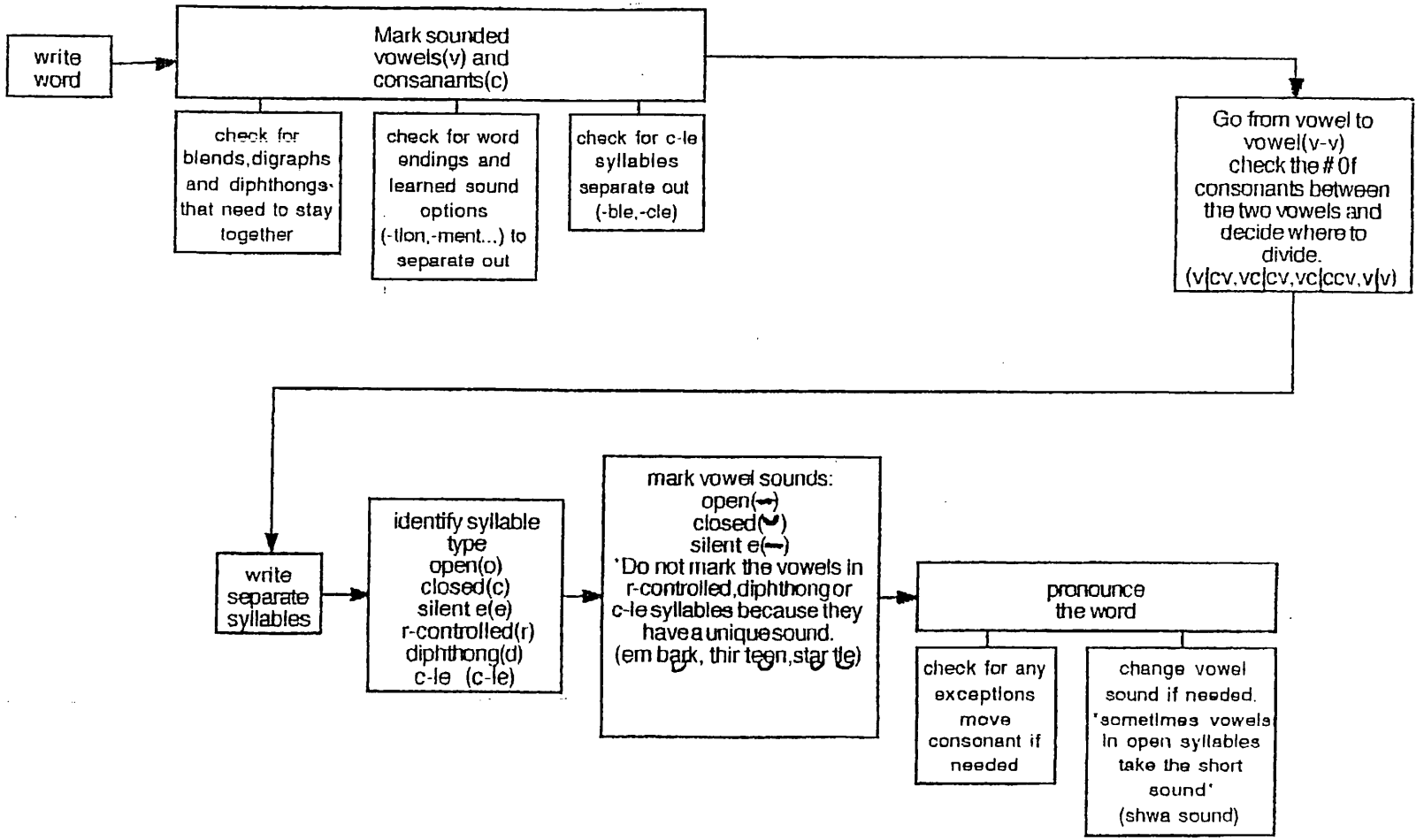
Steps for Dividing Syllables



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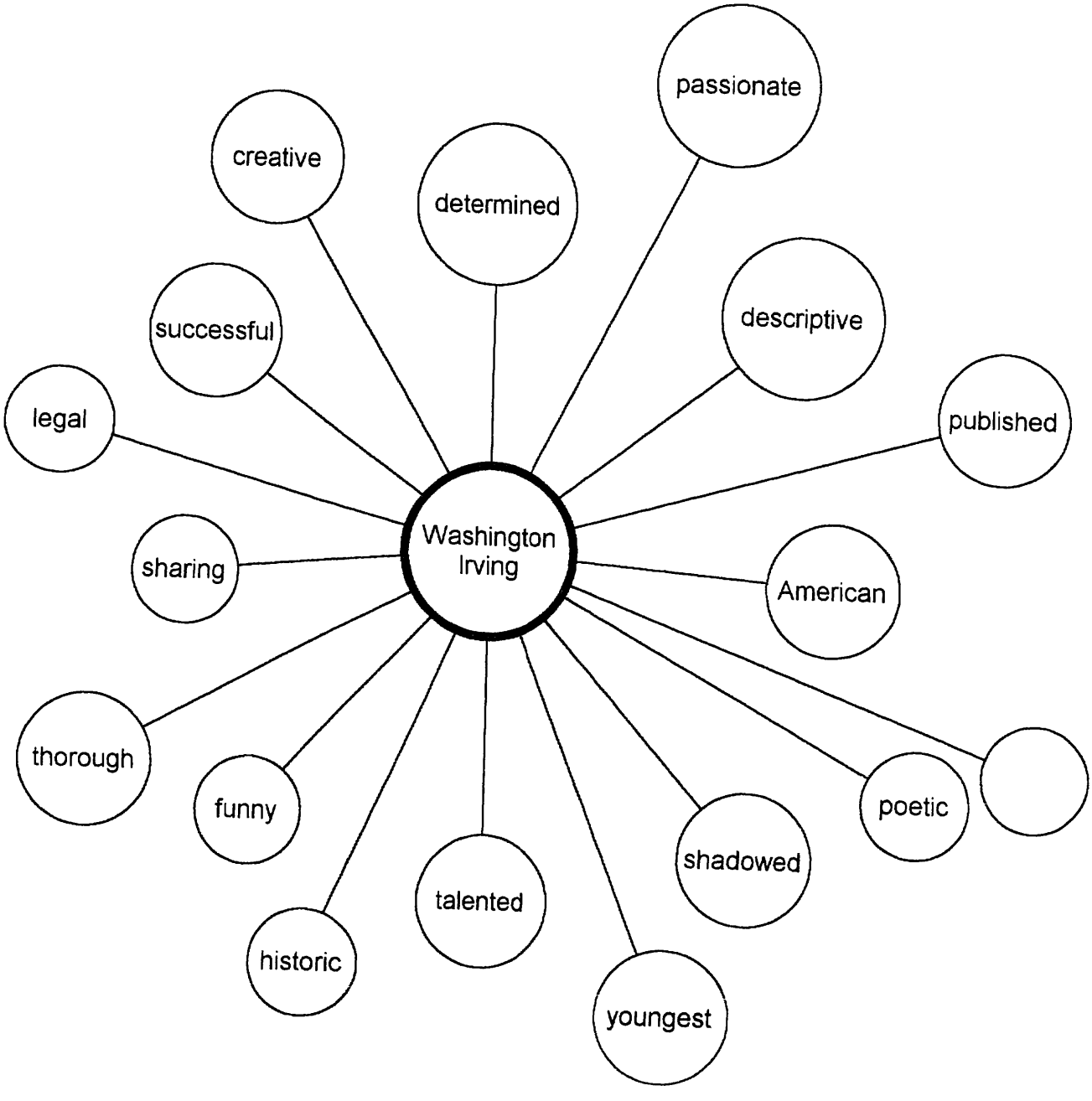

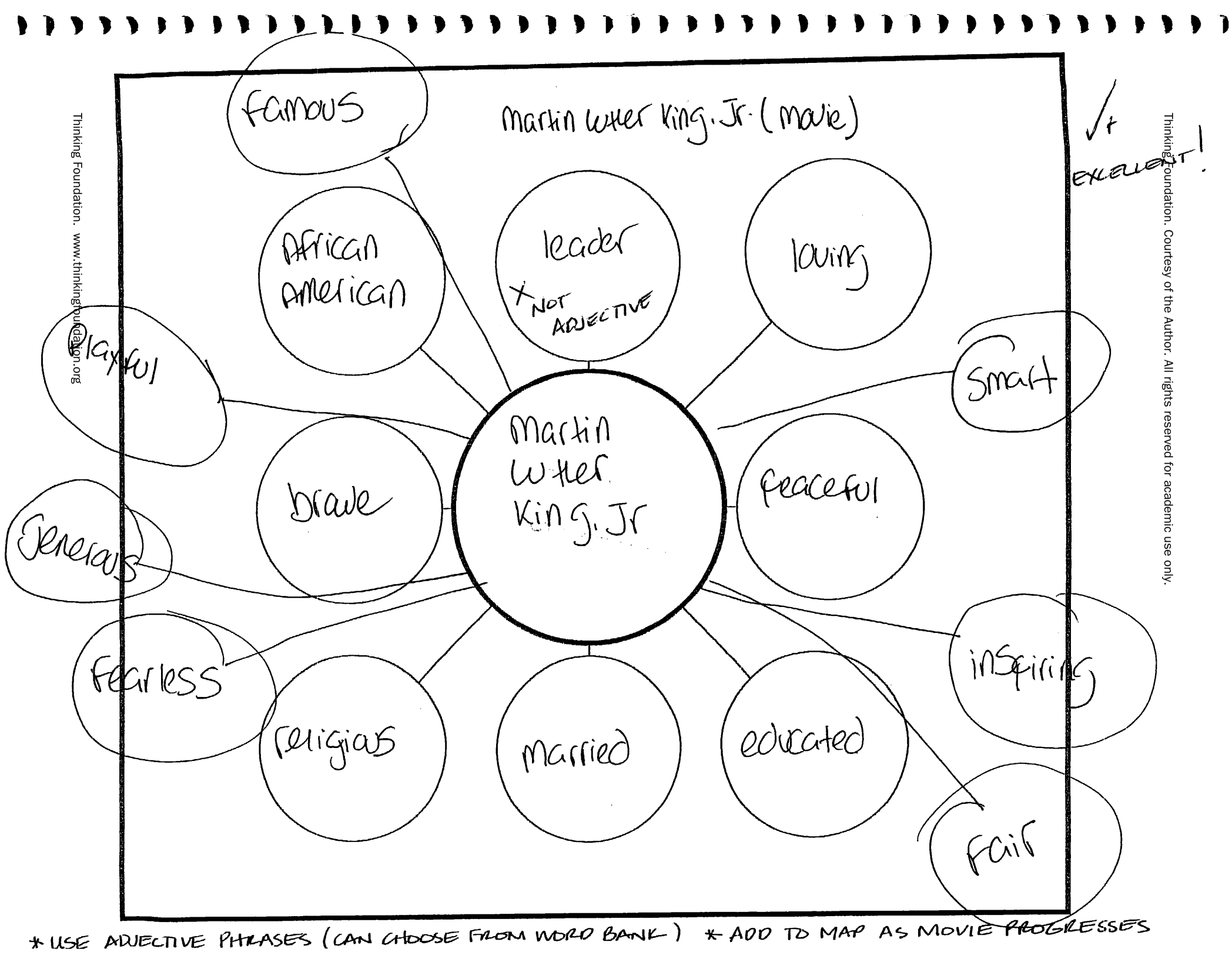

√+ EXCELLENT!

* USE ADJECTIVE PHRASES (CAN CHOOSE FROM WORD BANK) * ADD TO MAP AS MOVIE PROGRESSES

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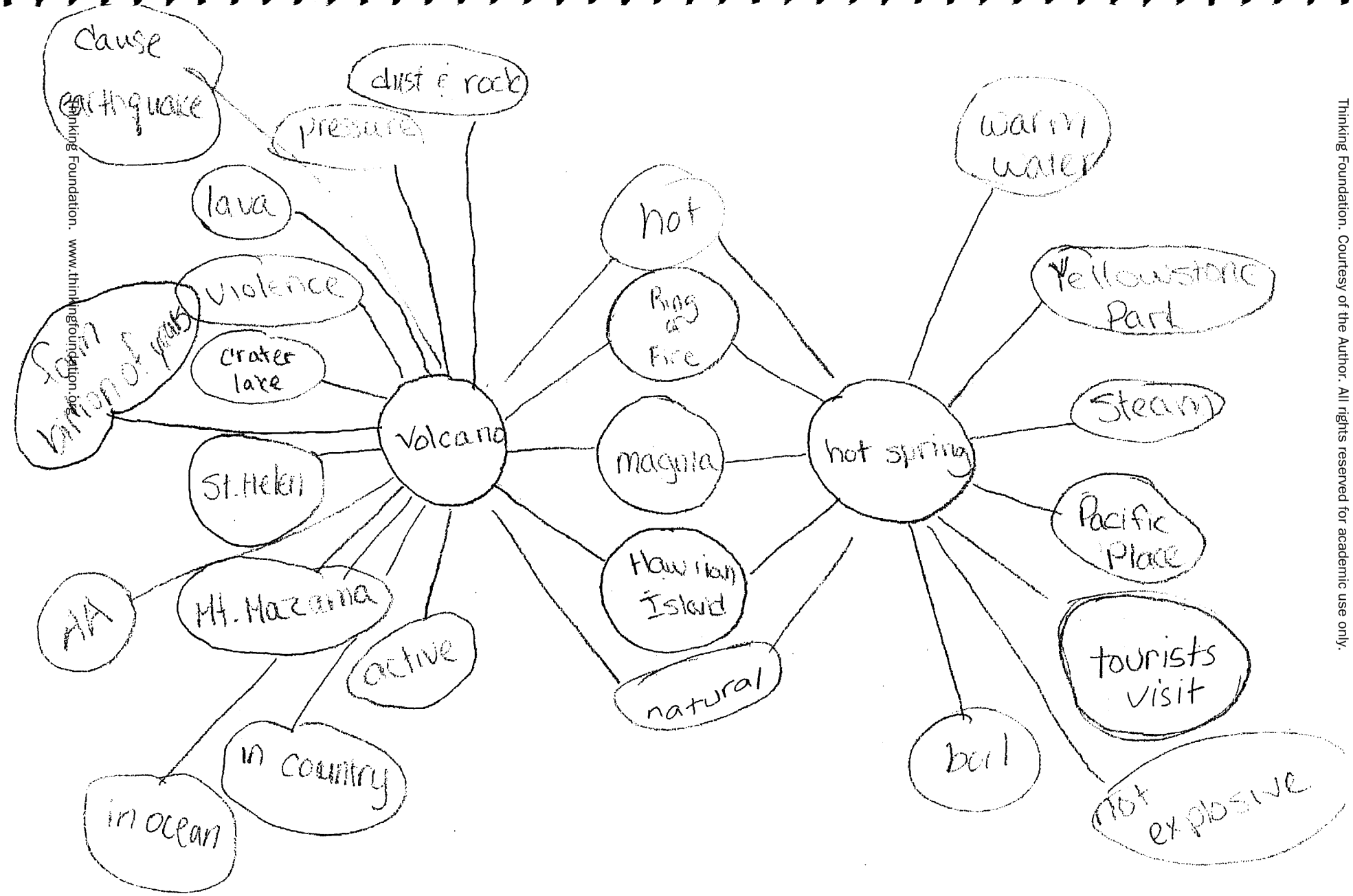

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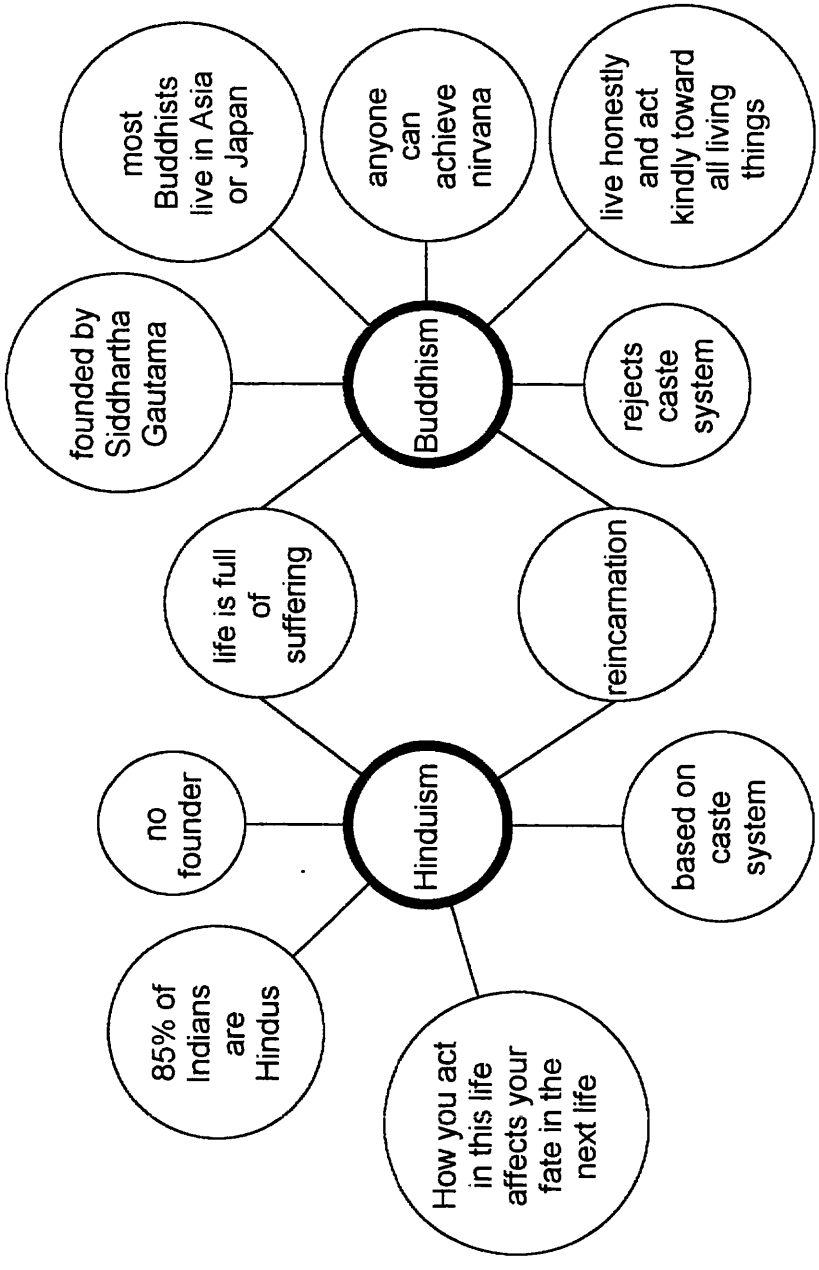

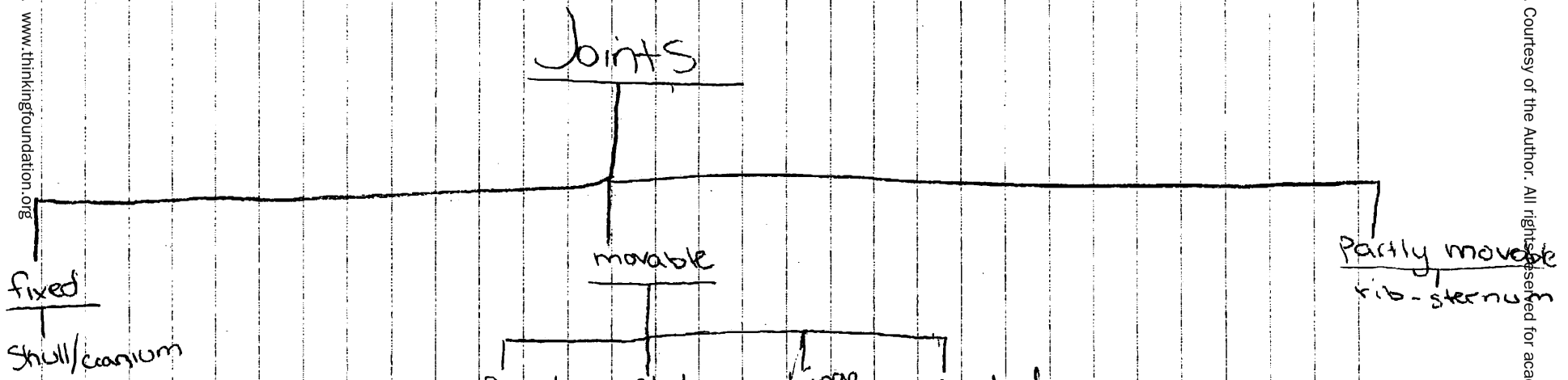

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2/7/03

Science — Space shuttle Disaster — per. 3

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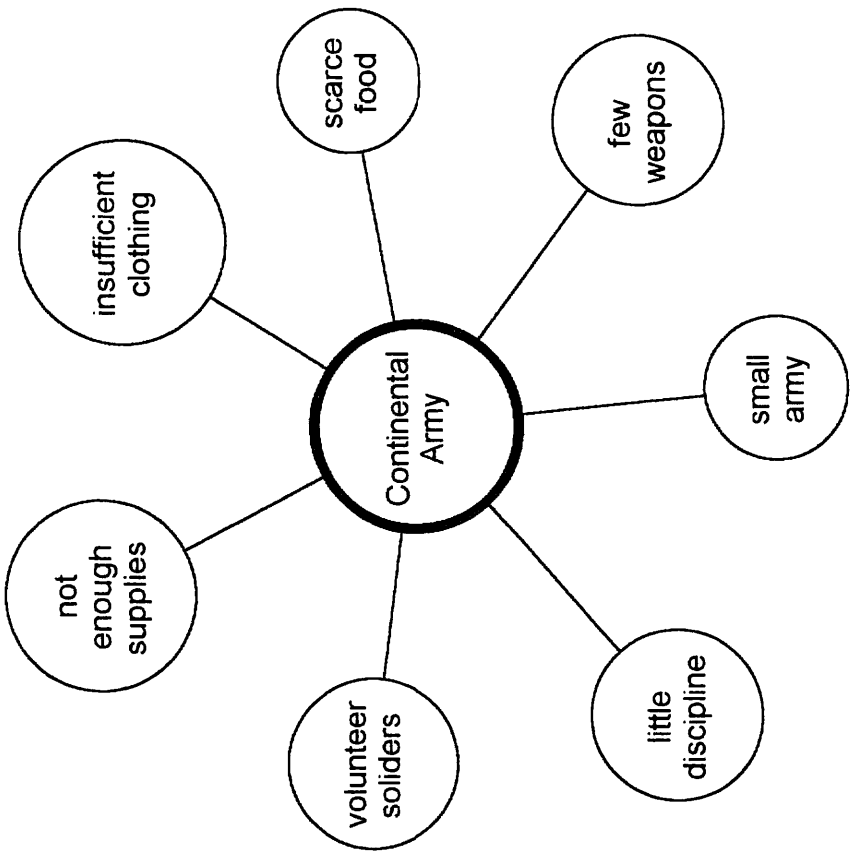

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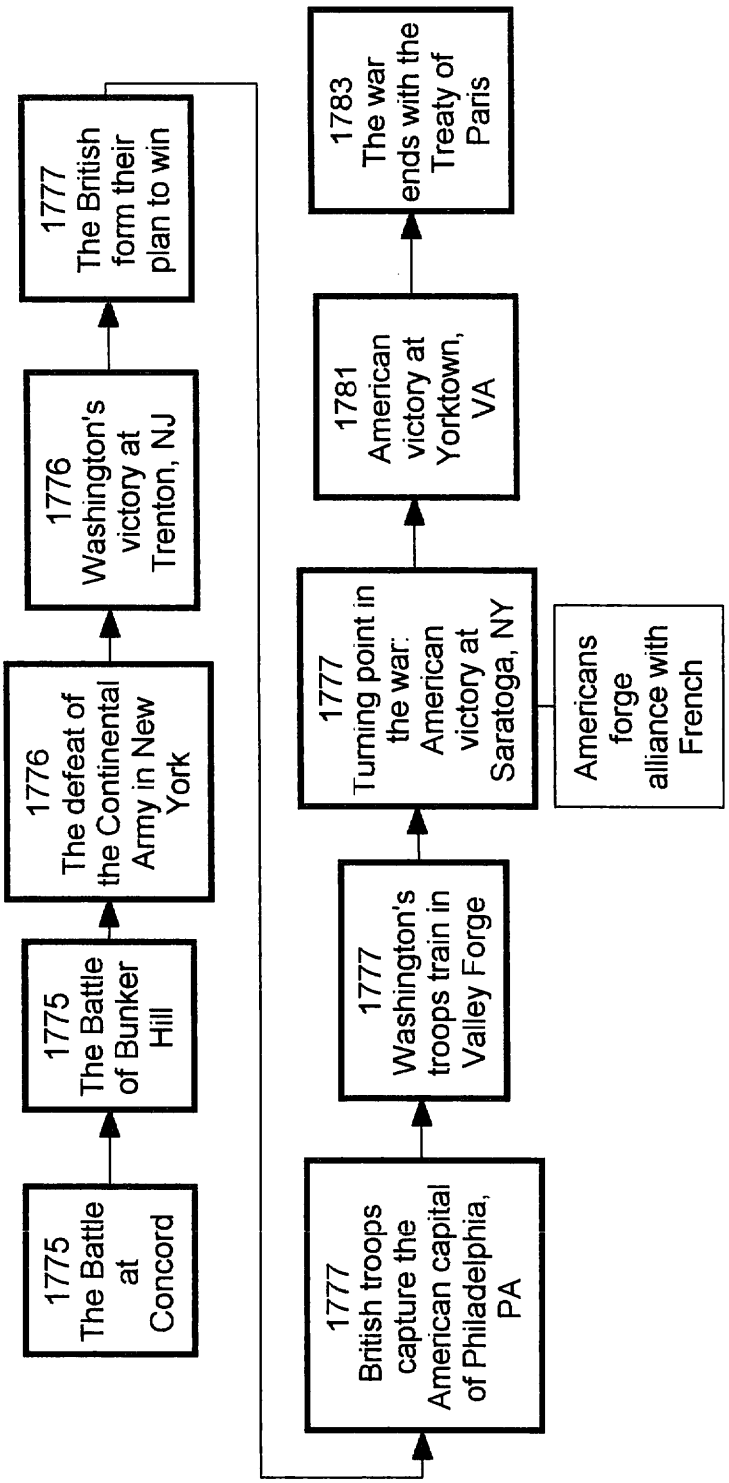
Timeline of the American Revolution



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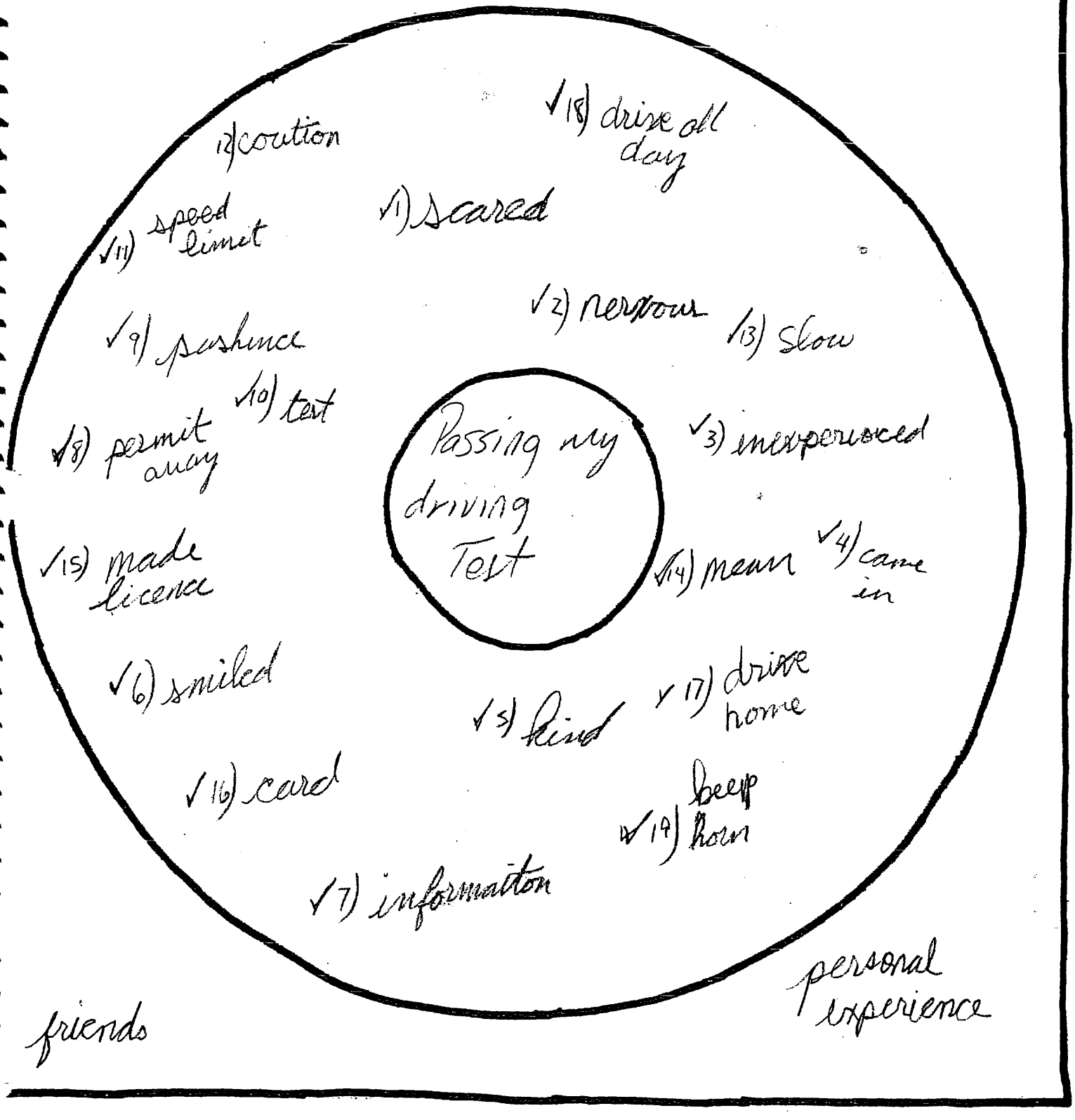
Love how you numbered and checked your details.

Wow!

Name: _____ Date: 10/22/11

Subject: Literature



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¶ = new paragraph

10/23/02

Literature

"Life is not measured by the number of breaths we take, but by the moments that take our breath away." Passing my driving test was a moment that took my breath away. I took got my driving test last year. Now, I can drive my friends around, but before all this, nobody could can drive with me, only my parents or family members.

¶ When I was going to North Attleboro Atibero License Registry, I was very scared. I was nervous because I knew everything and I didn't want to fail. When you're inexperienced, they don't let any mistakes slip by. I took three deep breaths and walked in. The state police officer was very kind to me. We both smiled and said let's go. Before all that, he got all of my information. ¶ If I pass, I don't have my permit anymore. I had a lot of patience paychinel and we drove out. The most important steps are is to always to us your blinker, always go do the speed limit, always use caution, and drive slowly. If I did something wrong, he would will get meaner. ¶ After all that, I got made my license. I got a white slip; it was is temperary. I got to drive home. My mom and dad said that I

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could drive all day. I drove up the driveway (driveway) and beeped my horn in victory. Passing my driving test was a moment I will never forget.

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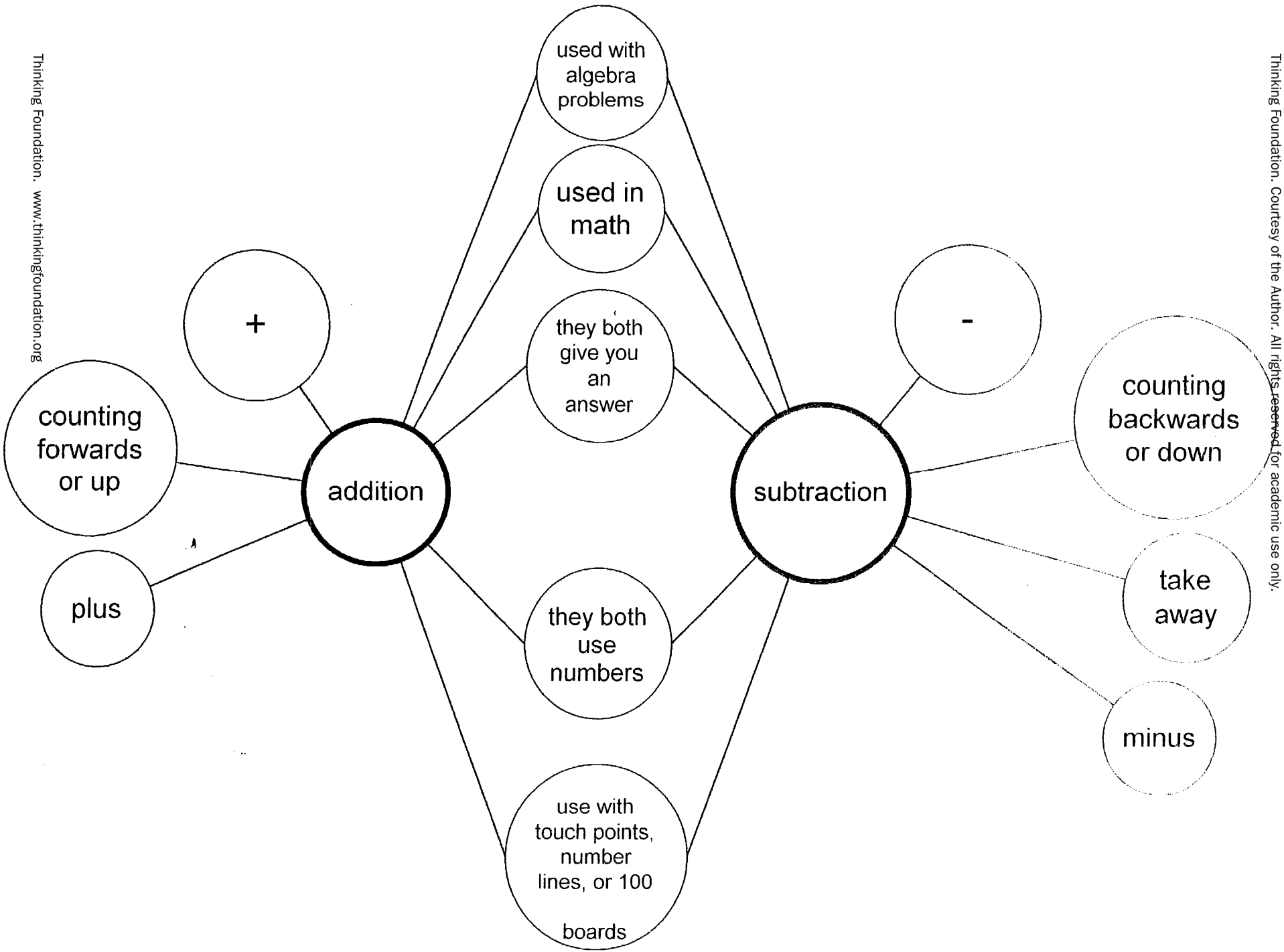

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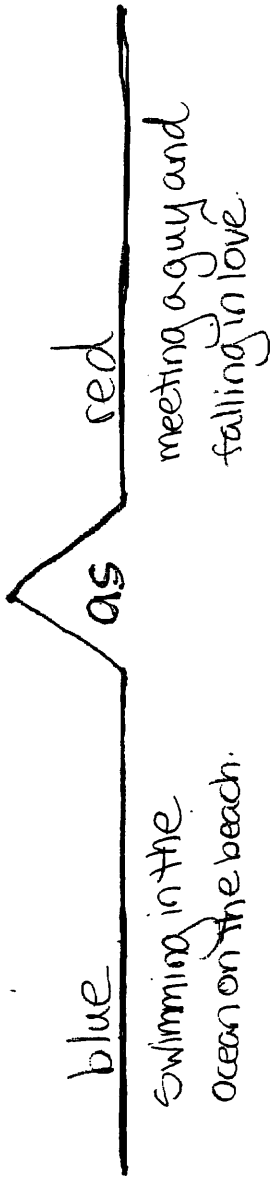
Name: _____ Date: 1/29/03

Subject: Literature Period: 7

A+ Outstanding!



reminds me of

relating factor

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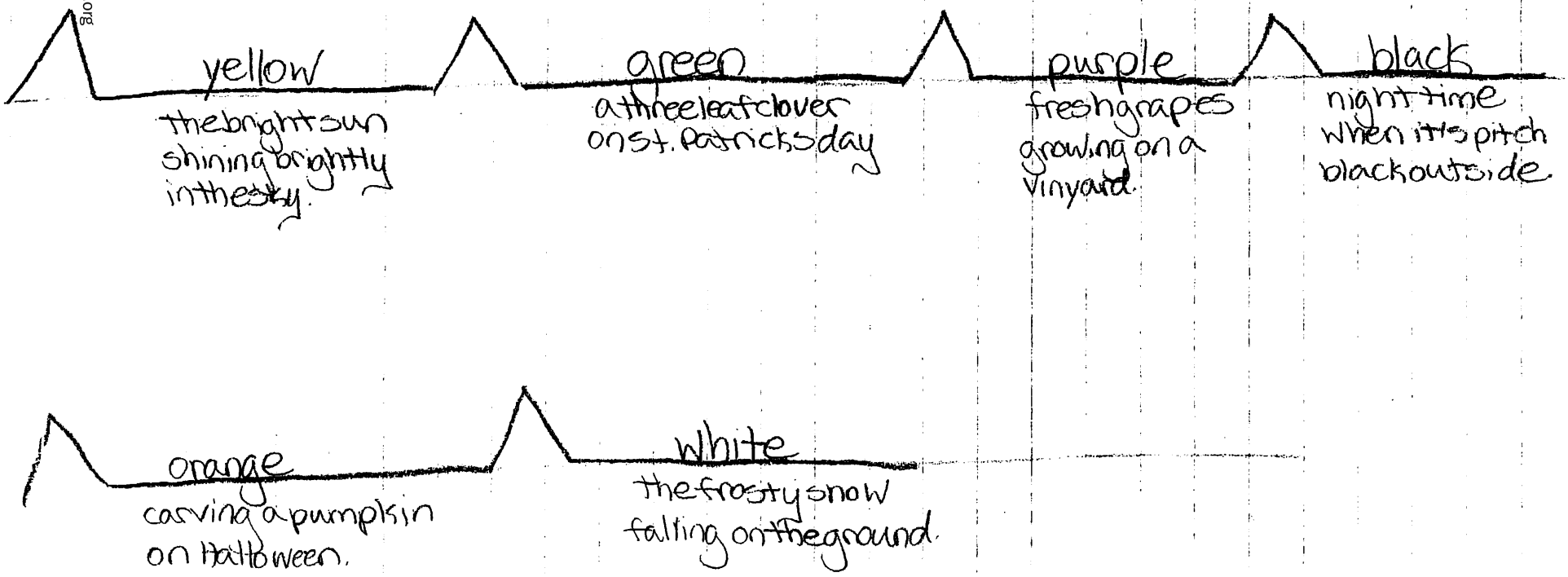

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equals	100 cm	as	1,000 m	as	12 in	as	3 ft	as	5,280 ft	as	1,760 yd
Relating Factor	1 m		1 km		1 ft		1 yd		1 mi		1 mi

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7/13/03

Math Per 5

Use fewest amount

$87.89

1 50 dollar bill

1 20 dollar bill

1 10 dollar bill

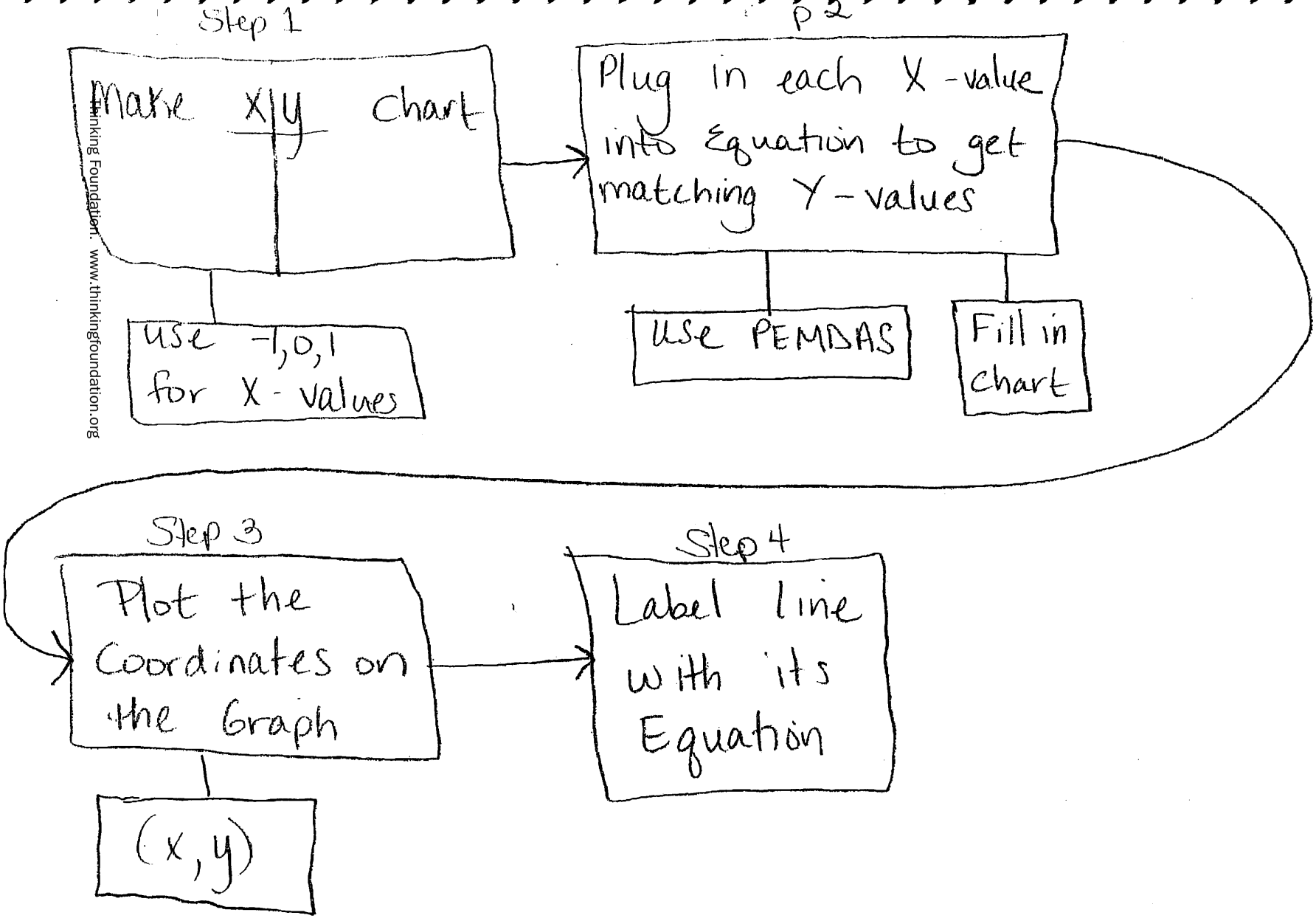
1 5 dollar bill

2 1 dollar bills

3 quarters

1 dime

4 pennies



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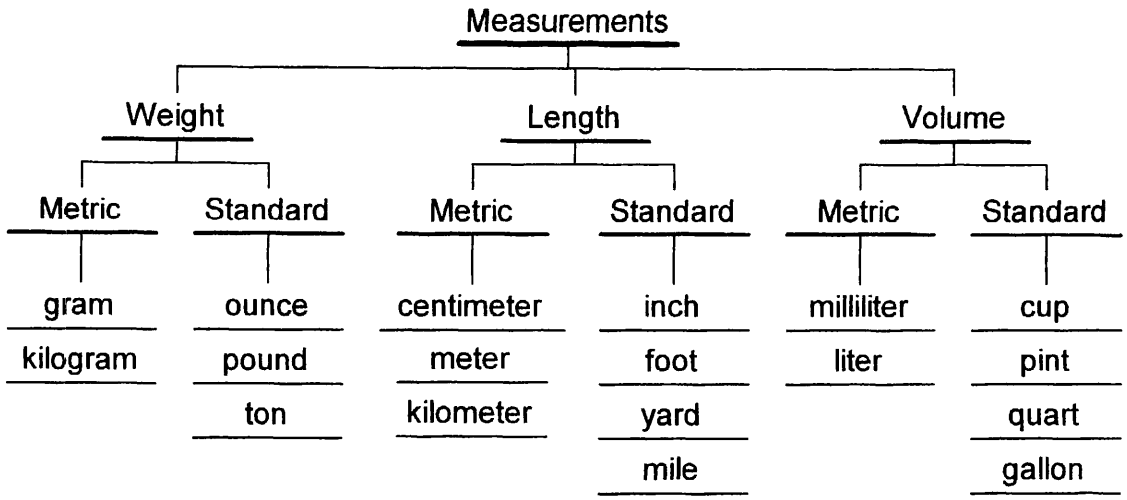

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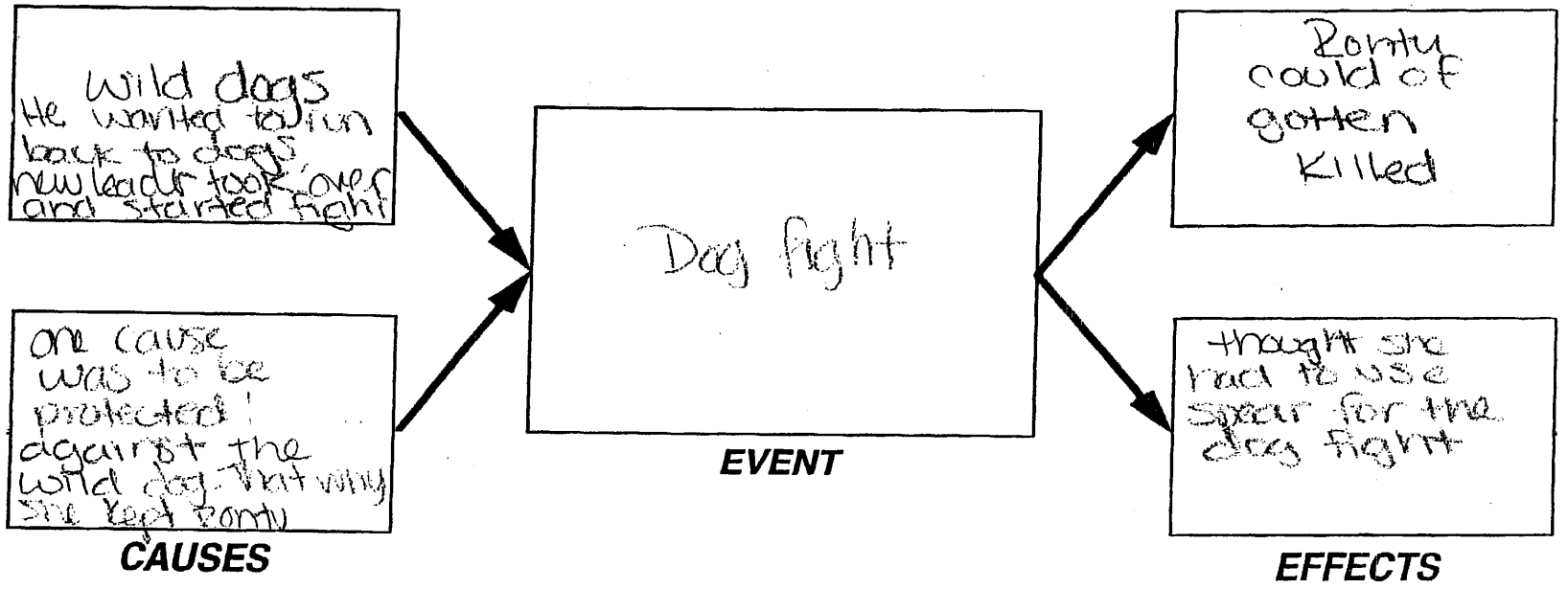
Multi-Flow Map **Name** _____

Island of the Blue Dolphins by Scott O'Dell

What were the causes and effects of the dog fight Ronru was involved in?



Critical Thinking: (1P)

How did the fight bring Karana and Rontue closer?

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2/27/03

Literature

Multi-Flow map

There are alot of different causes and effects have to do with the dog fight. One cause is that Rantu was a wild dog and he wanted to run back to see his buddies. A new leader took over Rantus Spot and that what started the fight. One reason Karana kept Rantu is because she wanted to feel protected against the wild dogs. One of the major effects was that Rantu could have gotten killed in the fight. When Karana saw the fight she thought that she would have to use her new spear. The fight brought them closer because it shows that Karana really cares for Rantu and she was there the whole time backing him up. There going to become closer because Rantu doesn't have a dog gang to hang out with anymore and I know that Rantu will back Karana up when ever she needs help.

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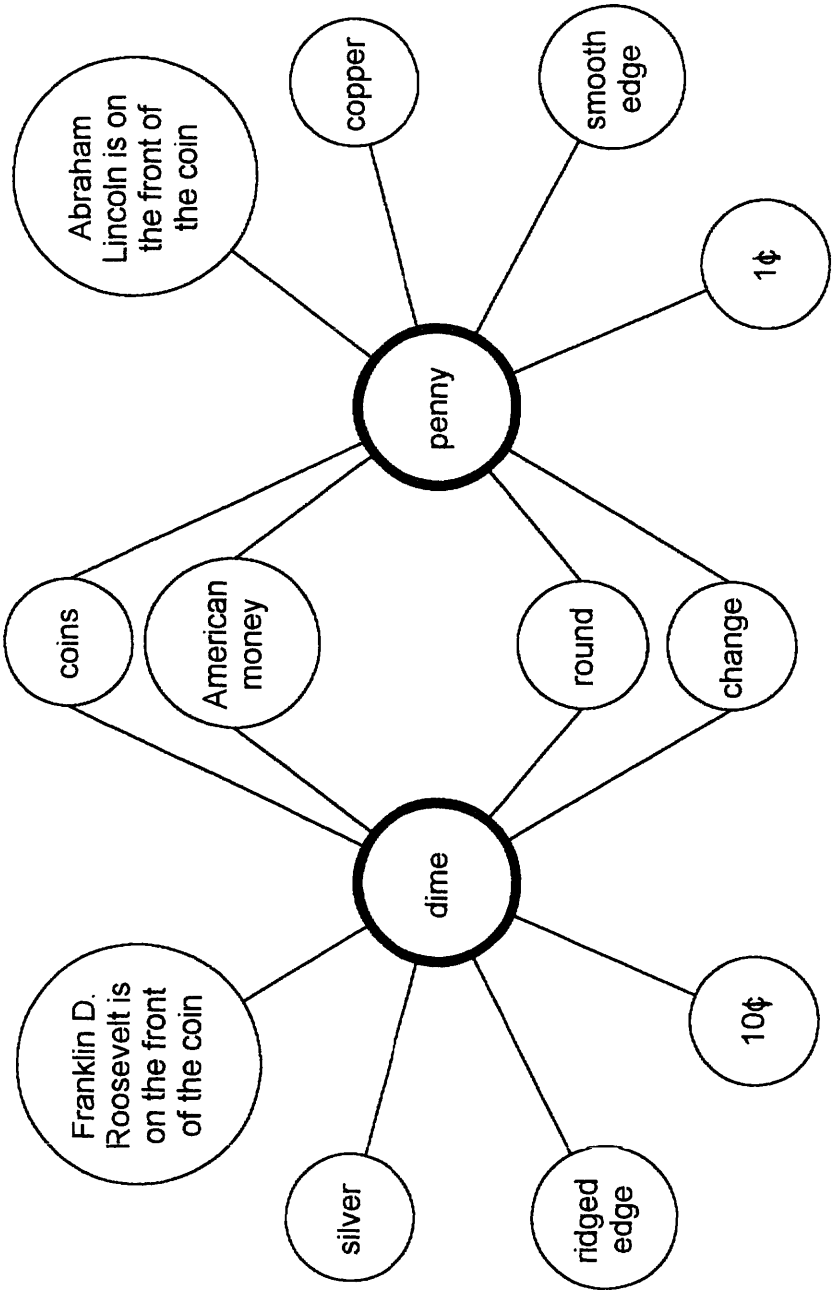
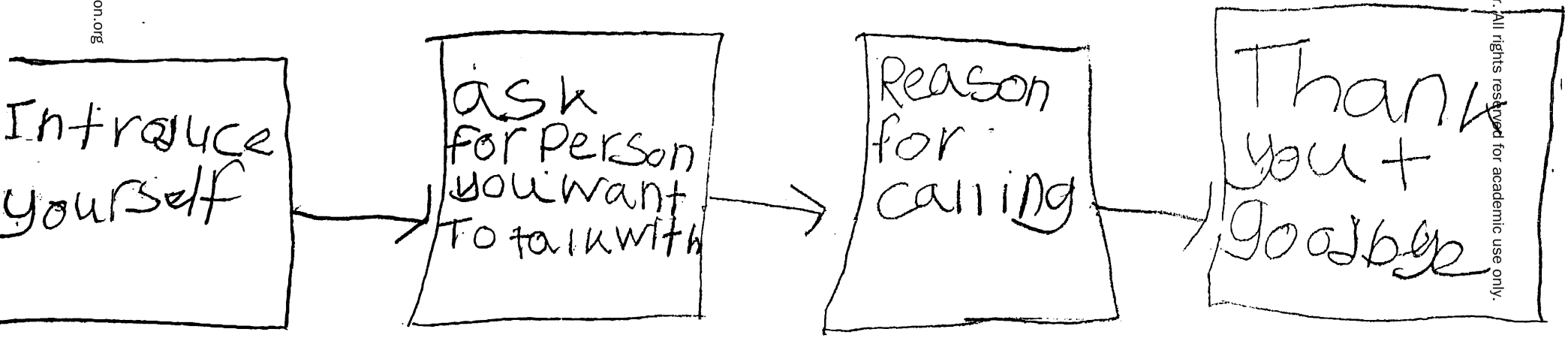
Double Bubble Map



Phone Skills — How rap

"How To Make a Business Call"



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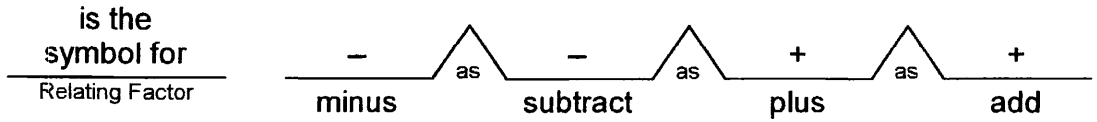
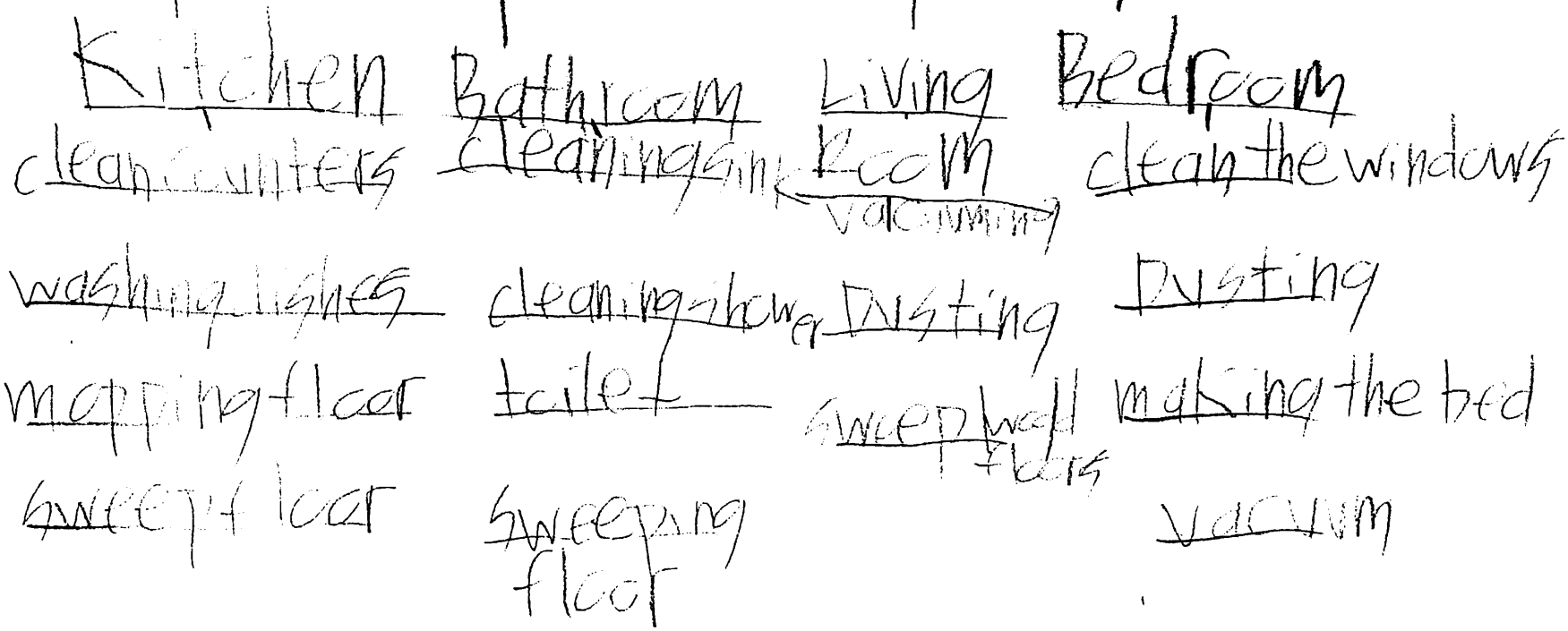


Tree Map

Daily chores



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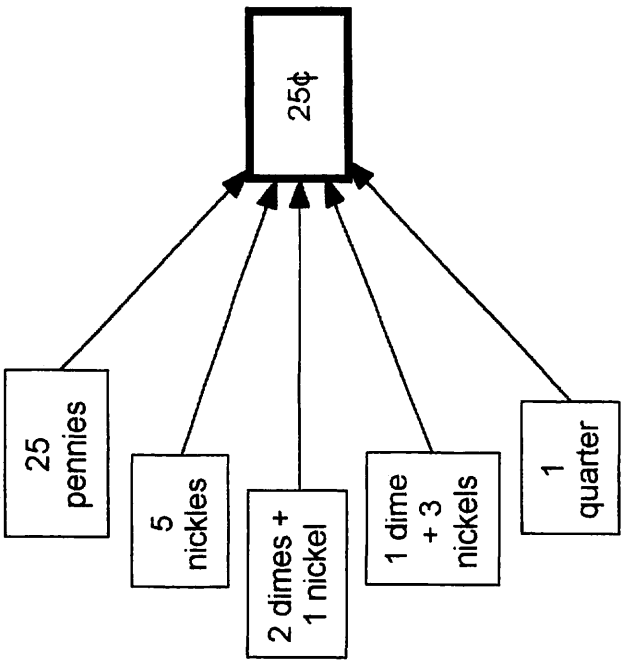

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3-6-03

Living skills Period 4

News Paper

- section A
  - Editorial
  - Top breaking news about world
  - National News
  - Front page (very important
- section B
  - city & government
- section C
  - Health + Science
  - classifieds
    - jobs
    - selling
    - cars
- section D
  - TV & radio
  - Deaths
  - comic
  - classifieds
- section E
  - Living Arts
  - T.V. + Radio info
  - weather
  - movies
  - resturants
  - info about books
- section F
  - sports
  - score board
  - sports news

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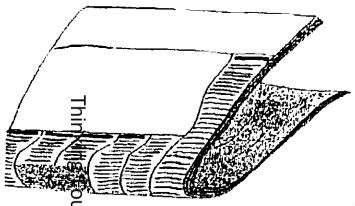

Current Event

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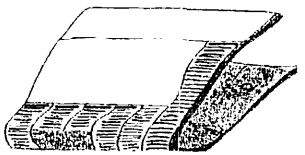
(Title of Article)

Source | **Author** | **Who** | **What** | **When** | **Where** | **Why**



Directions: Cut out a current event from a newspaper, magazine, or from the internet and fill out the Tree Map. Attach the article to the Tree Map

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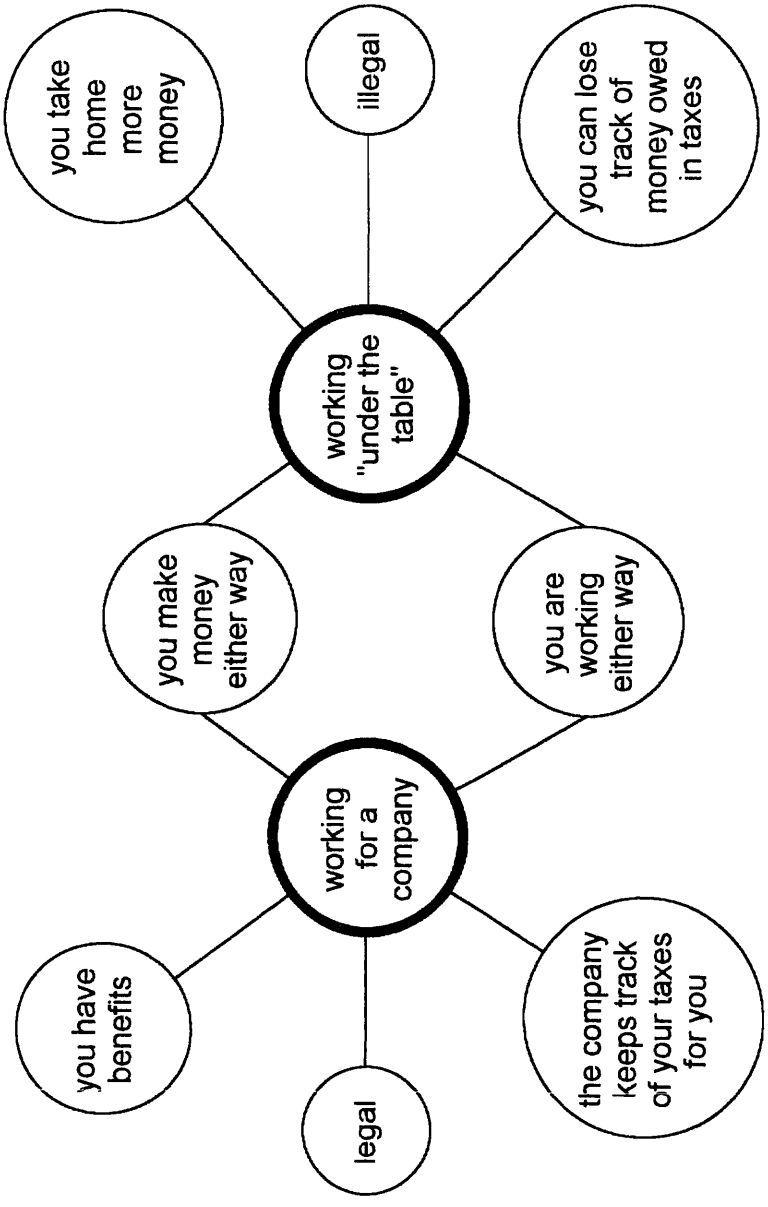

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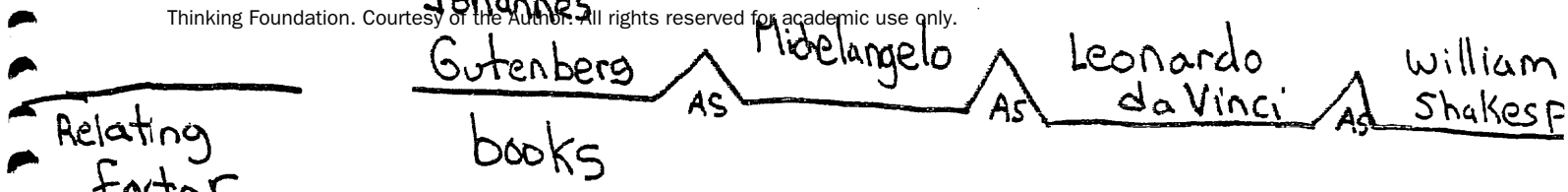

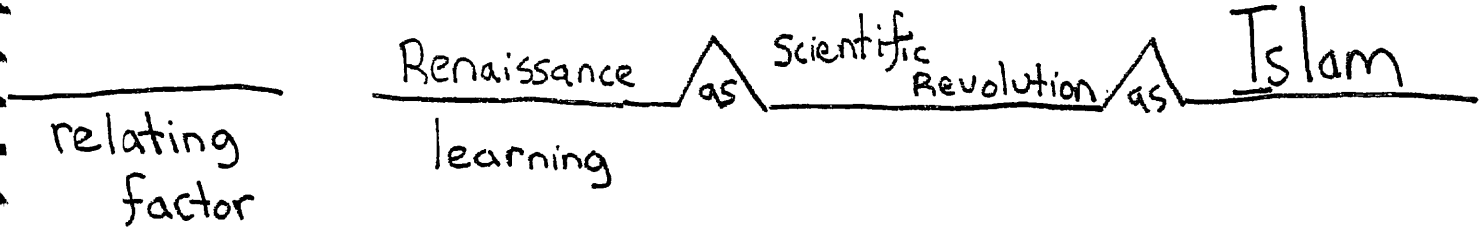

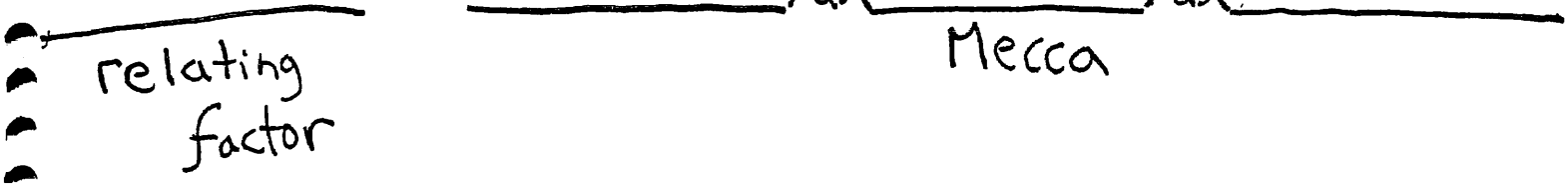

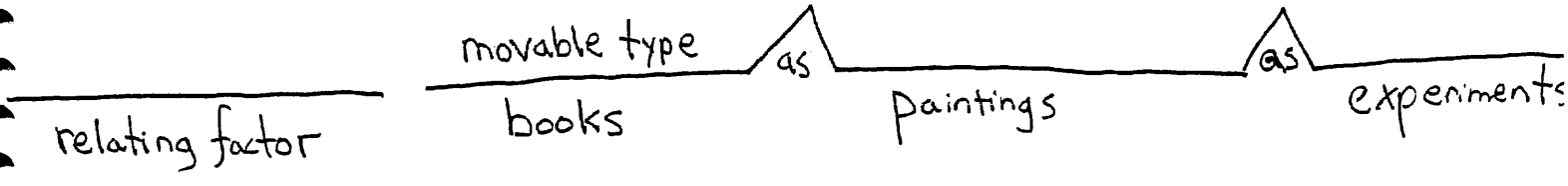

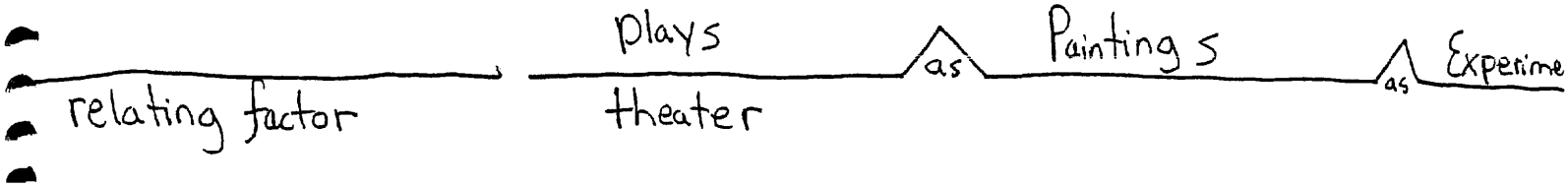

Name: _____ Date: _____

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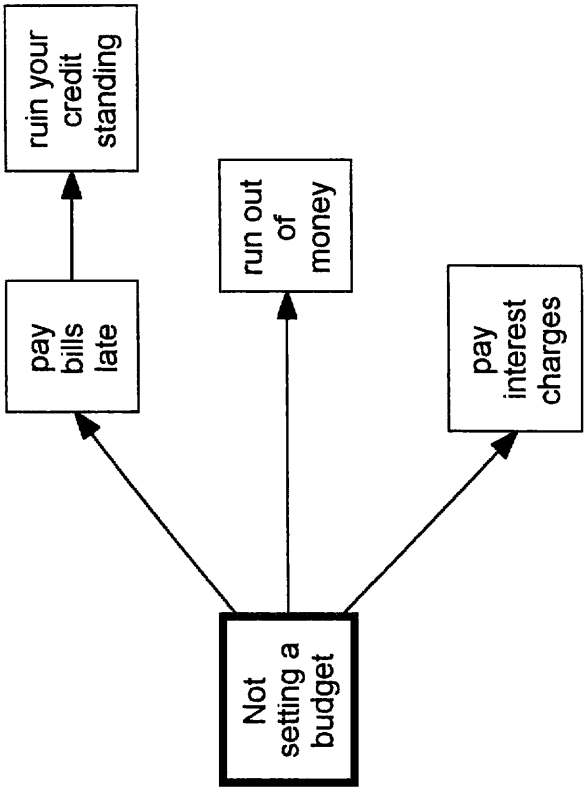
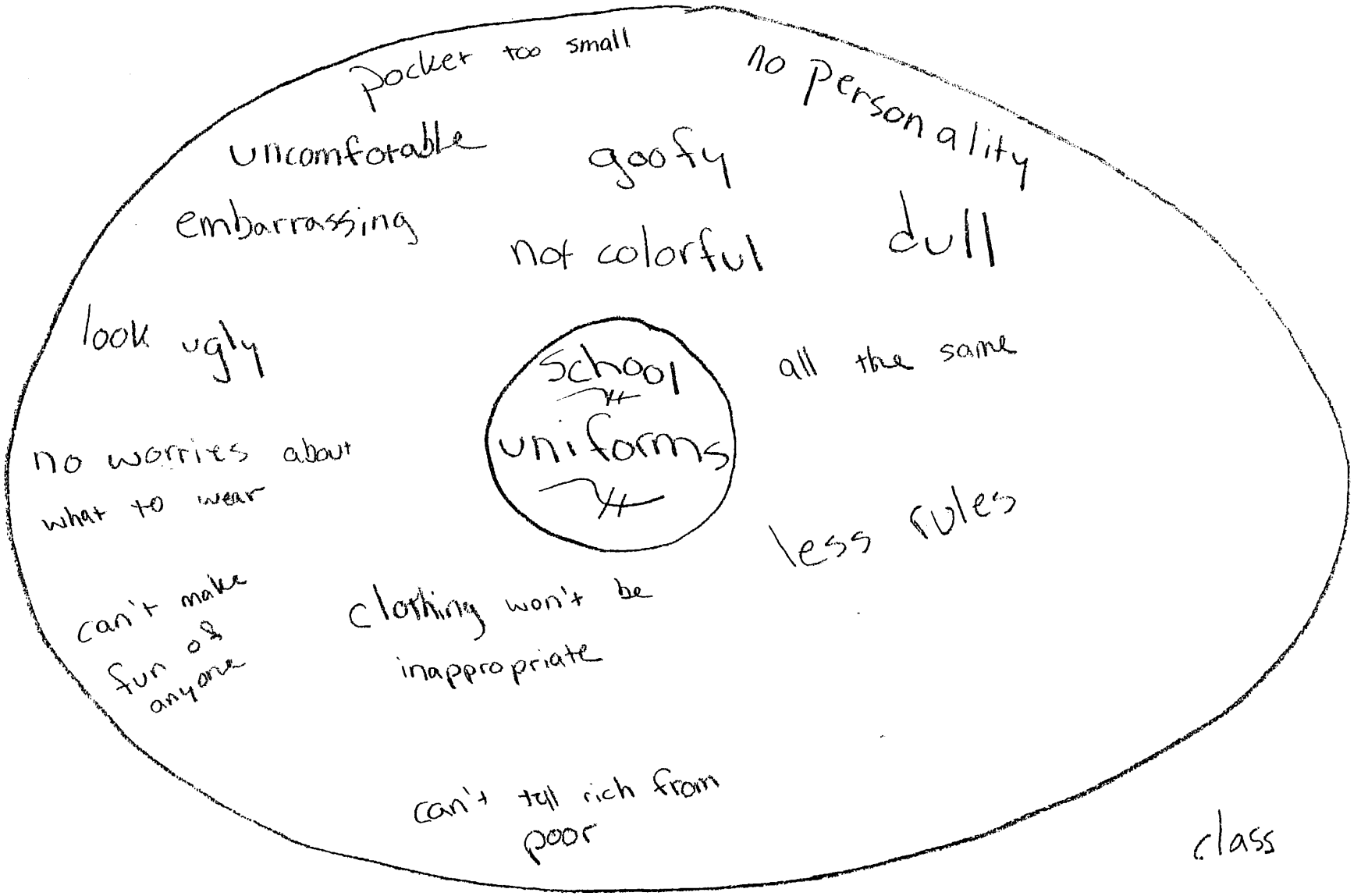


Circle Map

Per: 1

L A.

Jr Scholastic



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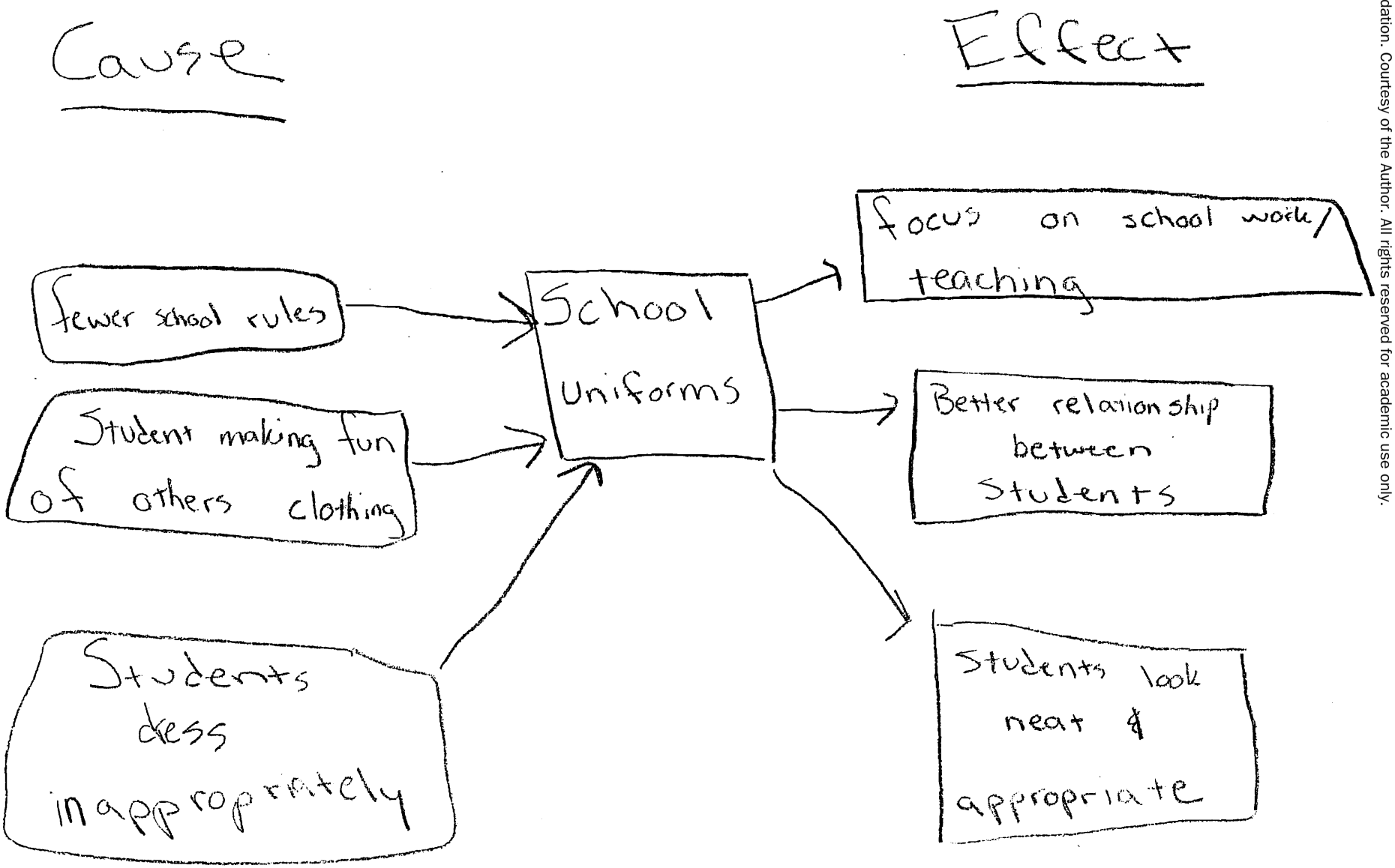

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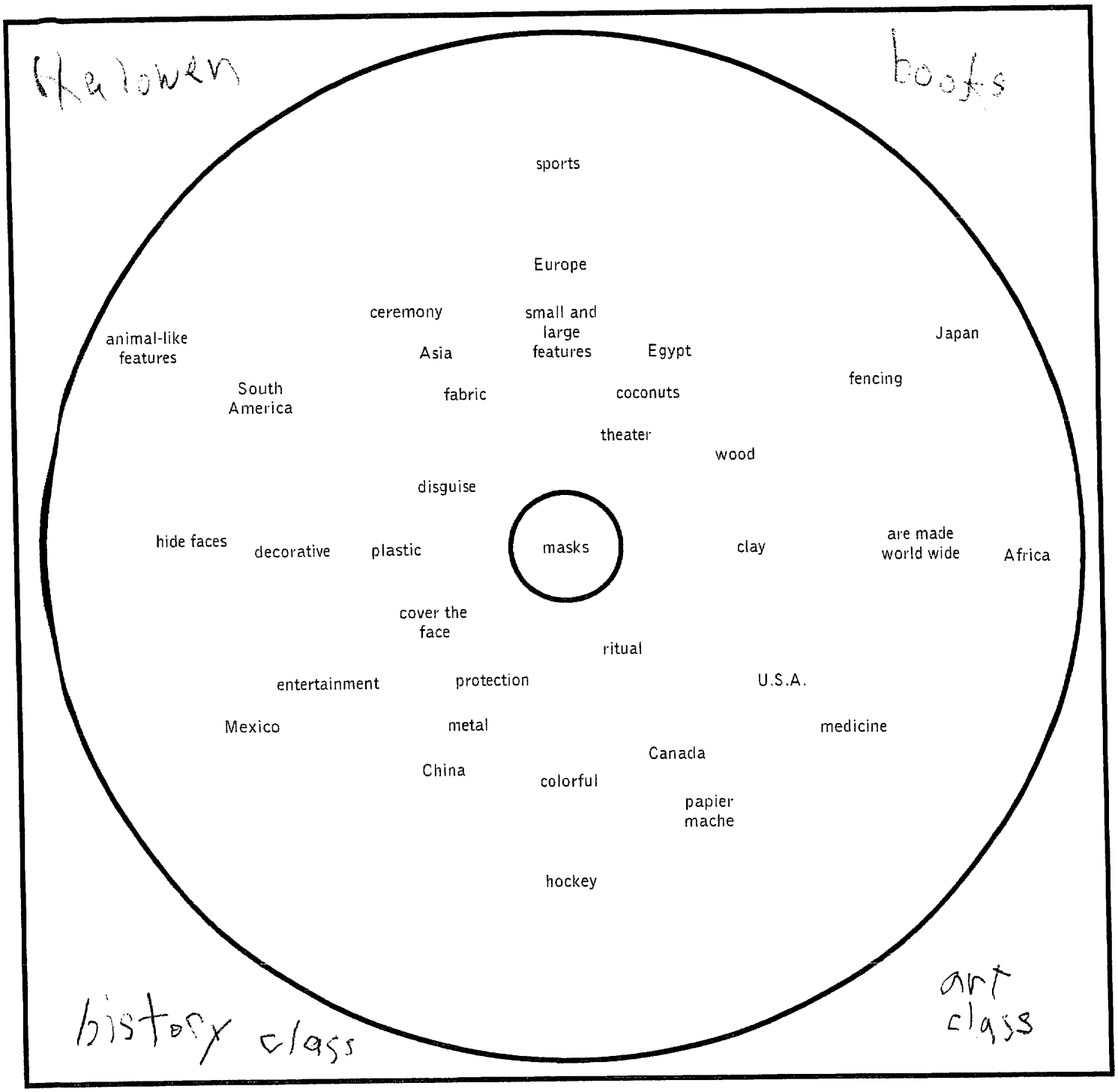

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Appendix F

The following Thinking Maps observation form is one that the researcher designed to be used as a template when completing staff observations. Both a blank form and samples of completed forms are included.

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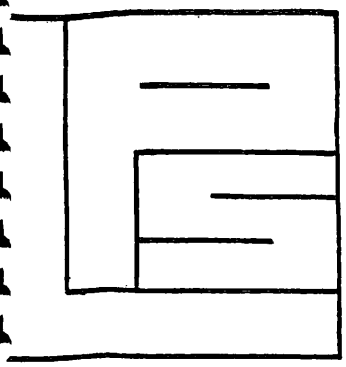
THINKING MAPS LESSON: TEMPLATE



THINKING MAPS OBSERVATION

Name of Teacher:
Date and time of Observation:
Observation conducted by: Cynthia Manning
Thinking Map selected:

	OBS	NOBS	COMMENTS
THE TEACHER			
The teacher clearly explained the lesson and its goal.			
The teacher was well-prepared.			
The teacher was fluent with the map.			
The teacher demonstrated a positive attitude towards the map.			
The teacher conveyed information clearly.			
The teacher checked student progress.			
The teacher praised student work when appropriate.			
The teacher called on every student equally.			
The teacher had control of the class.			
The teacher guided the class using questions.			
The teacher cued students when necessary (behavior/participation).			

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	OBS	NOBS	COMMENTS
The teacher used different colors to complete the map.			
The teacher used a frame with the map.			
THE LESSON			
The objective of the lesson was evident.			
The lesson was an effective instructional tool.			
Students had the opportunity to participate in the lesson.			
The level of the lesson seemed appropriate for the students.			
The lesson complemented the curriculum.			
THE STUDENTS			
The students comprehended the lesson content.			
The students were fluent with the map.			
The students were focused on the map activity.			
The students participated in the lesson.			
The amount of student writing or copying was appropriate.			
THE MAP			
The map selected was appropriate for the lesson.			
The map was a creative complement to the lesson.			
Sample maps were posted around the room in the correct order.			
The map was written legibly.			
The map was large enough to be seen easily.			

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	OBS	NOBS	COMMENTS
The map structure was drawn correctly.			
Completion of the map was well-paced.			
The map was used for an additional activity.			
THE CLASSROOM			
Student maps were posted in the classroom.			
The classroom environment was conducive to learning.			

COMMENTS:

The following are notes that I typed as reminders to ensure that I incorporate them in the context of my comments. Obviously, other feedback will be included as well.

The map was presented: on the board / on an overhead

Students were / were not required to copy the map from the board

Students were required to draw the map: independently / on a starter map / on a map worksheet / the teacher would distribute a copy of the map the next day

Kind of activity: independent work / group work / teacher-taught lesson / teacher-guided lesson

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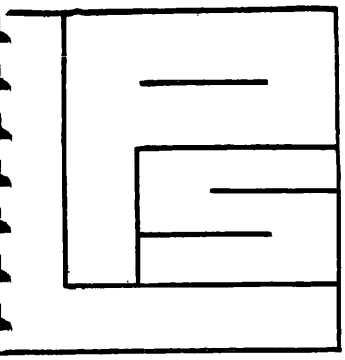
THINKING MAPS LESSON: "EXCELLENT" EXAMPLE



THINKING MAPS OBSERVATION

Name of Teacher: Nancy
Date and time of Observation: 2/24/03, Period 3
Observation conducted by: Cynthia Manning
Thinking Map selected: Circle Map

	OBS	NOBS	COMMENTS
THE TEACHER			
The teacher clearly explained the lesson and its goal.	X		The teacher explained how a circle map would be used to teach a Wilson phonics lesson
The teacher was well-prepared.	X		Pre-organizers and post-organizers were used
The teacher was fluent with the map.	X		
The teacher demonstrated a positive attitude towards the map.	X		
The teacher conveyed information clearly.	X		
The teacher checked student progress.	X		The teacher paused frequently to look at each student's work and make suggestions
The teacher praised student work when appropriate.	X		The teacher responded to correct answers with great enthusiasm
The teacher called on every student equally.	X		Every student was called upon equally and by name
The teacher had control of the class.	X		
The teacher guided the class using questions.	X		"What is the suffix? What is the base word? How many syllables? How do I label it?"
The teacher cued students when necessary (behavior/participation).	X		Andre required cueing to focus, but he responded to the teacher's cues

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	OBS	NOBS	COMMENTS
The teacher used different colors to complete the map.	X		Blue: word Red: suffix Green: labeling
The teacher used a frame with the map.	X		The teacher looked for very specific information to complete the frame
THE LESSON			
The objective of the lesson was evident.	X		
The lesson was an effective instructional tool.	X		The inclusion of two word banks was an effective strategy
Students had the opportunity to participate in the lesson.	X		Each student was required to participate
The level of the lesson seemed appropriate for the students.	X		Students were challenged but, with guidance, were able to provide correct responses
The lesson complemented the curriculum.	X		
THE STUDENTS			
The students comprehended the lesson content.	X		
The students were fluent with the map.	X		
The students were focused on the map activity.	X		
The students participated in the lesson.	X		
The amount of student writing or copying was appropriate.	X		Students copied down answers as they covered the lesson in class
THE MAP			
The map selected was appropriate for the lesson.	X		The map was an effective review of previously introduced material
The map was a creative complement to the lesson.	X		This lesson was a very creative way to use the circle map!
Sample maps were posted around the room in the correct order.	X		
The map was written legibly.	X		The teacher's penmanship is neat and well-spaced; it complements a phonics lesson well
The map was large enough to be seen easily.	X		

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	OBS	NOBS	COMMENTS
The map structure was drawn correctly.	X		
Completion of the map was well-paced.	X		Students had the opportunity to work independently and in groups, yet there was no lag time
The map was used for an additional activity.	X		Post-organizers were assigned as homework
THE CLASSROOM			
Student maps were posted in the classroom.	X		
The classroom environment was conducive to learning.	X		

COMMENTS:

Nancy began class by introducing the objective of the lesson and by issuing clear instructions as to how to complete that day's project. She used a circle map displayed on an overhead projector to review a Wilson rule. Nancy used questioning techniques to elicit student responses; for incorrect answers, she rephrased questions as necessary. The students then worked independently completing a circle map with a different Wilson rule; peer editing was used to check answers.

The lesson was presented on the board and on an overhead; student packets, including word banks, were used as well. Students were required to complete the map independently and then check their responses as a group against answers written on the board and on the overhead. The kinds of activities covered in class were a teacher-guided review, independent work, and a group lesson. Using a circle map to review Wilson rules is a creative, effective strategy that students view with enthusiasm and are willing to implement.

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1) Review
vowel suffix look at white board
consonant suffix

2) Review "How to add suffixes to words ending in "y"
2/10 packet p.3

3) Distribute Review circle maps
and word lists

4) Ask students to look at p. 18 or p. 19

Select a word ending in a "y"

Tell me (teacher) the rule #1, #2, #2A

Teacher - write word on correct rule transparency (blue)
pencil Students - write word on correct rule worksheet

Ask students how to label that word

Teacher labels word on transparency
(1) suffix (es) (red)
(2) scoop and label in (green)

5) Do several as a group

5 min
6) Ask students to locate more on p.18 or p.19
then write these words on correct rule sheets

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7) Ask students to share their choices

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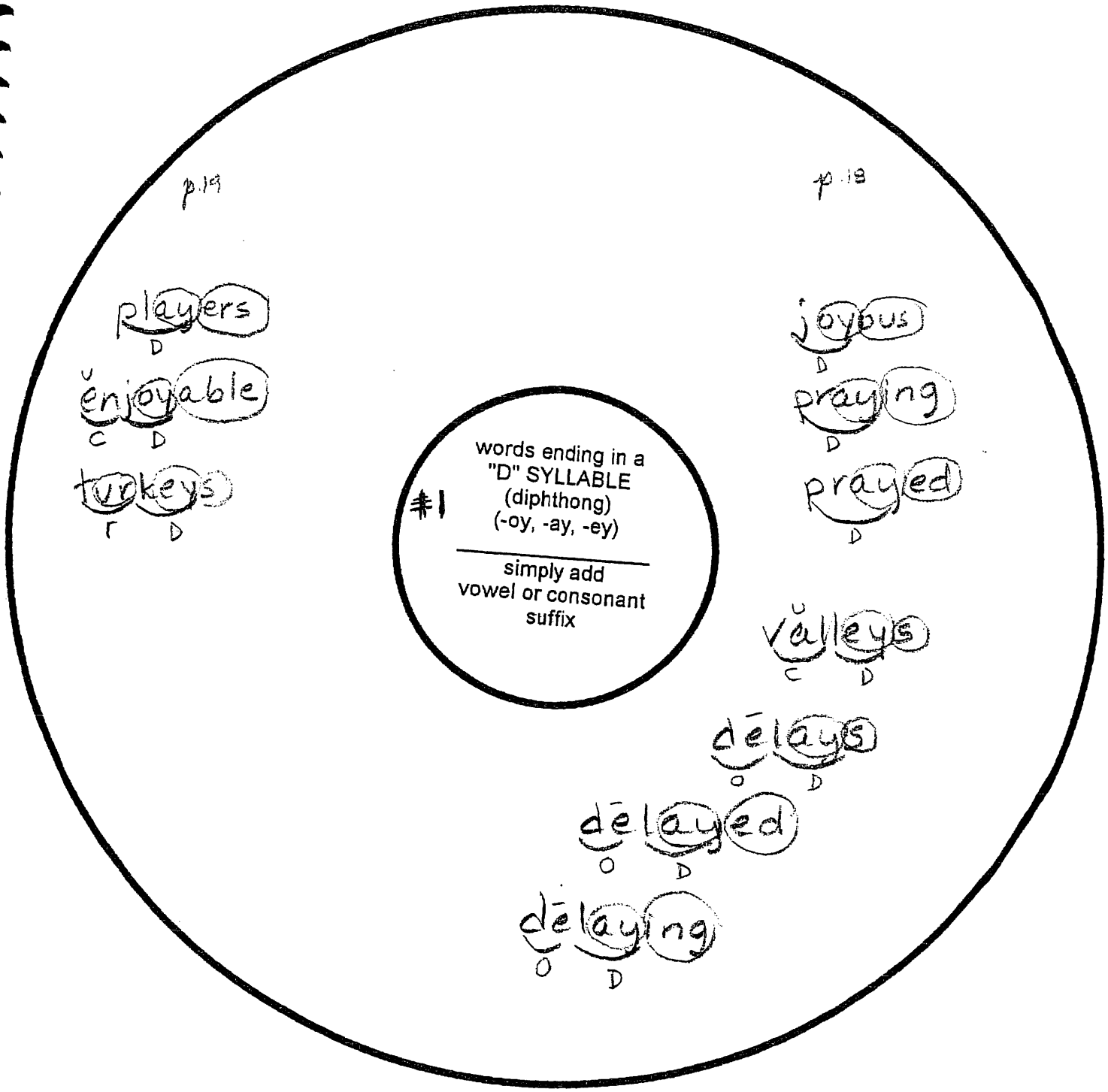

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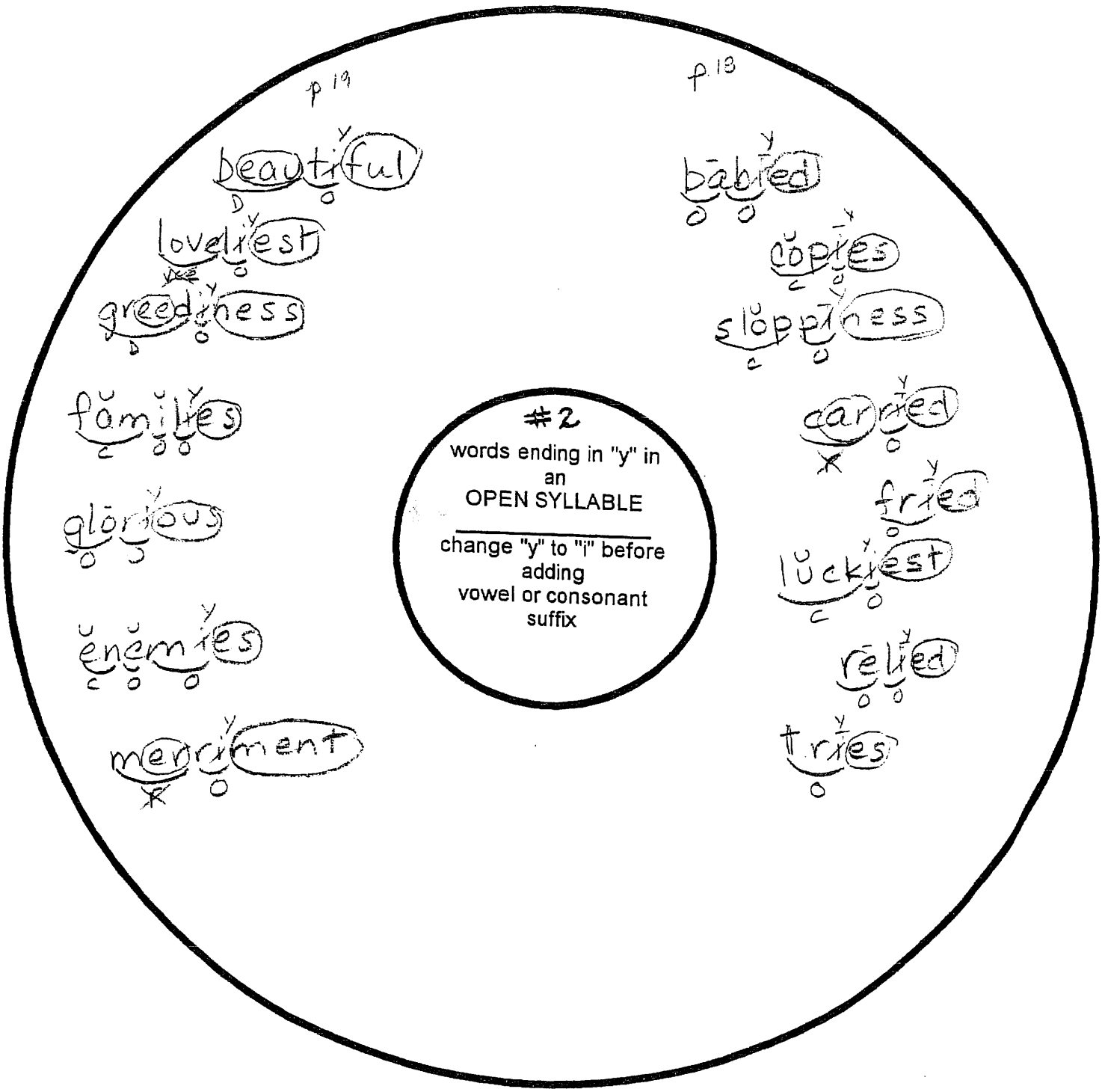

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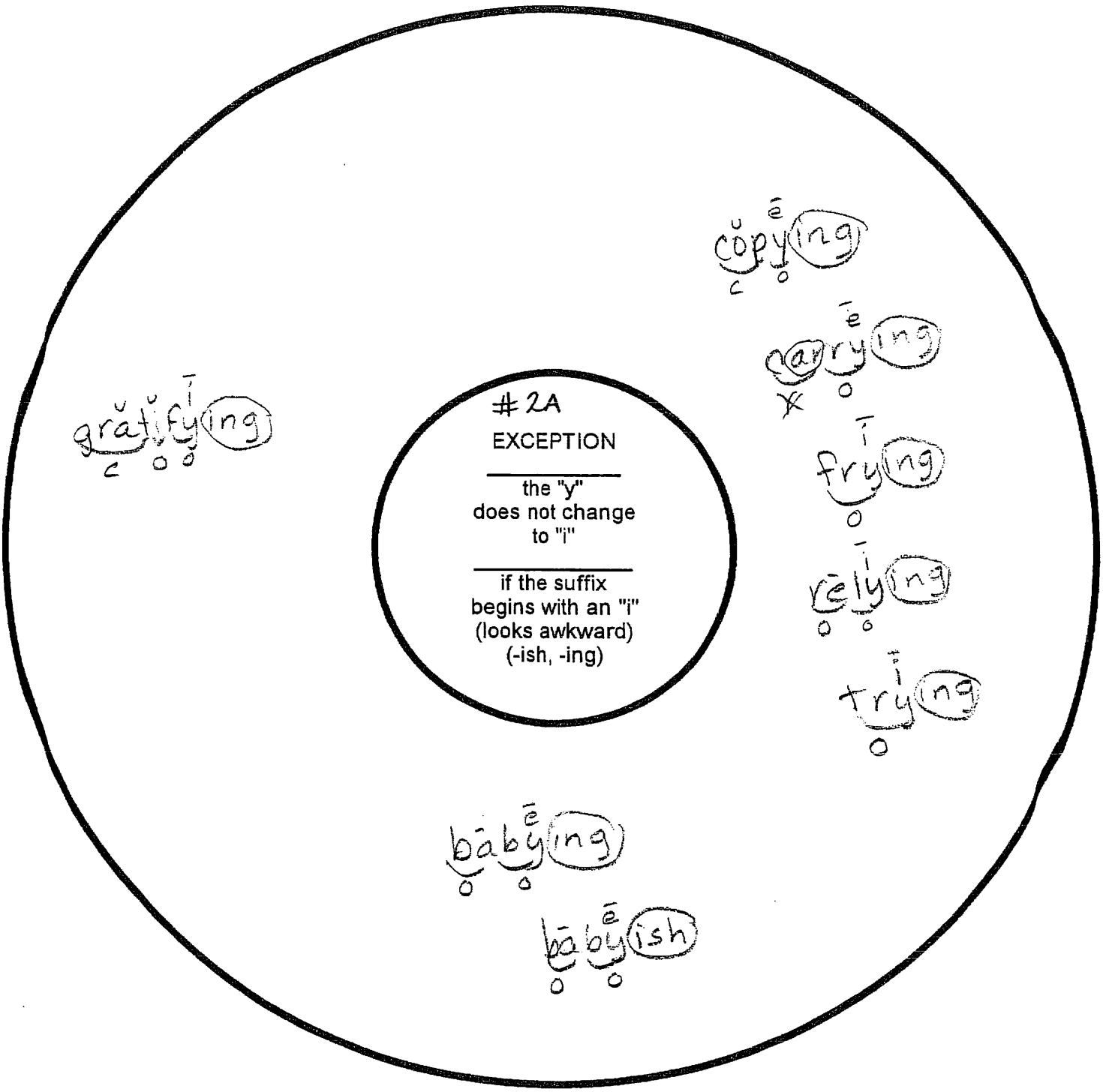

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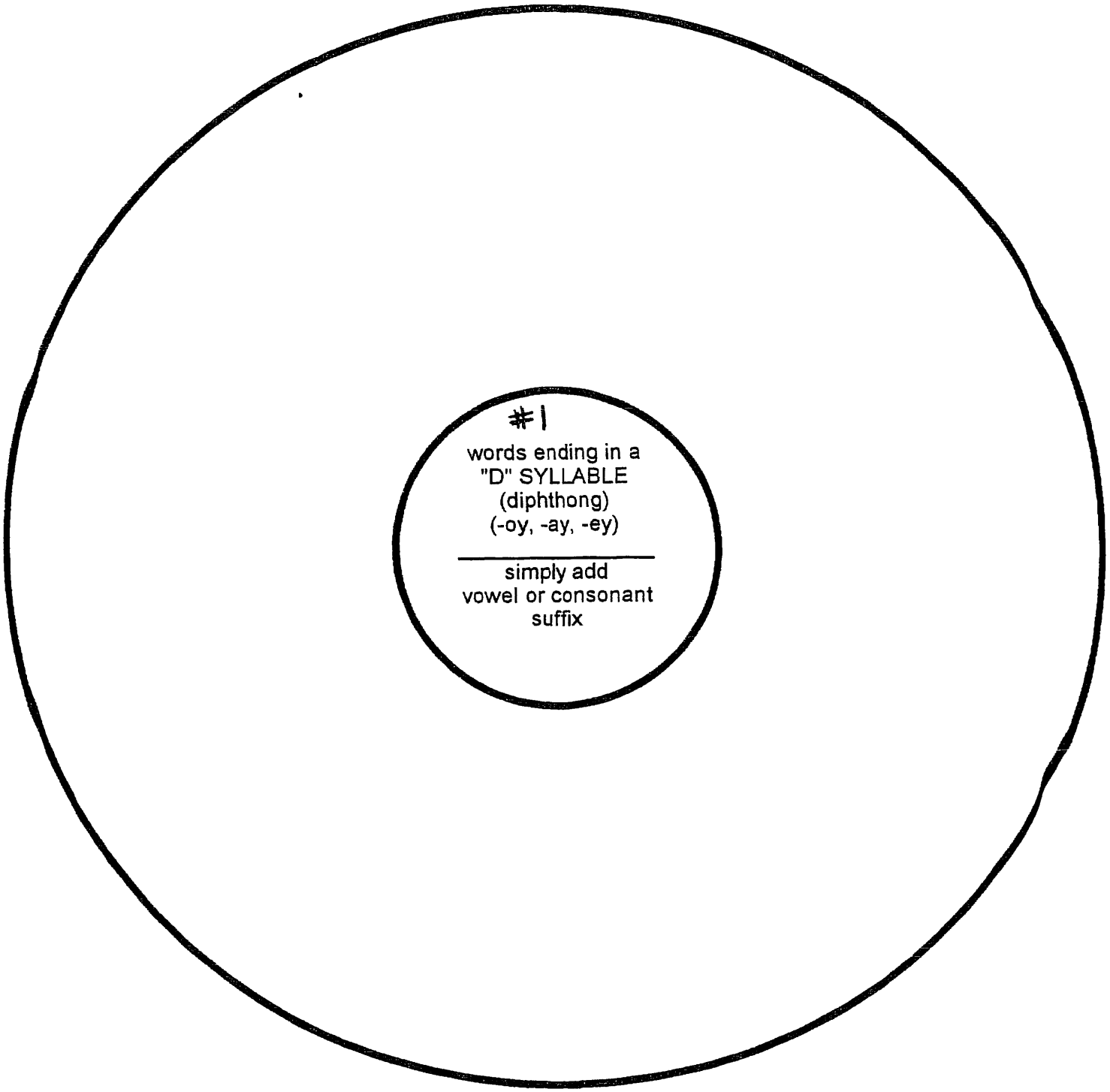

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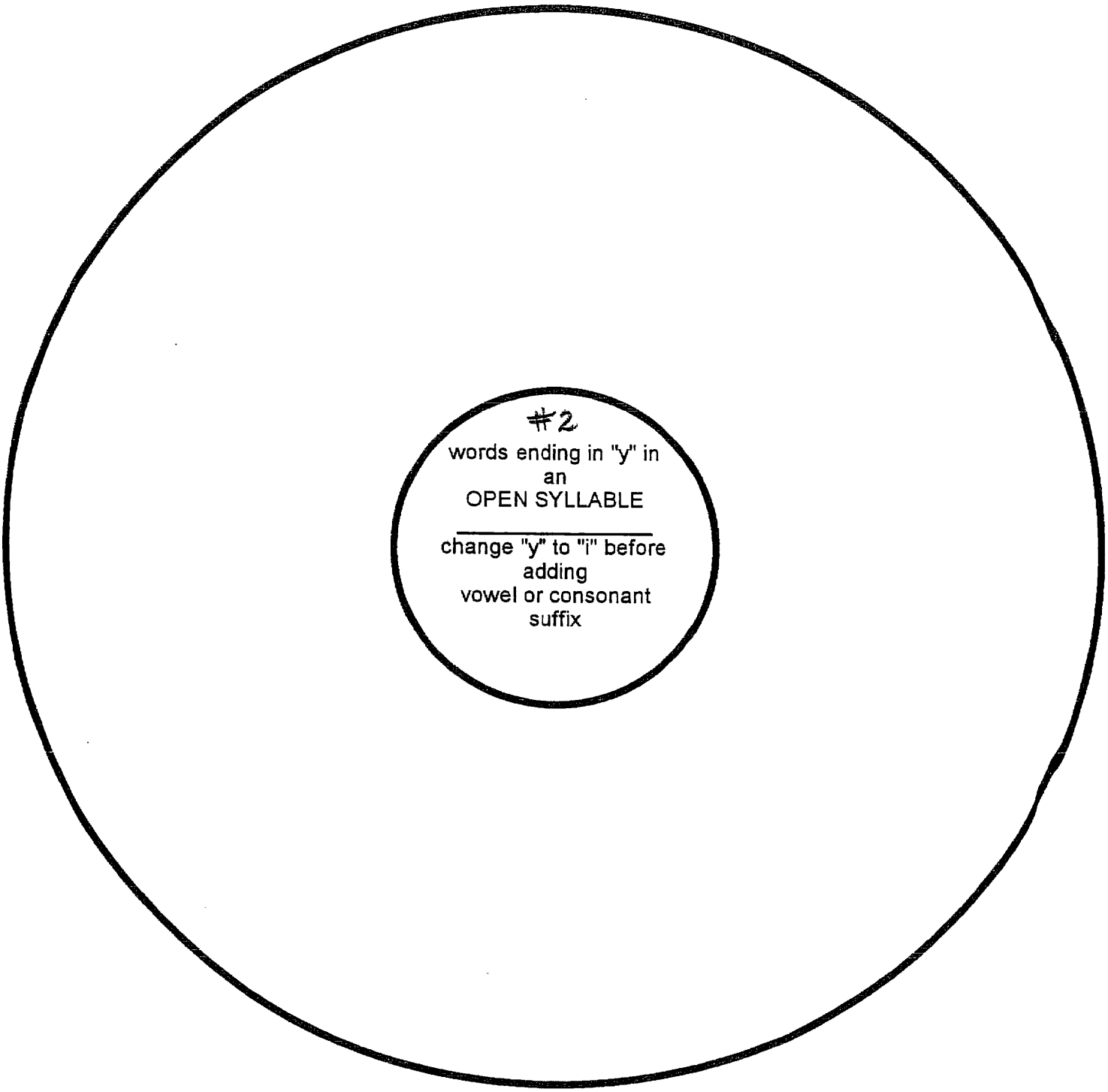

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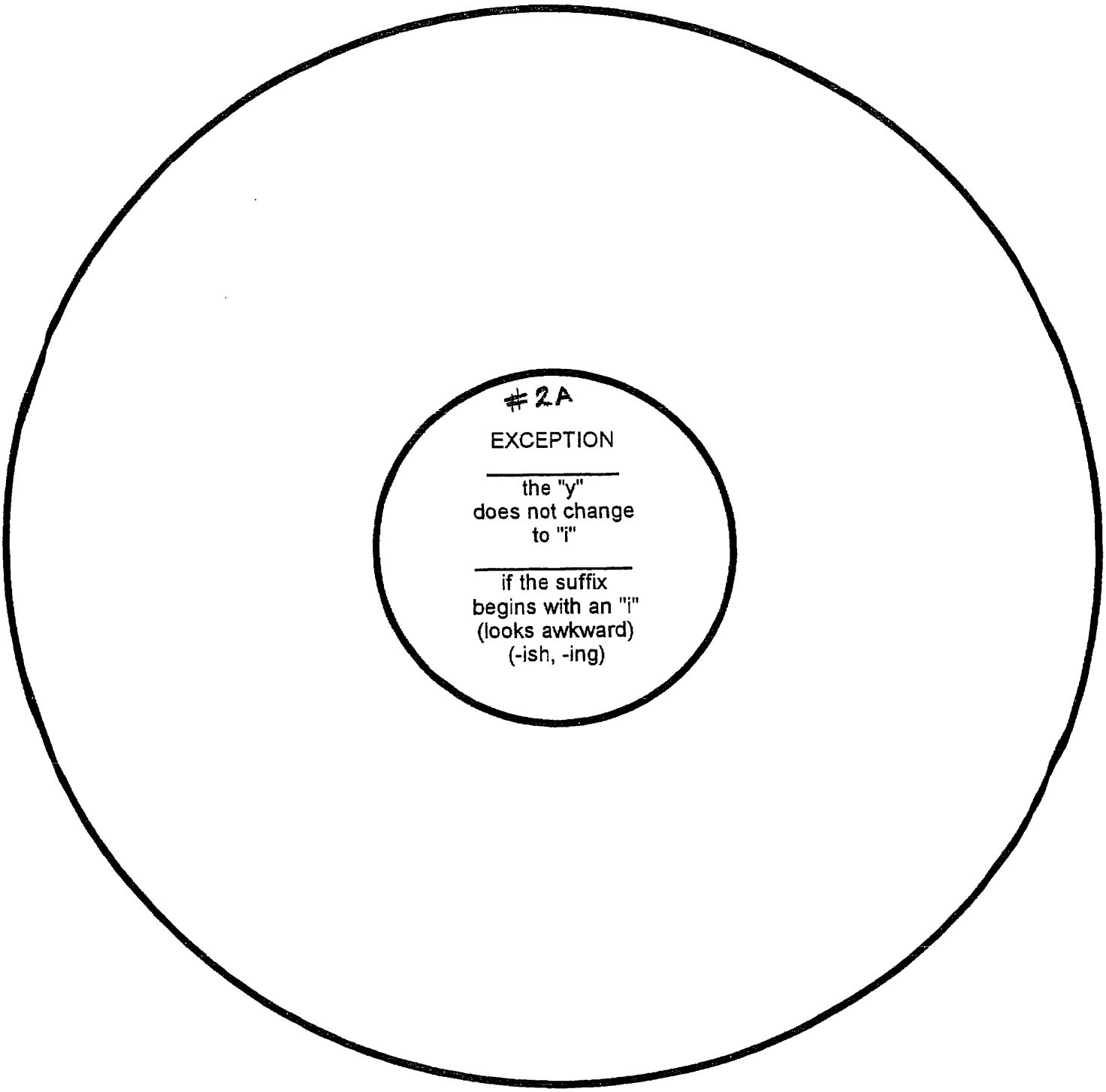

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Name: _____ Date: _____

Language Arts Wilson 11.2

babying

babied

copies

copying

joyous

praying

prayed

sloppiness

valleys

carried

carrying

delays

delayed

delaying

fried

frying

luckiest

relying

relied

tries

trying

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Wilson 11.2 Spelling Words Study Sheet

players	sincerely
continued	friends
beautiful	engaging
moved	boring
loveliest	turkeys
enjoyable	enemies
greediness	merriment
families	planning
glorious	gratifying

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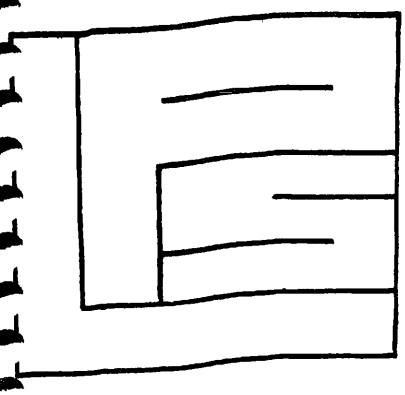
THINKING MAPS LESSON: "NEEDS IMPROVEMENT" EXAMPLE



THINKING MAPS OBSERVATION

Name of Teacher: Jennifer
Date and time of Observation: 2/12/03, Period 6
Observation conducted by: Cynthia Manning
Thinking Map selected: Double Bubble Map on the North and the South (Civil War)

	OBS	NOBS	COMMENTS
THE TEACHER			
The teacher clearly explained the lesson and its goal.	X		The teacher started the lesson with a review of the Civil War
The teacher was well-prepared.	X		
The teacher was fluent with the map.		X	Some aspects of the map were drawn incorrectly
The teacher demonstrated a positive attitude towards the map.	X		
The teacher conveyed information clearly.	X		
The teacher checked student progress.	X		
The teacher praised the students when appropriate.	X		The teacher used much positive reinforcement after eliciting responses
The teacher called on every student equally.	X		The teacher frequently used students' names
The teacher had control of the class.	X		The class was well-behaved and focused on the lesson
The teacher guided the class using questions.	X		The map was completed by the students with the teacher acting as facilitator
The teacher cued students when necessary (behavior/participation).	X		

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	OBS	NOBS	COMMENTS
The teacher used different colors to complete the map.	X		The teacher used three colors to complete the map
The teacher used a frame with the map.	X		The frame was not drawn properly, although it was used correctly
THE LESSON			
The objective of the lesson was evident.	X		
The lesson was an effective instructional tool.	X		Students were required to recall and integrate previous material
Students had the opportunity to participate in the lesson.	X		Students did the majority of the work, with the teacher acting as "guide"
The level of the lesson seemed appropriate for the students.	X		Students seemed sufficiently challenged
The lesson complemented the curriculum.	X		The lesson was an effective summary of previously taught info
THE STUDENTS			
The students comprehended the lesson content.	X		
The students were fluent with the map.	X		
The students were focused on the map activity.	X		
The students participated in the lesson.	X		The students demonstrated a high interest level in the lesson
The amount of student writing or copying was appropriate.		X	The students had to copy the map after completion
THE MAP			
The map selected was appropriate for the lesson.	X		
The map was a creative complement to the lesson.	X		
Sample maps were posted around the room in the correct order.	X		
The map was written legibly.	X		
The map was large enough to be seen easily.	X		The map was drawn on an entire whiteboard

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	OBS	NOBS	COMMENTS
The map structure was drawn correctly.		X	The frame and similarity bubbles were incorrectly drawn
Completion of the map was well-paced.	X		
The map was used for an additional activity.	X		The map was to be used as a study guide for an upcoming test
THE CLASSROOM			
Student maps were posted in the classroom.		X	Student maps were not posted, although other work was displayed
The classroom environment was conducive to learning.	X		

COMMENTS:

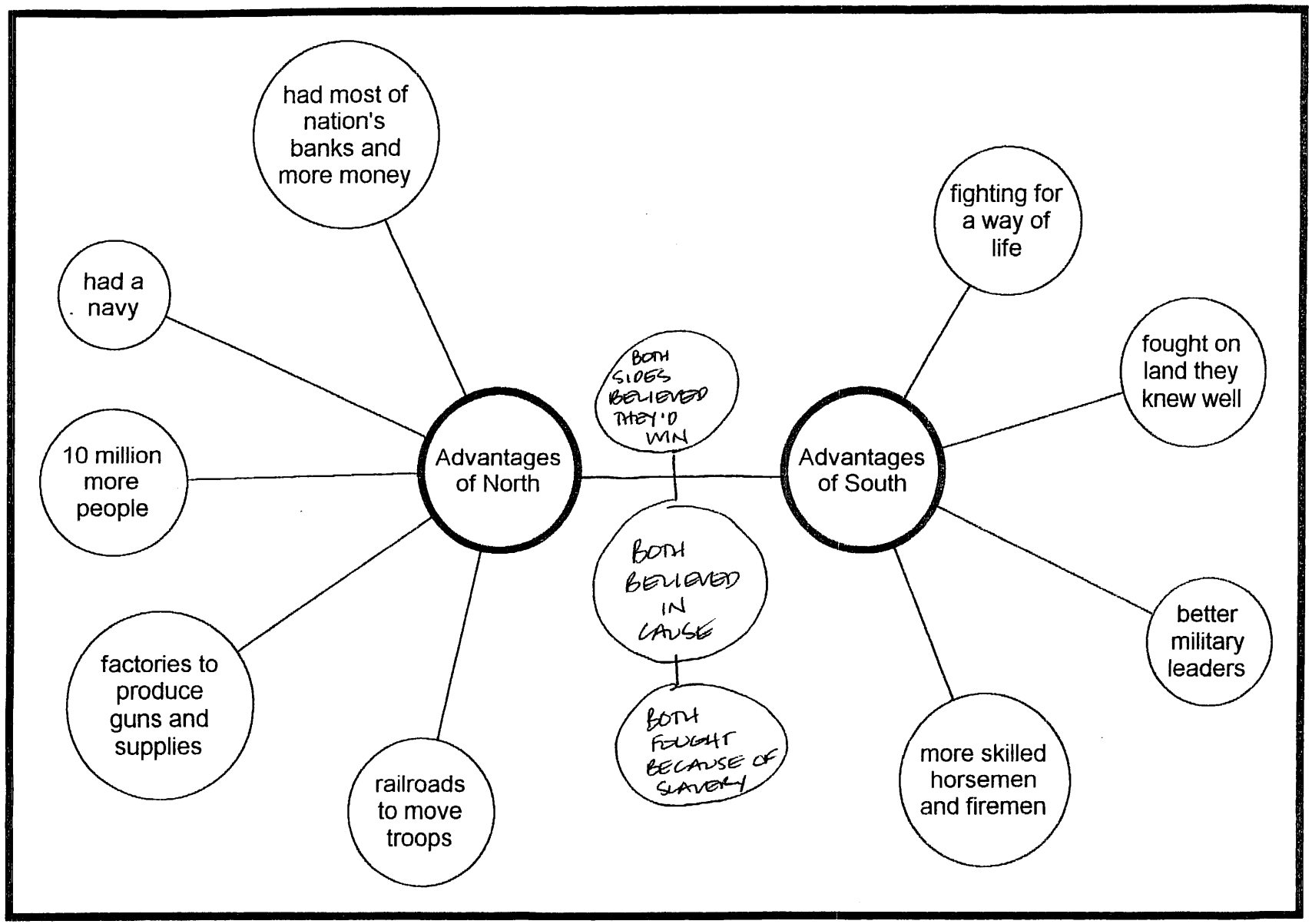
Jennifer chose a double bubble map to present a lesson on the similarities and the differences of the North and the South during the Civil War. She demonstrated competency with the thinking process (comparing and contrasting), but certain aspects, the similarity bubbles and the frame, were drawn incorrectly. The map was presented on the board with the teacher drawing the map. The lesson was teacher-guided; Jennifer used questioning techniques to elicit student input.

Students were required to copy the map from the board. This did not appear to be instruction of note-taking methods, as the students did not receive any teacher direction as to how to find and write main facts and ideas, but rather they were simply told to copy the map. Jennifer said that she does not have enough space to use an overhead projector, which would eliminate the need for students to copy the map by hand, as the teacher could make copies of the transparency for student use.

Suggestions:

- Write the text first and then draw a circle or box around the text; this prevents the teacher from having to squeeze the text inside a circle or box that is too small to properly contain the information.
- Draw each similarity bubble branching off the two main topics, rather than off a connecting line (see attached graphics).
- Write information inside (not outside) the frame; if necessary, draw the frame larger to accommodate the information as needed.
- Students were required at the end of the discussion to copy the map from the board; a more efficient use of class time would be to write down the map for the students (or copy a transparency if used) and distribute copies the next day.

JENNIFER'S MAP



WORKSHEETS MOVES

HISTORY BOOK

JENNIFER

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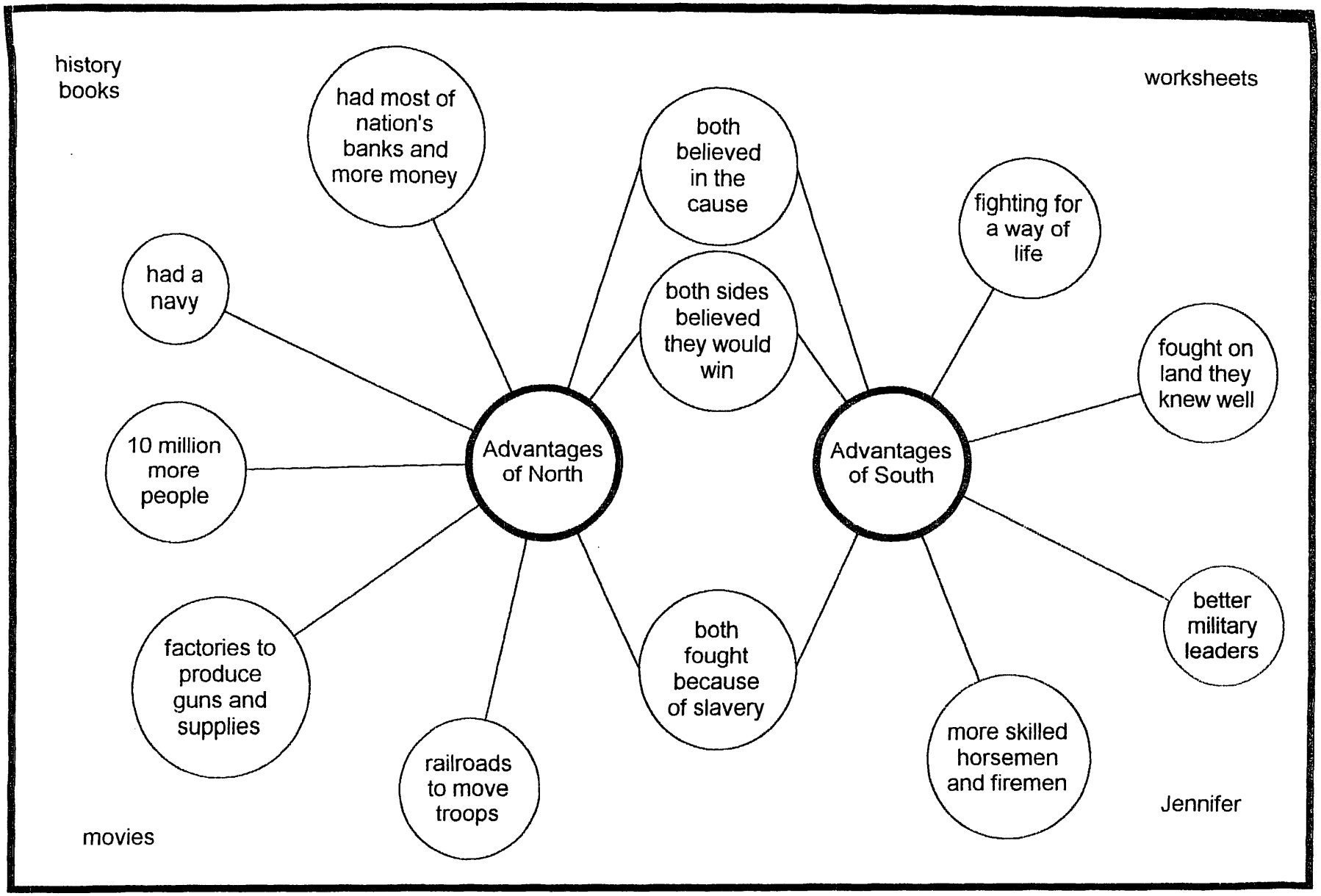

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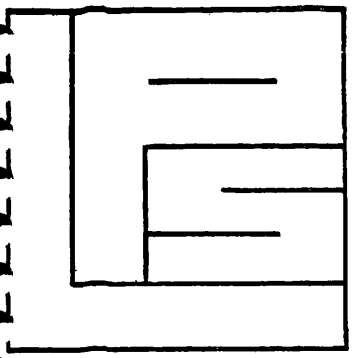
THINKING MAPS LESSON:
"UNSATISFACTORY" EXAMPLE



THINKING MAPS OBSERVATION

Name of Teacher: Dana
Date and time of Observation: 2/6/03, Period 7
Observation conducted by: Cynthia Manning
Thinking Map selected: Bubble and Flow Maps

	OBS	NOBS	COMMENTS
THE TEACHER			
The teacher clearly explained the lesson and its goal.		X	A major aspect of the lesson (bubble map) was not initially explained or introduced
The teacher was well-prepared.		X	The teacher didn't know how to spell a town name and didn't know where it was located
The teacher was fluent with the map.		X	The maps were used correctly but one—the flow map—was drawn incorrectly
The teacher demonstrated a positive attitude towards the map.	X		
The teacher conveyed information clearly.		X	The teacher's initial board notes (see end comments) were difficult to follow
The teacher checked student progress.	X		
The teacher praised student work when appropriate.	X		
The teacher called on every student equally.		X	The teacher often called on Jamin & Steveanne but not on Mark, Suzanne, or James
The teacher had control of the class.	X		
The teacher guided the class using questions.	X		
The teacher cued students when necessary (behavior/participation).	X		

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	OBS	NOBS	COMMENTS
The teacher used different colors to complete the map.		X	Using different colors is not necessary but it does assist visual learners
The teacher used a frame with the map.		X	Using a frame is not necessary but it does assist with higher level thinking skills
THE LESSON			
The objective of the lesson was evident.		X	The teacher said she was going to do a flow map but 1st launched into a bubble map first with no segue way
The lesson was an effective instructional tool.	X		The lesson was teacher-guided, utilizing questioning techniques
Students had the opportunity to participate in the lesson.	X		
The level of the lesson seemed appropriate for the students.	X		
The lesson complemented the curriculum.	X		
THE STUDENTS			
The students comprehended the lesson content.	X		
The students were fluent with the map.	X		
The students were focused on the map activity.		X	Only some of the students were focused on the lesson; a few had their heads down
The students participated in the lesson.		X	Some students participated; others were struggling to stay awake (it was 7th period)
The amount of student writing or copying was appropriate.		X	The teacher was going to have the students copy down the map but the bell rang
THE MAP			
The map selected was appropriate for the lesson.	X		
The map was a creative complement to the lesson.	X		
Sample maps were posted around the room in the correct order.	X		
The map was written legibly.	X		The map was written on the board by the teacher
The map was large enough to be seen easily.	X		

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	OBS	NOBS	COMMENTS
The map structure was drawn correctly.		X	The Flow Map did not have a connecting line between rows or on sub-detail boxes
Completion of the map was well-paced.	X		
The map was used for an additional activity.		X	The class ran out of time before the map could be finished; it would make an effective study guide for a quiz
THE CLASSROOM			
Student maps were posted in the classroom.	X		The teacher's Flow Map bulletin board was incorrect; it did not have a connecting line between rows or on sub-detail boxes. Sub-detail boxes do not need to be in sequential pairs and should be used only as needed
The classroom environment was conducive to learning.	X		

COMMENTS:

Dana's lesson centered on chapters 4 and 5 in **Where the Red Fern Grows**. She began class by asking questions such as:

- What characters do we encounter in chapter 4?
- What happens in Chapter 5?
- Where is he going?
- Is it a big town?
- What is the size of the town?
- What is the setting?

She wrote some of the answers to these on the board as points (see below). Her board notes did not seem to follow any pattern:

Billy and his grandfather } 4th
immediate family }

Marshall
meets the dogs
Setting
In the mountains – on the way to get the dogs
and on the way back
Tahlequah

(This would have been an effective tree map, with **Where the Red Fern Grows** as the topic and chapters 4 and 5 as sub-topics.) She then prompted the students that "you all should be writing this down." The students also were prompted during the lesson to pull out their books if they had not done so yet. Dana quietly mentioned to Jamin that she would write down the material from

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the board for him. During this time, Dana seemed to not be adequately prepared to present aspects of the lesson, as she did not know where Tahlequah was and had to search the book with the students to find the correct spelling of the town's name as well as in which state it was located.

After reviewing the reading, she erased the board and asked the students to "wait to write down the Flow Map until I am done." She then commenced to draw a Bubble Map on the board with "Billy" as the topic. Dana had explained the Flow Map but not the Bubble; it appeared that she had called the map by the wrong name. She again used a series of questions to elicit answers from her students:

- What adjectives could you use to describe Billy?
- Why is he weird?
- Would you say he is weird, or inexperienced?
- Why would you say he is independent?
- Why is he impatient? Could he wait to get the dogs?
- Is he smart because he was taught by his mom?
- Is he adventurous because he went to Kentucky and back?

If the students were non-responsive, she would provide them with an adjective (e.g., Is Billy impatient?") and ask them to give an example of this (e.g., "Why is Billy impatient?").

Steveanne asked during this part of the lesson, "Do you want our homework?" Dana replied that she would check it at the end of class (the class ran out of time before she had a chance to check homework; the students also did not have time to copy down the map).

During the lesson, some students were non-participatory: For much of the lesson, Bianca had her head down; Mark stared at his desk or around the room; and James stared down at his arm and played with his sweatshirt or his wrist. She did make a few pleas for Bianca to please keep her head up, and asked twice while snapping her fingers, "James? Sarah? Are you with me?" Sarah answered, "Sort of," and James never responded. She did comment to the students, "I know it is 7th period and you guys are tired but you need to stay with me."

After completing the bubble map describing the main character (Billy), Dana began a Flow Map for sequencing events in chapters 4 and 5. Dana completed the map used guided questions to elicit student input, which was then inserted into the Flow Map in proper sequential order. During this part of the lesson, Dana mostly called on Suzanne, Mark, and Ryan to answer questions. She asked Ryan twice, "Ryan, are you with me? Are you okay?" and snapped her fingers at him to get his attention.

The Flow Map structure was drawn incorrectly; there was not a connecting line between the bottom and top rows, and lines were not used to connect the sub-detail boxes to the main event boxes.

Dana displayed several completed Thinking Map activities around the room. Her maps were posted correctly, although her Flow Map bulletin board was drawn incorrectly (same issues as above). It was obvious that most students were comfortable with using the maps during the lesson. Bianca and Steveanne mentioned that they always copy the maps down at the end of class. It was suggested to Dana that the map contained too much material for students to copy; it would be better for her to write it down for them and distribute copies the next day.

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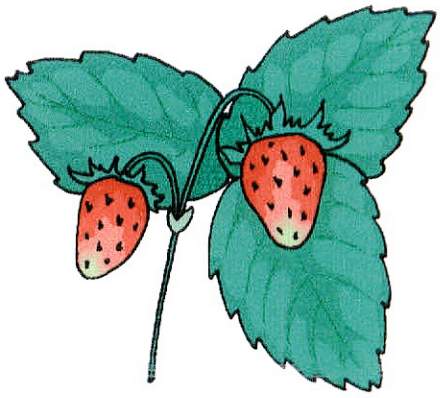
Strawberry Girl

by Lois Lenski



Reading Level

- 5th Grade

Learning Standards

- ***Reading Strand**: Students will…*
  - 4: Acquire and use correctly advanced reading vocabulary of English words, identifying meanings through an understanding of word relationships.
  - 5: Identify, describe, and apply knowledge of the structure of the English language and standard English conventions for sentence structure, usage, punctuation, capitalization, and spelling.
  - 6: Describe and analyze how oral dialects differ from each other in English, how they differ from written standard English, and what role standard American English plays in informal and formal communication.
  - 7: Describe and analyze how the English language has developed and been influenced by other languages.
- ***Literature Strand**: Students will…*
  - 8: Decode accurately and understand new words encountered in their reading materials, drawing on a variety of strategies as needed, and then use these words accurately in speaking and writing.
  - 9: Identify the basic facts and essential ideas in what they have read, heard, or viewed.
  - 15: Identify and analyze how an author's choice of words appeals to the senses, creates imagery, suggests mood, and sets tone.
  - 17: Interpret the meaning of literary works, non-fiction, films, and media by using different critical lenses, and analytic techniques.
- ***Composition Strand**: Students will…*
  - 19: Write compositions with a clear focus, logically related ideas to develop it, and adequate supporting detail.
  - 22: Use their knowledge of standard English conventions for sentence structure, usage, punctuation, capitalization, and spelling to edit their writing.
  - 24: Use open-ended research questions, different sources of information, and appropriate research methods to gather information for their research projects.
- ***Media Strand**: Students will…*
  - 26: Obtain information by using a variety of media and evaluate the quality of the information obtained.

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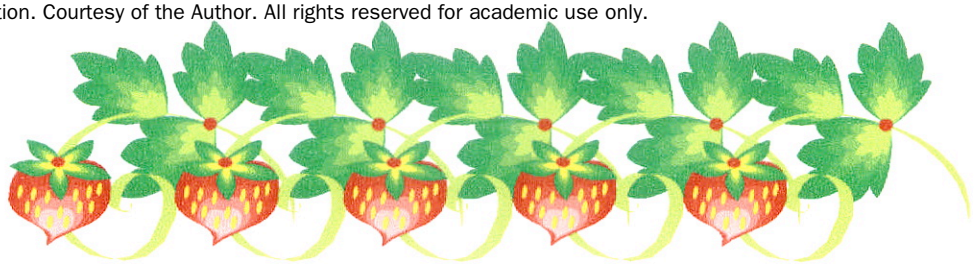

Name: _____ **Date:** _____
Subject: _____ **Period:** _____

Strawberry Girl by Lois Lenski

Directions:
Answer the questions below in complete sentences.

Forward

1. Describe Crackers using the "w" words:
   - Who are Crackers?
   - Where are they from?
   - How do they live?
   - What makes them different?
   - Where did they settle?
   - Why do we study them?

Prologue

Write definitions for these vocabulary words: drawl, grove

1. How did the Slaters mark their cows?
2. Why was Essie trying to alert Pa Slater about the cow?
3. Who were the Slaters' new neighbors?
4. Do you think the Slaters were rich or poor, and why?

Chapter 1 – Callers

Write definitions for these vocabulary words: akimbo, peep, trifle, snarls (n)

1. Do the Boyers seem rich or poor, and why?
2. What do you think "callers" are?
3. Is this a simile or a metaphor: "She was carrying her baby like a sack of potatoes on her hip"?
4. Why did Ma Slater tell Ma Boyer not to bother growing oranges?
5. How did the Boyers plan on earning money?
6. How did the Slaters earn money?
7. How did the Boyers treat their cows differently from the Slaters? Why is this important?

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8. According to Mrs. Slater, why wouldn't her daughters talk?
9. What were the nicknames for the following characters:
    - Robert Boyer
    - Bihu Boyer, Jr.
    - Dixie Lee Francine Boyer
    - Dovey Eudora Boyer
    - Berthenia Lou Boyer
    - Jefferson Davis Slater
10. What did Birdie call snarls in Shoestring's hair?
11. What new items hadn't the Slaters seen before?
12. Why did the Slaters leave the Boyers' home so quickly?
13. Why did the Slaters say they had come to visit the Boyers?

Chapter 2 – Fences

Write definitions for these vocabulary words: vigorous, furrow, rile

1. Why did the Boyers pen the cows up every night?
2. What did the Slaters do with their cows?
3. Over what did Shoestring and Birdie argue?
4. Where did strawberries first grow in Florida?
5. What did Shoestring claim to be?
6. What happened when Shoestring tried to ride Semina, the mule?
7. Is this a cliché or simile: "Don't count your biddies (chickens) before they're hatched"?
8. What gift did Shoestring bring for Birdie after their argument?
9. What two things killed Birdie's plants?
10. What damage did the Slaters' cows do?
11. What did the Boyers build to keep out the Slaters' animals?
12. According to Shoestring, what was going to happen if Pa Slater built a fence?
13. What bad habit did Pa Slater have?

Chapter 3 – School

Write a definition for this vocabulary word: shrill

1. In what did school children pack their lunches?
2. What did the girl at school call the Boyer children?
3. Why do you think Olema and the other children didn't want anything to do with the Slaters?
4. What did the water taste like?
5. Why did Billie Sue think Dovey was stuck up?
6. Of what was most girls' dresses made?
7. Who burst into the school in the middle of the day?
8. Did Pa Slater support his sons attending school?
9. What happened when Mr. Pearce tried to discipline Gus and Joe?
10. Why was school cancelled for a very long time?

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Chapter 4 – Hogses

Write definitions for these vocabulary words: grits, commotion, coward

1. To what trouble did Birdie awaken in the middle of the night?
2. What do you think Pa Boyer did to the hog?
3. What kind of food did the Crackers eat?
4. Why was Birdie afraid for Pa Slater to meet with her dad?
5. How did Pa Boyer want to settle their problem?
6. How did Pa Slater want to settle their problem?
7. Is this a cliché or a simile: "My razorbacks (hogs) can run like a streak o' lightening"?
8. Why was Birdie angry with Shoestring?
9. How did the Slaters threaten the Boyers?
10. What animal did Shoestring bring to show Birdie?
11. Why did Shoestring really come to the Boyers' house?
12. What did Pa Boyer do to the Slaters' hogs?
13. Why did Pa Boyer call Pa Slater a coward?
14. Why did Birdie suddenly become friendly with Shoestring?
15. What did Birdie suggest Shoestring do to try to keep the Slaters' hogs at home?

Chapter 5 – Overalls

Write definitions for these vocabulary words: millinery, yearning, forlorn, paraffin, steer (n)

1. Why did the Boyers go to town?
2. Why did Birdie have to get a new summer hat?
3. Why did the town seem so far away?
4. What did Miss Liddy believe about every woman?
5. What kind of person was Miss Liddy, as shown by her conversation with Ma Slater?
6. What did Birdie help Avuloy make?
7. What luxury item did the Boyers purchase?
8. What new fencing material did Pa Boyer buy?
9. Who did Birdie see in town?
10. From where did the Slaters hope to get money?
11. How do you think Pa Slater was going to celebrate after taking the steer to the butcher?
12. Why did the painter call himself the "Lightning Artist"?
13. How did Pa Slater actually celebrate with the butcher's money?
14. Why did Shoestring lie to Miss Liddy about his family's new purchases?

Chapter 6 – The Storm

Write definitions for these vocabulary words: gourd, quench, cross (adj.), pester, oppressive, balk, scurry

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1. Why couldn't Dovey and Birdie drink much water when they worked in the fields?
2. What was Central Florida's weather like in September?
3. What ate Birdie's amaryllis lilies?
4. Why was Bunny crying?
5. What two services did Doc Dayton perform for the Boyers?
6. How were visiting strangers treated in the 1940s?
7. How would your family treat strangers today?
8. What changes happened during the storm?
9. Is this a cliché or a metaphor: "The rain came like sharp pebbles"?
10. What damage did the storm do?

Chapter 7 – Cane Grinding

Write definitions for these vocabulary words: fodder, tallow, frolic, ferment, indignant, glum

1. Why did Pa Boyer tell the neighbors he was grinding cane?
2. What was attracted to the sweet cane juice?
3. What did Shoestring say cane juice looked like?
4. What was the unwritten law of the backwoods?
5. What items were made from cane juice?
6. What stopped the cane grinding?
7. What took place during a frolic?
8. Why was Shoestring glum at the candy-pull?
9. What do you think Pa Slater was going to do to the Boyers?

Chapter 8 – Cattle

Write definitions for these vocabulary words: ruckus, commotion, teamster, rickety, battered, runt

1. Why did Pa Slater cut the Boyers' barbed wire fence?
2. Is this a cliché or a metaphor: "It is better to let sleeping hogs (*or* dogs) lie"?
3. For what did Pa Boyer want to go to town?
4. Why did Birdie go see Miss Liddy?
5. What were the two big commotions in town?
6. According to Miss Liddy, what are Crackers?
7. What is a "strawberry girl"?
8. Over what did Pa Slater and Pa Boyer fight?
9. According to Pa Boyer, what is a "squatter"?
10. Miss Liddy said that Florida would not be a peaceful place to live until what happened?
11. What happened to Pa Slater and Pa Boyer after the fight?
12. What did Pa Boyer threaten to do if he saw any of Pa Slaters' cattle or hogs on his land?
13. Who else fought besides Pa Slater and Pa Boyer?
14. What happened to Buzz and Gus?
15. What do you think Ma Boyer would do to keep Pa Slater off her property?
16. Why was Ma Boyer's strategy successful?

Chapter 9 – Strawberries

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Write definitions for these vocabulary words: penalty, thicket, hunched (adj.)

1. Why did the Slaters and the Boyers stop fighting?
2. What did the Slaters and the Boyers do together in the winter?
3. Why were the Boyers able to get milk and butter?
4. Why was the winter peaceful for the Boyers?
5. Why were some schools in Florida called "Strawberry Schools"?
6. What was the penalty for being the fastest berry picker?
7. What animal did Shoestring have in his bag?
8. Why did Birdie risk a rattlesnake bite?
9. How did the Boyers protect strawberry plants from freezing?
10. What happened to Shoestring's snake?

Chapter 10 – Alligator

Write definitions for these vocabulary words: waddle, depot, bog

1. What was the new method used for shipping strawberries?
2. Why did Pa Boyer and Birdie rush to get to the train?
3. Why did Osceola, their horse, stop suddenly in the road?
4. To where were strawberries being shipped?
5. How long did it take the Yankees to get strawberries using the Pony Refrigerator for shipping?
6. What was the suggestion the stranger offered?
7. Why couldn't Pa Boyer use pints for packing strawberries?
8. How was the Pony Refrigerator returned to the Boyers?
9. Why were buzzards circling above the trees?
10. How did Pa Boyer rescue the cow?
11. How did Mrs. Slater react when Pa Boyer brought the cow to her?
12. How did Shoestring claim he caught a fish?
13. How did Pa Boyer punish Shoestring?
14. What are the two reasons why Ma Slater bought a Bible?
15. What do you think would happen if Pa Boyer whipped Shoestring in 2003, instead of 1945?

Chapter 11 – Spotted Calf

Write definitions for these vocabulary words: heifer, meddle

1. Why did trouble between the Slaters and the Boyers begin again in the spring?
2. What was Pa Boyer's brand, and what did it stand for?
3. What did Pa Slater steal from the Boyers?
4. Why couldn't Pa Boyer change the brand on the spotted calf?
5. What did Pa Boyer do when he found Pa Slater's hogs in his yard?

6. How did Pa Slater respond to his hogs being killed?
7. Why did the townspeople call Birdie a "strawberry girl"?
8. What did Pa Slater do to Semina?

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9. Why did Pa Boyer call Pa Slater a skunk?
10. What other animal could Pa Boyer have called Pa Slater?

Chapter 12 – Grass Fire

Write definitions for these vocabulary words: charred, billow, calamity

1. Why did Shoestring claim that Birdie and her family were better than other people?
2. Where did Ma Boyer wash clothes?
3. When Birdie went to get help from the Slaters, how did they respond?
4. Who was the only member of the Slater family who offered to help the Boyers put out the fire?
5. Who was trapped in the palmettos during the fire?
6. What building did the fire destroy?
7. Who would have been the new teacher?

Chapter 13 – Brown Mule

Write definitions for these vocabulary words: swap, dicker, harangue, doubloon, bid (v), sober

1. What job did Pa Boyer prefer over being a cattleman?
2. What did Pa Boyer bring to trade for a mule?
3. How did the Boyers plan to keep their mule safe from the Slaters?
4. Why did Essie and Zephy come to see the Boyers?
5. Why did Ma Slater have a chicken dinner for all the neighbors?
6. Where was Mr. Slater, and why did he leave?
7. What is "chicken pilau"?
8. Why would Ma Boyer have buried the chickens instead of having a frolic, like Ma Slater?
9. What effects did Mr. Slater's drinking have on his family?
10. What changed between Ma Slater and Ma Boyer?

Chapter 14 – The Preacher

Write definitions for these vocabulary words: fretful, flickering, pallet, nourishing, puny, meager, doff, wail (v)

1. Why did Shoestring come to the Boyers' house in the middle of the night?
2. Did Ma Slater and her children recover from their illness?
3. What did Shoestring do while the Boyers were taking care of the Slaters?
4. Who came to visit the Slaters' house?

5. Do you think it was fair that the hungry children were not allowed to share supper with the preacher? Why or why not?
6. Why did Shoestring climb the kitchen wall?
7. Why did Essie and Zephy cry?
8. Why did Shoestring return home, even though he expected a whipping?

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9. What two things did Shoestring tell Mrs. Boyer?
10. How did Pa Slater first react when he saw Ma Boyer in his house?
11. Why did Pa Slater change his attitude toward Ma Boyer?

Chapter 15 – New Organ

Write definitions for these vocabulary words: converted (v), begrudge, squabble

1. Why did Pa Slater change and become a better man?
2. Who helped convert Pa Slater?
3. What two things did Pa Slater hope to become?
4. How was land in Florida changing?
5. What company moved near the Slaters and the Boyers?
6. What is phosphate used for?
7. How is phosphate removed from the earth?
8. What were two ways Pa Slater was affected by the phosphate company?
9. What was Pa Slater finally going to let Shoestring do?
10. What was Ma Slater planning on growing, since Pa Slater had a job at the phosphate company?
11. Why was Miss Annie Laurie Dunnaway frightened on the first day of school?
12. What surprise awaited Birdie when she returned home from school?
13. Why did Pa and Ma Boyer purchase the organ for Birdie?
14. What did Birdie hope to do someday?

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Strawberry Girl by Lois Lenski

Directions:
The following sentences are written in "Florida Cracker" dialect. Rewrite the sentences to be grammatically correct.

Page #	Quote from Strawberry Girl	Re-written sentence
p. 19	She don't like cowmen.	
p. 29	We don't want no Yankees in our school.	
p. 59	What you doin'?	
p. 84	You can't do nothing with her.	
p. 96	You got no right to fence it up!	
p. 138	Can't nobody go changin' brands without landin' in jail.	
p. 139	What you-all doin' here?	
p. 171	Is Mis' Slater fixin' to die, Ma?	
p. 173	You're so easy to neighbor with.	
p. 190	He ain't rough and wild.	

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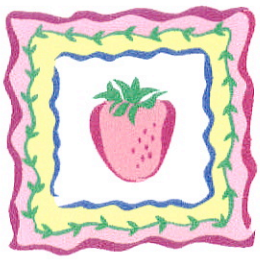

Name: _____ Date: _____
Subject: _____ Period: _____

Strawberry Girl by Lois Lenski

Directions:
Three opinions are written below.
Find proof in the book to support these opinions; hints are given as to where to look. Write your answers in the space provided.

Opinion	Proof
1. "Guess we know now how biggety you folks is," said Mrs. Slater (to Mrs. Boyer). *(Look in Chapter 1 for proof of fancy household items that the Boyers own.)*	
2. "Pa's mean, and when he's drunk, you can never tell what he'll do," Shoestring said. *(Look in Chapter 5 for proof of Pa Slater being mean when he gets drunk.)*	
3. "*My* Pa will make trouble for [your Pa]" Shoestring told Birdie. *(Look in Chapter 12 for proof of Pa Slater making trouble for the Boyers.)*	

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Name: _____ Date: _____
Subject: _____ Period: _____

Strawberry Girl by Lois Lenski

Directions:

How many words can you make from the letters in "teamster," "indignant," and "converted"? Try to think of at least 5 words. Write your answers in the space provided.

Vocabulary Word	You Make the Words
teamster	
indignant	
converted	

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Name: _____ Date: _____
Subject: _____ Period: _____

Strawberry Girl by Lois Lenski

Directions:
Decide if the statements below are fact or opinion.
Write your answer in the line provided.

	Fact or Opinion?
1. The old Roddenberry house… had been built in the late 1880's, the earliest type of Florida pioneer home. *(p.7)*	
2. Birdie said to Essie, "See how purty you look!" *(p.11)*	
3. Frequent rains gave [the strawberry plants] a good start, and the plants began to green up and stretch out fresh new leaves. *(p.21)*	
4. "We come from Marion County, Florida—that's up north," said Birdie patiently. *(p.29)*	
5. As Birdie tried to go back to sleep, the grunts and squeals grew fainter and fainter. *(p. 40)*	
6. "My razorbacks can run like a streak o' lightning!" retorted Slater *(p. 45)*	
7. Shoestring said, "Pa's hog mark is a round hole in the ear." *(p. 50)*	
8. Birdie said, "Your Pa's a coward." *(p. 51)*	
9. "[Mules'] teeth git very sharp and need to be filed once a year by a mule dentist," said Doc Dayton *(p.75)*	
10. Birdie was glad that the snake was dead. *(p. 117)*	

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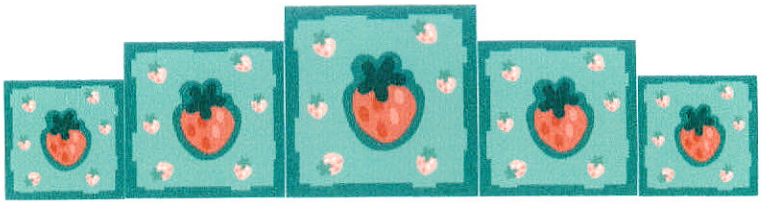

Name: _____ Date: _____

Subject: _____ Period: _____

Strawberry Girl by Lois Lenski

Directions:
Answer the questions below.

3 Things you found out:

2 Interesting things you discovered:

1 Question you still have:

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Name: _____ Date: _____
Subject: _____ Period: _____

Strawberry Girl by Lois Lenski

Directions:

How many words can you think of that rhyme with "rile," "shrill," "bid," and "steer"? Try to think of at least 5 words.
Write your answers in the space provided.

Vocabulary Word	Rhyming Words
rile	
shrill	
bid	
steer	

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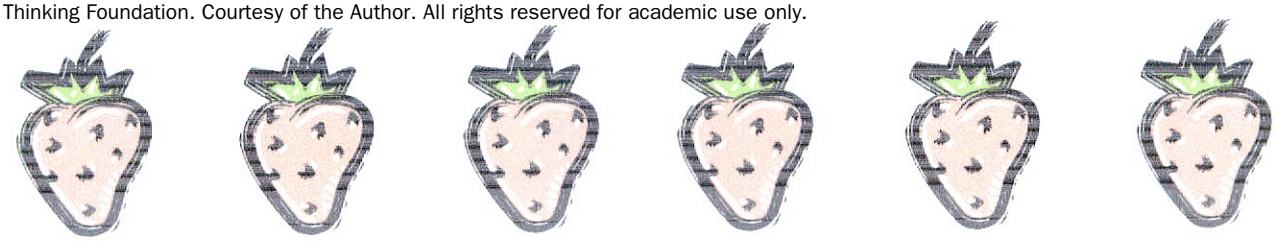

Name: _____ Date: _____

Subject: _____ Period: _____

Strawberry Girl by Lois Lenski

Directions: Write a synonym and antonym for each vocabulary word.

Vocabulary Word	Synonym	Antonym
vigorous		
shrill		
commotion		
coward		
forlorn		
pester		
scurry		
frolic		
glum		
rickety		
waddle		
calamity		
puny		
meager		

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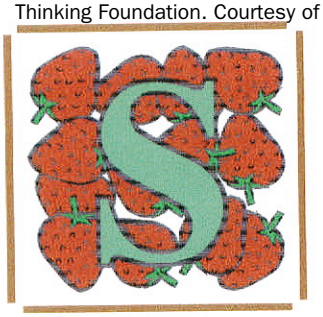

Name: _____ Date: _____

Subject: _____ Period: _____

Strawberry Girl by Lois Lenski

***Directions: The names "Boyer" and "Slater" are written** vertically below; use each letter to start a word that describes each family.*

B _____

O _____

Y _____

E _____

R _____

S _____

L _____

A _____

T _____

E _____

R _____

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Name: _____ Date: _____

Subject: _____ Period: _____

Strawberry Girl by Lois Lenski

Directions:

Write ten sentences using any ten vocabulary words (remember to underline the vocabulary). The sentences should relate to the novel Strawberry Girl.

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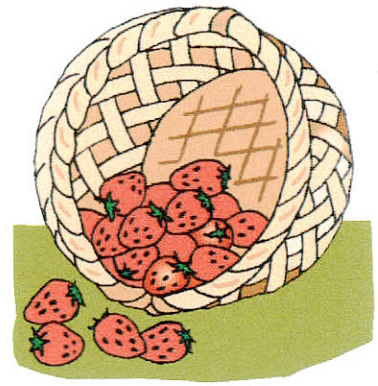
Subject: _____ Period: _____



Strawberry Girl by Lois Lenski

Directions:

Draw a circle map brainstorming everything you know about neighbors. Then draw a frame around your map and write *how* you know about neighbors, or how you acquired your information. *Be specific*—use particular names, places, dates, etc.

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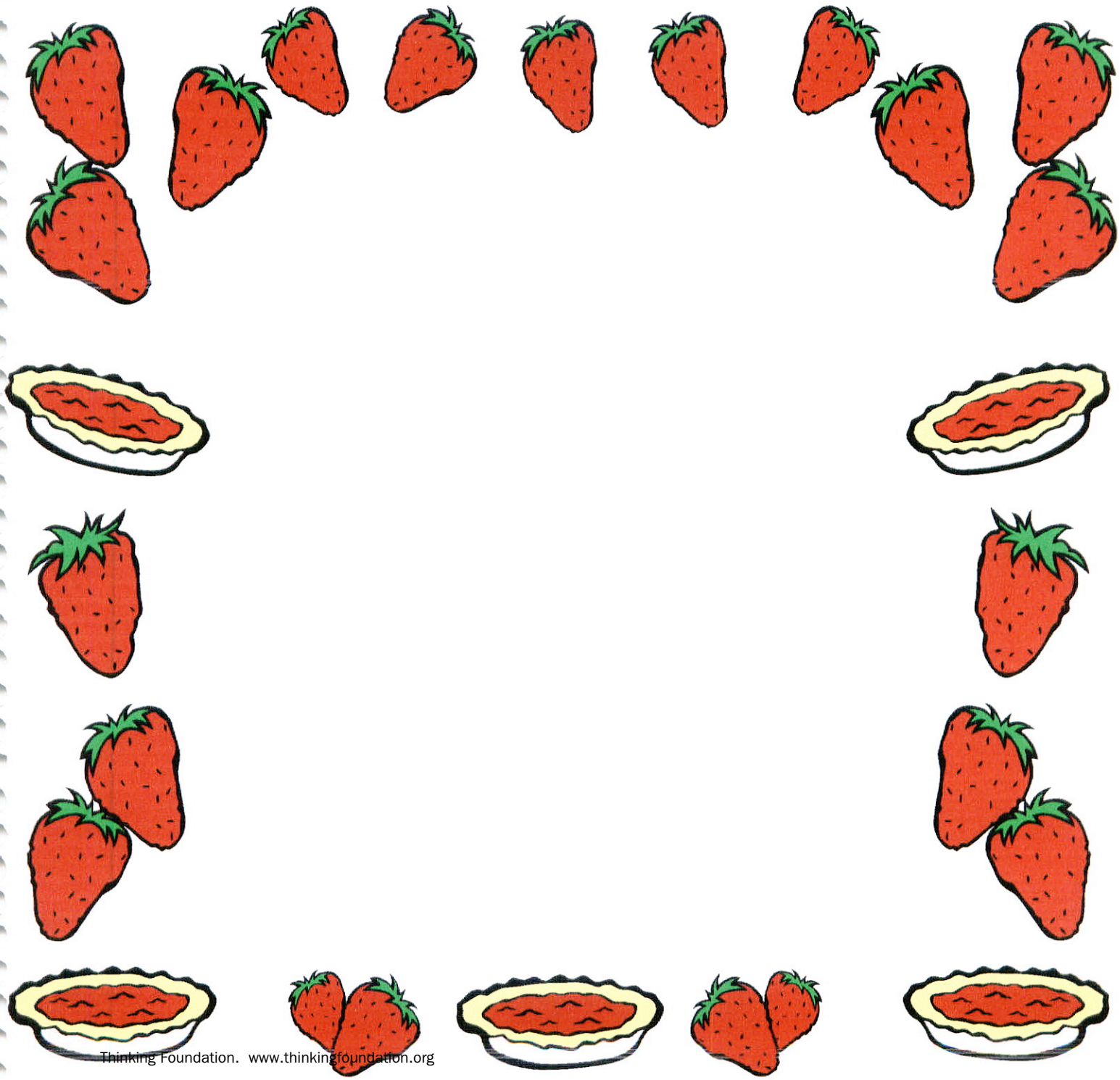
Name: _____ Date: _____

Subject: _____ Period: _____

Strawberry Girl by Lois Lenski

Directions:

Draw a bubble map with 6 bubbles that describe strawberries.
Remember to use adjectives or adjective phrases!
Use the completed map to write 6 sentences about strawberries.



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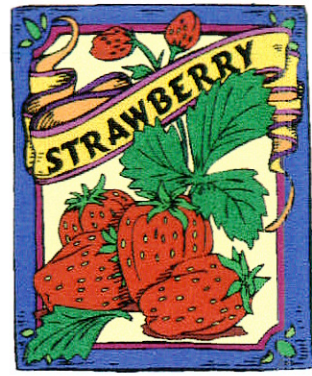
Subject: _____ Period: _____

Strawberry Sentences

Name: _____ Date: _____

Subject: _____ Period: _____



Strawberry Girl by Lois Lenski

Directions:

Draw a double bubble map comparing and contrasting the Slater family with the Boyer family. Use the completed map to write an essay about the similarities and differences between these two families.

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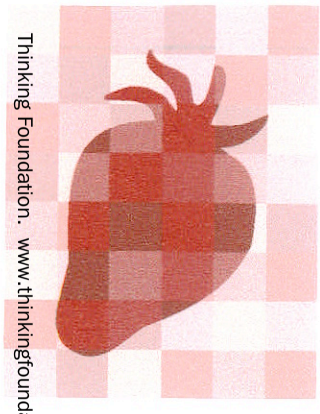

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Name: _____ Date: _____

Subject: _____ Period: _____

Strawberry Girl by Lois Lenski

Directions:

Draw a tree map using the "w" words as categories (who, what, where, when, why, and how).

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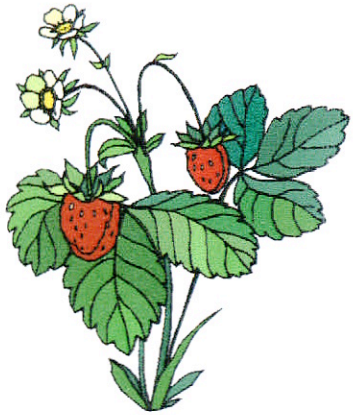

Name: _____ Date: _____

Subject: _____ Period: _____

Strawberry Girl by Lois Lenski

Directions:

Draw a brace map breaking down a strawberry plant from its whole into its parts.

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Name: _____ Date: _____

Subject: _____ Period: _____

Strawberry Girl by Lois Lenski

Directions:

Draw a flow map sequencing the ten main events in the novel Strawberry Girl.
Use your completed map to write a summary of the plot.

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Name: _____ Date: _____

Subject: _____ Period: _____

Strawberry Girl by Lois Lenski

Directions:

Draw a multi-flow map describing the causes and effects of the feud between the Boyers and Slaters.

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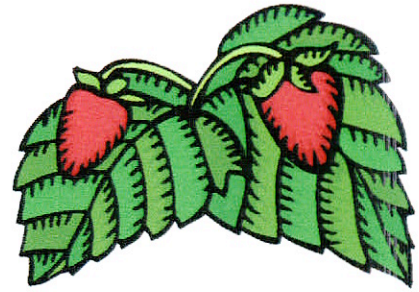
Subject: _____ Period: _____



Strawberry Girl by Lois Lenski

Directions:

Draw a bridge map with a relating factor of "learned";
describe what the characters learned throughout the story.

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Name: _____ Date: _____

Subject: _____ Period: _____

Strawberry Girl by Lois Lenski

Book Report

Directions: ***You will be writing a book report that is based on thinking maps. As you work on each part of the report, use the thinking maps software to construct your map. Type your paragraphs on the computer and use spell-check and grammar-check. Choose construction paper or any other art materials to make a book jacket for the thinking map hard copies. Illustrate your book jacket with magazine pictures, photos, drawings, or mixed media materials; the illustrations should reflect the novel. The more creative your project is, the better your grade will be. When you are finished, you will present your book report to the class.***

1. SETTING: Draw a bubble map with at least 10 bubbles to describe the setting of Strawberry Girl; remember to use only adjectives or adjective phrases. In your map, describe when and where the novel took place. Using the completed map, write a half-page essay describing the setting of the novel.

2. SETTING: Draw a brace map to break down from a whole into parts either the Slater home or the Boyer Home; remember to use only physical objects that can be touched.

3. CHARACTERS: Draw a double bubble map to compare and contrast Shoestring and Birdie. Include as many similarities and differences of which you can think. Using the completed map, write a half-page essay describing these two characters.

4. CHARACTERS: Draw a bubble map to describe daily life for the characters in the novel; remember to use only adjectives or adjective phrases. Using the completed map, write a half-page essay describing a typical day in the life of a Florida Cracker.

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5. CHARACTERS: Draw a tree map that lists as sub-categories all of the characters in the novel; under each character, write the main details that pertain to that character. As this will be a large map, use a sheet of large construction paper or poster board.

6. CHARACTERS: Draw a bridge map that has as a relative factor "is a main character in". Include Strawberry Girl and at least five other books you have read this year.

7. PLOT: Draw a flow map to summarize the ten main events in the novel. Using the completed map, write a half-page essay summarizing Strawberry Girl.

8. PLOT: Draw a multi-flow map to illustrate the causes and effects of the Boyer family growing strawberries. Using the completed map, write a half-page essay describing your map.

9. VOCABULARY: Pick a vocabulary word with which you are familiar. Draw a circle map to brainstorm everything you know about this word.

10. VOCABULARY: Choose a vocabulary word that you do not know. Using a thesaurus and a dictionary, research everything you can find out about this word—synonyms, antonyms, definitions, part(s) of speech, word origin, and pronunciation guide. Draw a circle map to brainstorm everything you have learned about this word.

11. READING LOG: Draw a tree map using the "w" words (who, what, where, when, why, and how). For each chapter, write notes from your reading under the appropriate categories.

12. OPINION: Decide if you liked or did not like the novel. Draw a one-sided multi-flow map using your opinion of the book as the topic and reasons to support your opinion as the flow boxes.

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Name: _____ **Date:** _____
Subject: _____ **Period:** _____

Strawberry Girl by Lois Lenski

Research Projects

1. Compare life in Florida in the 1940's to life in Florida today, examining the social, political, and economic factors. Draw a tree map for each time period to help organize your thoughts; using the completed maps, write a one to two page essay. Include graphics and copies of your research.

2. Research current agricultural crops in Florida and their impact on Florida's economy. Include what practices are employed when crops are threatened by insects, disease, or bad weather. Draw any thinking map to help organize your thoughts; using the completed map, write a one to two page essay. Include graphics and copies of your research.

3. Research the culture of the Florida Crackers, including language, traditions and customs, food, holidays, and way of life. Draw a tree map to help organize your thoughts; using the completed map, write a one to two page essay. Include graphics and copies of your research.

4. Research Florida's "Open Range" policy in the 1940's and how it evolved. Draw a flow or multi-flow map to help organize your thoughts; using the completed map, write a one to two page essay. Include graphics and copies of your research.

5. Research wildlife or natural eco-systems in Florida. Draw any thinking map to help organize your thoughts; using the completed map, write a one to two page essay. Include graphics and copies of your research.

6. Research the author, Lois Lenski. Write a brief biography describing her life and accomplishments, including how she became an author and illustrator. Draw any thinking map to help organize your thoughts; using the completed map, write a one to two page essay. Include graphics and copies of your research.

7. Read one of Lois Lenski's other Newbery Award-winning books—either Phebe Fairchild: Her Book or Indian Captive. Make a "thinking maps book report" by using all eight thinking maps to analyze the contents of the book. Draw an illustrated book jacket for your report.

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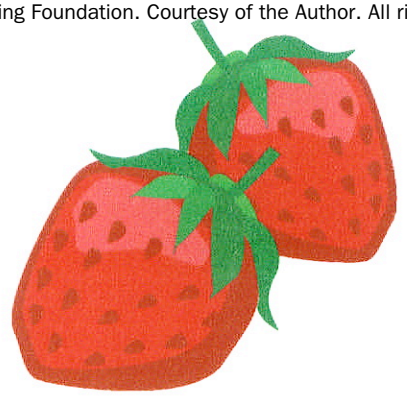

Answer Key

Strawberry Girl by Lois Lenski

Cracker Dialect Worksheet

1. She does not like cowmen.
2. We do not want any Yankees in our school.
3. What are you doing?
4. You cannot do anything with her.
5. You do not have any right to fence it up!
6. Nobody can change brands without landing in jail.
7. What are you doing here?
8. Is Mrs. Slater going to die, Ma?
9. You are so easy to have as a neighbor.
10. He is not rough and wild.

3-2-1 Worksheet

Student answers will vary.

Bubble Map Worksheet

Student answers will vary; possible adjectives include juicy, red, ripe, sweet, delicious, sugary, healthy, plump, succulent, seasonal, fruity.

Double Bubble Map Worksheet

Student answers will vary; possible similarities include: both are Crackers, live in Florida backwoods, own cattle and farm animals, go to town for supplies, attend school, are religious at end of story, fight with each other, apologize at end of story, have children, enjoy frolics. Differences include: Boyers: have more money, are more civilized people, are harder workers, are more successful, are more religious, don't drink, value education, fill their home with luxury items, care about their neighbors, don't want to fight. Slaters include: are poor, are dirty, have meager furnishings/clothes/food, don't value education or religion, are jealous, are lazy, drink and fight.

Research Projects Worksheet

Student answers will vary.

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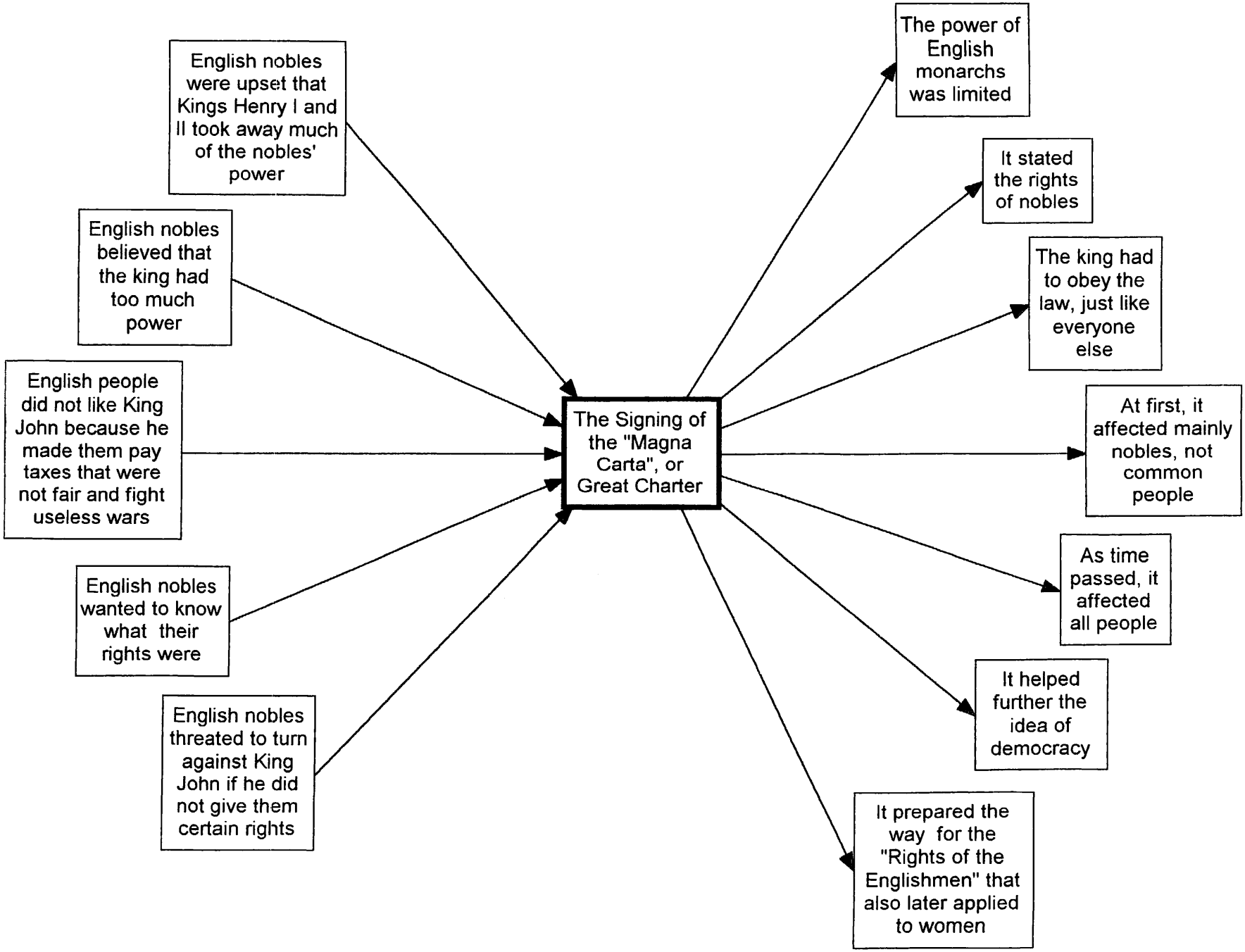

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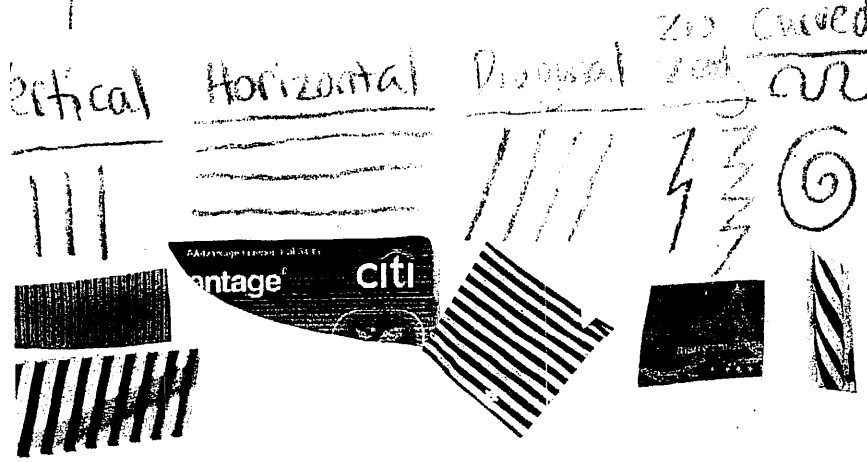
Line

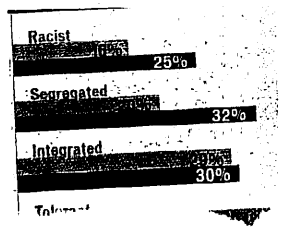
Kinds

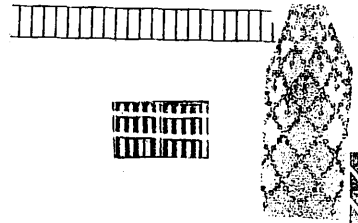
- Vertical
- Horizontal
- Diagonal
- Zig Zag
- Curved

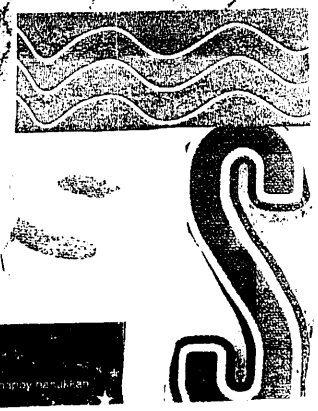


Variations

- Length
- Width
- Texture
- Direction
- Shape







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Appendix C

Thinking Maps surveys that were completed by the staff at the eastern Massachusetts school follow. Teachers who regularly use Thinking Maps in their classrooms observed the most improvement, whereas teachers who are reticent to integrate the maps, who have a negative attitude toward the maps, or who do not use them on a regular basis, did not observe as much growth, indeed if any at all, in their classes. Approximately half of the staff responded to the survey.

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Thinking Maps Survey

Name: Nancy d'Hemecourt

Subject Taught: Literature / Language Arts

Since the introduction of Thinking Maps, students demonstrate improved...	Observed	Not observed	Not applicable
▪ concept attainment	X		
▪ abstract thought processes	X		
▪ reflective thinking	X		
▪ recall	X		
▪ retention	X		
▪ writing (quality)	X		
▪ writing (quantity)	X		
▪ writing (organization of ideas)	X		
▪ metacognition (thinking)	X		

Additional Comments (*optional*):

- exceptional intervention
- I feel so positive about TMs that when my professors at BC and teachers from other schools talk about graphic organizers, they are no comparison with TMs.

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Thinking Maps Survey

Name: Robert Finnegan

Subject Taught: Literature and Language Arts

Since the introduction of Thinking Maps, students demonstrate improved…	Observed	Not observed	Not applicable
▪ concept attainment		X	
▪ abstract thought processes		X	
▪ reflective thinking	X		
▪ recall	X		
▪ retention	X		
▪ writing (quality)		X	
▪ writing (quantity)	X		
▪ writing (organization of ideas)	X		
▪ metacognition (thinking)		X	

Additional Comments (*optional*):

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Thinking Maps Survey

Name: Carol Ivins

Subject Taught: L.A./Lit

Since the introduction of Thinking Maps, students demonstrate improved...	Observed	Not observed	Not applicable
▪ concept attainment	✓		
▪ abstract thought processes		✓	
▪ reflective thinking	✓		
▪ recall	✓		
▪ retention	✓		
▪ writing (quality)	✓		
▪ writing (quantity)		✓	
▪ writing (organization of ideas)	✓		
▪ metacognition (thinking)		✓	

Additional Comments (*optional*):

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Thinking Maps Survey

Name: Joan Habib

Subject Taught: Language Arts / Literature

Since the introduction of Thinking Maps, students demonstrate improved…	Observed	Not observed	Not applicable
▪ concept attainment	X		
▪ abstract thought processes	X		
▪ reflective thinking	X		
▪ recall			
▪ retention	X		
▪ writing (quality) with respect to organization - yes		X	
▪ writing (quantity)	X		
▪ writing (organization of ideas)	X		
▪ metacognition (thinking)	X		

Additional Comments (*optional*):

It is still early in the process. I hope to see some carry overs to next year's performance in the classroom.

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Thinking Maps Survey

Name: Chris Dowling

Subject Taught: L.A. / Lit

Since the introduction of Thinking Maps, students demonstrate improved…	Observed	Not observed	Not applicable
▪ concept attainment		X	
▪ abstract thought processes	X		
▪ reflective thinking	X		
▪ recall	X		
▪ retention	X		
▪ writing (quality)		X	
▪ writing (quantity)	X		
▪ writing (organization of ideas)	X		
▪ metacognition (thinking)	X		

Additional Comments (*optional*):

It is difficult to give a yes or no response to many of these categories; so many kids differ. In addition, for some of these categories it is about 50/50 - observed/not.

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Thinking Maps Survey

Name: Jane McGowan

Subject Taught: Literature / Language Arts

Since the introduction of Thinking Maps, students demonstrate improved...	Observed	Not observed	Not applicable
▪ concept attainment	both ✓ ⟷ ✓		
▪ abstract thought processes	✓ both ⟷ ✓		
▪ reflective thinking	✓		
▪ recall	✓ both ⟷ ✓		
▪ retention	✓ ⟷ ✓		
▪ writing (quality)	✓		
▪ writing (quantity)	✓		
▪ writing (organization of ideas)	✓		
▪ metacognition (thinking)	✓ both ⟷ ✓		

Additional Comments (*optional*):

Both means in some cases with some students these qualities were observed, and in other cases, they were not. Overall, in my classes, thinking maps have been a positive and enhancing learning tool.

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To - Cynthia Manning

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Thinking Maps Survey

Name: Susan Sward

Subject Taught: Reading / Language Arts Elem/Middle School

Since the introduction of Thinking Maps, students demonstrate improved…	Observed	Not observed	Not applicable
▪ concept attainment	✓		
▪ abstract thought processes	some ✓		
▪ reflective thinking	✓		
▪ recall	✓		
▪ retention	yes, some ✓		
▪ writing (quality)	improved ✓		
▪ writing (quantity)	✓	about the same quantity	
▪ writing (organization of ideas)	✓		
▪ metacognition (thinking)	✓		

Additional Comments (*optional*):

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Thinking Maps Survey

Name: Colleen Amidon

Subject Taught: Reading / Language Arts

Since the introduction of Thinking Maps, students demonstrate improved…	Observed	Not observed	Not applicable
▪ concept attainment	X		
▪ abstract thought processes	X		
▪ reflective thinking	X		
▪ recall	X		
▪ retention	X		
▪ writing (quality)	X		
▪ writing (quantity)	X		
▪ writing (organization of ideas)	X		
▪ metacognition (thinking)	X		

Additional Comments (*optional*):

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Thinking Maps Survey

Name: Robyn Cohen

Subject Taught: Reading / L.A.

Since the introduction of Thinking Maps, students demonstrate improved…	Observed	Not observed	Not applicable
▪ concept attainment	✓		
▪ abstract thought processes		✓	
▪ reflective thinking		✓	
▪ recall	✓		
▪ retention	✓		
▪ writing (quality)	✓		
▪ writing (quantity)	✓		
▪ writing (organization of ideas)	✓		
▪ metacognition (thinking)		✓	

Additional Comments (*optional*):

Thinking Maps help clarify story elements + plot for studies. Helps summarize the main idea. Also helps writing story summaries. Makes getting through the books quicker.

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Thinking Maps Survey

Name: Cheri Stakely

Subject Taught: History - U.S. and World

Since the introduction of Thinking Maps, students demonstrate improved...	Observed	Not observed	Not applicable
▪ concept attainment	X		
▪ abstract thought processes	X		
▪ reflective thinking	X		
▪ recall	X		
▪ retention	X		
▪ writing (quality)	X		
▪ writing (quantity)	X		
▪ writing (organization of ideas)	X		
▪ metacognition (thinking)	X		

Additional Comments (*optional*):

Thinking Maps have been very effective in improving retention and recall in students. Also, students who are concrete thinkers have been able to grasp abstract concepts, such as cause and effect, by using Thinking maps

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Thinking Maps Survey

Name: Michael Frates

Subject Taught: History

Since the introduction of Thinking Maps, students demonstrate improved...	Observed	Not observed	Not applicable
▪ concept attainment	✓		
▪ abstract thought processes	✓		
▪ reflective thinking	✓		
▪ recall	✓		
▪ retention	✓		
▪ writing (quality)	✓		
▪ writing (quantity)	✓		
▪ writing (organization of ideas)	✓		
▪ metacognition (thinking)	✓		

Additional Comments (*optional*):

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Thinking Maps Survey

Name: DAVE HOLLAND

Subject Taught: HISTORY

Since the introduction of Thinking Maps, students demonstrate improved…	Observed	Not observed	Not applicable
▪ concept attainment	X		
▪ abstract thought processes	X		
▪ reflective thinking	X		
▪ recall	X		
▪ retention		X	
▪ writing (quality)	X		
▪ writing (quantity)	X		
▪ writing (organization of ideas)	X		
▪ metacognition (thinking)			

Additional Comments (*optional*): Sometimes too effective – mistakes on a map get repeated because they are remembered. They are generally a great organizational tool and opens student to higher thinking skills.

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Thinking Maps Survey

Name: Tricia Zaccardi

Subject Taught: Social Studies

Since the introduction of Thinking Maps, students demonstrate improved…	Observed	Not observed	Not applicable
▪ concept attainment	✓		
▪ abstract thought processes	✓		
▪ reflective thinking	✓		
▪ recall	✓		
▪ retention	✓		
▪ writing (quality)	✓		
▪ writing (quantity)	✓		
▪ writing (organization of ideas)	✓		
▪ metacognition (thinking)	✓		

Additional Comments (*optional*):

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Thinking Maps Survey

Name: Helen Carr

Subject Taught: Social Studies

Since the introduction of Thinking Maps, students demonstrate improved…	Observed	Not observed	Not applicable
▪ concept attainment	X		
▪ abstract thought processes ie describe, compare	X		
▪ reflective thinking	X		
▪ recall	X		
▪ retention	X		
▪ writing (quality)	X		
▪ writing (quantity)	X		
▪ writing (organization of ideas)	X		
▪ metacognition (thinking)	X		

Additional Comments (*optional*):

- concept attainment "in the making" ie English/England as Spanish/Spain, some students go back to the visual
- students focus is often "grabbed" by the visual lines which then "guide" their thinking.
- overall, writing is frequently teacher guided with the younger students

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metacognition - glimpses of

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Thinking Maps Survey

Name: Nina Filbert

Subject Taught: Speech/Language

Since the introduction of Thinking Maps, students demonstrate improved…	Observed	Not observed	Not applicable
▪ concept attainment	✓		
▪ abstract thought processes	✓		
▪ reflective thinking		✓	
▪ recall	✓		
▪ retention	✓		
▪ writing (quality)	✓		
▪ writing (quantity)		✓	
▪ writing (organization of ideas)	✓		
▪ metacognition (thinking)	✓		

Additional Comments (*optional*):

This information also varies depending on the class

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Thinking Maps Survey

Name: Meri Salloway

Subject Taught: Speech/Language

Since the introduction of Thinking Maps, students demonstrate improved…	Observed	Not observed	Not applicable
▪ concept attainment	✓		
▪ abstract thought processes	sometimes		
▪ reflective thinking	sometimes		
▪ recall	✓		
▪ retention	✓		
▪ writing (quality)	✓		
▪ writing (quantity)	✓		
▪ writing (organization of ideas)	✓		
▪ metacognition (thinking)	sometimes		

Additional Comments (*optional*):

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Thinking Maps Survey

Name: Jennifer Friedberg

Subject Taught: Speech and Language

Since the introduction of Thinking Maps, students demonstrate improved…	Observed	Not observed	Not applicable
▪ concept attainment	✓		
▪ abstract thought processes		✓	
▪ reflective thinking	✓		
▪ recall	✓		
▪ retention		✓	
▪ writing (quality)	✓		
▪ writing (quantity)	✓		
▪ writing (organization of ideas)	✓		
▪ metacognition (thinking)		✓	

Additional Comments (*optional*):

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Thinking Maps Survey

Name: Natalie Cohen

Subject Taught: Speech-Language

Since the introduction of Thinking Maps, students demonstrate improved...	Observed	Not observed	Not applicable
▪ concept attainment	✓		
▪ abstract thought processes	✓		
▪ reflective thinking	✓		
▪ recall	✓		
▪ retention	✓		
▪ writing (quality)	✓		
▪ writing (quantity)	✓		
▪ writing (organization of ideas)	✓		
▪ metacognition (thinking)	✓		

Additional Comments (*optional*):

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Thinking Maps Survey

Name: Cara Donovan

Subject Taught: Speech & Language Therapy; Communication Skills

Since the introduction of Thinking Maps, students demonstrate improved...	Observed	Not observed	Not applicable
▪ concept attainment	✓		
▪ abstract thought processes		✓	
▪ reflective thinking	✓		
▪ recall	✓		
▪ retention	✓		
▪ writing (quality)	✓		
▪ writing (quantity)		✓	
▪ writing (organization of ideas)	✓		
▪ metacognition (thinking)	✓		

Additional Comments (*optional*):

I think that the Thinking Maps are excellent tools and I feel that I haven't seen fully what they will do for my students. As they continue to learn how to use each map, I believe the students' metacognition will greatly improve

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Thinking Maps Survey

Name: Stephanie Noble

Subject Taught: Speech & Language

Since the introduction of Thinking Maps, students demonstrate improved...	Observed	Not observed	Not applicable
▪ concept attainment	X		
▪ abstract thought processes	X		
▪ reflective thinking	X		
▪ recall		X	
▪ retention		X	
▪ writing (quality)	X		
▪ writing (quantity)	X		
▪ writing (organization of ideas)	X		
▪ metacognition (thinking)	X		

Additional Comments (*optional*):

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Thinking Maps Survey

Name: Angie Hanna

Subject Taught: Occupational Therapy

Since the introduction of Thinking Maps, students demonstrate improved...	Observed	Not observed	Not applicable
▪ concept attainment	X		
▪ abstract thought processes		X	
▪ reflective thinking		X	
▪ recall	X		
▪ retention	X		
▪ writing (quality)			X
▪ writing (quantity)			X
▪ writing (organization of ideas)			X
▪ metacognition (thinking)	X		

Additional Comments (*optional*):

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Thinking Maps Survey

Name: Erin Powers

Subject Taught: OT

Since the introduction of Thinking Maps, students demonstrate improved…	Observed	Not observed	Not applicable
▪ concept attainment	✓		
▪ abstract thought processes	✓		
▪ reflective thinking	✓		
▪ recall	✓		
▪ retention	✓		
▪ writing (quality)		✓	
▪ writing (quantity)	✓		
▪ writing (organization of ideas)	✓		
▪ metacognition (thinking)	✓		

Additional Comments (*optional*):

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Thinking Maps Survey

Name: Blaine Colley

Subject Taught: OT

Since the introduction of Thinking Maps, students demonstrate improved…	Observed	Not observed	Not applicable
▪ concept attainment	X		
▪ abstract thought processes	X		
▪ reflective thinking	X		
▪ recall	X		
▪ retention	X		
▪ writing (quality)	X		
▪ writing (quantity)	X		
▪ writing (organization of ideas)	X		
▪ metacognition (thinking)	X		

Additional Comments (*optional*):

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Thinking Maps Survey

Name: Andrea Zechello, OTR/L

Subject Taught: Occupational Therapy

Since the introduction of Thinking Maps, students demonstrate improved…	Observed	Not observed	Not applicable
▪ concept attainment	X		
▪ abstract thought processes	X		
▪ reflective thinking	X		
▪ recall	X		
▪ retention	X		
▪ writing (quality)			X
▪ writing (quantity)			X
▪ writing (organization of ideas)			X
▪ metacognition (thinking)			

Additional Comments (*optional*):

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Thinking Maps Survey

Name: Donna Coleman

Subject Taught: Occupational Therapy

Since the introduction of Thinking Maps, students demonstrate improved...	Observed	Not observed	Not applicable
▪ concept attainment	X		
▪ abstract thought processes		X	
▪ reflective thinking		X	
▪ recall	X		
▪ retention		X	
▪ writing (quality)			X
▪ writing (quantity)			X
▪ writing (organization of ideas)			X
▪ metacognition (thinking)	X		

Additional Comments (*optional*):

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Thinking Maps Survey

Name: Liana Mah

Subject Taught: O.T. (Elementary)
Work Center (Middle School)

Since the introduction of Thinking Maps, students demonstrate improved…	Observed	Not observed	Not applicable
▪ concept attainment	✓		
▪ abstract thought processes		✓	
▪ reflective thinking		✓	
▪ recall	✓		
▪ retention	✓		
▪ writing (quality)			✓
▪ writing (quantity)			✓
▪ writing (organization of ideas)			✓
▪ metacognition (thinking)	✓		

Additional Comments (*optional*):

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Thinking Maps Survey

Name: Lois

Subject Taught: Career Ed

Since the introduction of Thinking Maps, students demonstrate improved...	Observed	Not observed	Not applicable
▪ concept attainment	✓		
▪ abstract thought processes	some		
▪ reflective thinking	✓		
▪ recall	✓+		
▪ retention	✓		
▪ writing (quality)		✓	
▪ writing (quantity)	✓*		
▪ writing (organization of ideas)	✓		
▪ metacognition (thinking)	✓		

Additional Comments (*optional*):

At times I have observed students who minimize the quantity of written expression. It appears that they feel/think that the sentences they write need to pertain only to the thoughts on the map, rather than to have those as a "jump off point", to expand these ideas. That is the only concern I have. Other than that I have truely felt the students have benefitted from visual format that facilitate organization, sequencing and abstract

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Thinking Maps Survey

Name: Mary Jan Walsh

Subject Taught: Computer Literacy

Since the introduction of Thinking Maps, students demonstrate improved...	Observed	Not observed	Not applicable
▪ concept attainment	✓		
▪ abstract thought processes	✓		
▪ reflective thinking	✓		
▪ recall	✓		
▪ retention	✓		
▪ writing (quality)	✓		
▪ writing (quantity)			✓
▪ writing (organization of ideas)	✓		
▪ metacognition (thinking)		✓	

Additional Comments (*optional*):

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Thinking Maps Survey

Name: MACY WINNERMAN / RACHEAL MARS

Subject Taught: ART

Since the introduction of Thinking Maps, students demonstrate improved...	Observed	Not observed	Not applicable
▪ concept attainment	X		
▪ abstract thought processes		X	
▪ reflective thinking	X		
▪ recall		X	
▪ retention	X		
▪ writing (quality)			X
▪ writing (quantity)			X
▪ writing (organization of ideas)			X
▪ metacognition (thinking)	X		

Additional Comments (*optional*):

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Thinking Maps Survey

Name: Melissa Hamilton

Subject Taught: Math

Since the introduction of Thinking Maps, students demonstrate improved…	Observed	Not observed	Not applicable
▪ concept attainment	X		
▪ abstract thought processes		X	
▪ reflective thinking		X	
▪ recall		X	
▪ retention		X	
▪ writing (quality)		~~X~~ oops!	X
▪ writing (quantity)		~~X~~ oops!	X
▪ writing (organization of ideas)			X
▪ metacognition (thinking)		X	

Additional Comments (*optional*):

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Thinking Maps Survey

Name: Karen Ann Panarella

Subject Taught: Math

Since the introduction of Thinking Maps, students demonstrate improved…	Observed	Not observed	Not applicable
▪ concept attainment	X		
▪ abstract thought processes	X		
▪ reflective thinking	X		
▪ recall	X		
▪ retention	X		
▪ writing (quality)			X
▪ writing (quantity)			X
▪ writing (organization of ideas)			X
▪ metacognition (thinking)	X		

Additional Comments (*optional*):

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Thinking Maps Survey

Name: Mae Coyle

Subject Taught: Math

Since the introduction of Thinking Maps, students demonstrate improved…	Observed	Not observed	Not applicable
▪ concept attainment	X		
▪ abstract thought processes		X	
▪ reflective thinking	X		
▪ recall		X	
▪ retention		X	
▪ writing (quality)			X
▪ writing (quantity)			X
▪ writing (organization of ideas)			X
▪ metacognition (thinking)		X	

Additional Comments (*optional*):

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Thinking Maps Survey

Name: Courtney Ronald

Subject Taught: Math

Since the introduction of Thinking Maps, students demonstrate improved…	Observed	Not observed	Not applicable
▪ concept attainment	✓		
▪ abstract thought processes	✓		
▪ reflective thinking	✓		
▪ recall	✓		
▪ retention	✓		
▪ writing (quality)			✓
▪ writing (quantity)			✓
▪ writing (organization of ideas)	✓		
▪ metacognition (thinking)	✓		

Additional Comments (*optional*):

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Thinking Maps Survey

Name: Julie MacLeo

Subject Taught: Math

Since the introduction of Thinking Maps, students demonstrate improved…	Observed	Not observed	Not applicable
▪ concept attainment	✓		
▪ abstract thought processes	some ✓		
▪ reflective thinking	✓		
▪ recall	some ✓		
▪ retention	some ✓		
▪ writing (quality)			✓
▪ writing (quantity)			✓
▪ writing (organization of ideas)	✓		
▪ metacognition (thinking)	✓		

Additional Comments (*optional*):

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Thinking Maps Survey

Name: _____

Subject Taught: Math

Since the introduction of Thinking Maps, students demonstrate improved…	Observed	Not observed	Not applicable
▪ concept attainment	✓		
▪ abstract thought processes		✓	
▪ reflective thinking	✓		
▪ recall	✓		
▪ retention	✓	✓	
▪ writing (quality)			✓
▪ writing (quantity)			✓
▪ writing (organization of ideas)			✓
▪ metacognition (thinking)			✓

Additional Comments (*optional*):

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Thinking Maps Survey

Name: Anita

Subject Taught: Math

Since the introduction of Thinking Maps, students demonstrate improved...	Observed	Not observed	Not applicable
▪ concept attainment	✓		
▪ abstract thought processes	✓		
▪ reflective thinking	✓		
▪ recall		✓	
▪ retention		✓	
▪ writing (quality)			X
▪ writing (quantity)			X
▪ writing (organization of ideas)			X
▪ metacognition (thinking)	✓		

Additional Comments (*optional*):

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Thinking Maps Survey

Name: Staci Desatnick

Subject Taught: Elem. Math

Since the introduction of Thinking Maps, students demonstrate improved...	Observed	Not observed	Not applicable
▪ concept attainment	✓		
▪ abstract thought processes	✓		
▪ reflective thinking	✓		
▪ recall	✓		
▪ retention	✓		
▪ writing (quality)			✓
▪ writing (quantity)			✓
▪ writing (organization of ideas)			✓
▪ metacognition (thinking)	✓		

Additional Comments (*optional*):

The circle, double-bubble, and tree map have worked especially well in math, specifically when the thinking is more language-based (rather than number based).

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Thinking Maps Survey

Name: Danny Fain

Subject Taught: Science

Since the introduction of Thinking Maps, students demonstrate improved…	Observed	Not observed	Not applicable
▪ concept attainment	X		
▪ abstract thought processes		X	
▪ reflective thinking	X		
▪ recall		X	
▪ retention	X		
▪ writing (quality)		X	
▪ writing (quantity)		X	
▪ writing (organization of ideas)	X		
▪ metacognition (thinking)	X		

Additional Comments (*optional*):

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Thinking Maps Survey

Name: Christina Matson

Subject Taught: Gr 7 & Gr 8 Science

Since the introduction of Thinking Maps, students demonstrate improved...	Observed	Not observed	Not applicable
▪ concept attainment	X		
▪ abstract thought processes		X	
▪ reflective thinking	X		
▪ recall	X		
▪ retention	X		
▪ writing (quality)	X		
▪ writing (quantity)	X		
▪ writing (organization of ideas)	X		
▪ metacognition (thinking)	X		

Additional Comments (*optional*):

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Thinking Maps Survey

Name: Susie Solomon

Subject Taught: Science

Since the introduction of Thinking Maps, students demonstrate improved…	Observed	Not observed	Not applicable
▪ concept attainment	X		
▪ abstract thought processes	X		
▪ reflective thinking	X		
▪ recall	X		
▪ retention	X		
▪ writing (quality)	X		
▪ writing (quantity)		X	
▪ writing (organization of ideas)	X		
▪ metacognition (thinking)	X		

Additional Comments (*optional*):

Thinking maps have been very useful for introducing and reviewing in science relevant concepts.

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Thinking Maps Survey

Name: Mari Young

Subject Taught: Science

Since the introduction of Thinking Maps, students demonstrate improved…	Observed	Not observed	Not applicable
▪ concept attainment	sometimes		
▪ abstract thought processes		✓	~~✓~~
▪ reflective thinking	✓		
▪ recall	✓		
▪ retention	✓		
▪ writing (quality)	✓		
▪ writing (quantity)	✓		
▪ writing (organization of ideas)	✓		
▪ metacognition (thinking)		sometimes	

Additional Comments (*optional*):

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Thinking Maps Survey

Name: Katie Krueger

Subject Taught: Middle School Science

Since the introduction of Thinking Maps, students demonstrate improved…	Observed	Not observed	Not applicable
▪ concept attainment	X		
▪ abstract thought processes	X		
▪ reflective thinking	X		
▪ recall	X		
▪ retention	X		
▪ writing (quality)	X		
▪ writing (quantity)	X yes!		
▪ writing (organization of ideas)	X yes!		
▪ metacognition (thinking)	X		

Additional Comments (*optional*):

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Thinking Maps Survey

Name: Lynn Curran

Subject Taught: Health / Counseling

Since the introduction of Thinking Maps, students demonstrate improved…	Observed	Not observed	Not applicable
▪ concept attainment	X		
▪ abstract thought processes		X	
▪ reflective thinking	X		
▪ recall	X		
▪ retention	X		
▪ writing (quality)			X
▪ writing (quantity)			X
▪ writing (organization of ideas)			X
▪ metacognition (thinking)	X		

Additional Comments (*optional*):

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Thinking Maps Survey

Name: Maureen Austin

Subject Taught: ELM School HSI + Counseling

Since the introduction of Thinking Maps, students demonstrate improved…	Observed	Not observed	Not applicable
▪ concept attainment	X		
▪ abstract thought processes	X		
▪ reflective thinking	X		
▪ recall	X		
▪ retention	X		
▪ writing (quality)			X
▪ writing (quantity)			X
▪ writing (organization of ideas)			X
▪ metacognition (thinking)	X		

Additional Comments (*optional*):

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Thinking Maps Survey

Name: Rob Lamb

Subject Taught: Health / Student Issues

Since the introduction of Thinking Maps, students demonstrate improved…	Observed	Not observed	Not applicable
▪ concept attainment	X		
▪ abstract thought processes	X		
▪ reflective thinking	X		
▪ recall	X		
▪ retention	X		
▪ writing (quality)	X		
▪ writing (quantity)	X		
▪ writing (organization of ideas)	X		
▪ metacognition (thinking)		X	

Additional Comments (*optional*):

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Thinking Maps Survey

Name: Susan Smith Powers

Subject Taught: ———

Since the introduction of Thinking Maps, students demonstrate improved…	Observed	Not observed	Not applicable
▪ concept attainment	X+		
▪ abstract thought processes		X	
▪ reflective thinking		X	
▪ recall		X	
▪ retention		X	
▪ writing (quality)	X		
▪ writing (quantity)	X		
▪ writing (organization of ideas)	X		
▪ metacognition (thinking)	X		

Additional Comments (*optional*):

Students are really using TM and understand them.
Meeting with staff to share examples ideas was beneficial.
Thanks for all your hard work.
Susan

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Thinking Maps Survey

Name: Amy Davis

Subject Taught: Counseling / HSI

Since the introduction of Thinking Maps, students demonstrate improved…	Observed	Not observed	Not applicable
▪ concept attainment	X		
▪ abstract thought processes		X	
▪ reflective thinking	X		
▪ recall		X	
▪ retention	X		
▪ writing (quality)		X	
▪ writing (quantity)		X	
▪ writing (organization of ideas)		X	
▪ metacognition (thinking)		X	

Additional Comments (*optional*):

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Thinking Maps Survey

Name: Emily Foote

Subject Taught: HSI / Counseling

Since the introduction of Thinking Maps, students demonstrate improved…	Observed	Not observed	Not applicable
▪ concept attainment	✓		
▪ abstract thought processes		✓	
▪ reflective thinking	✓		
▪ recall		✓	
▪ retention		✓	
▪ writing (quality)			✓
▪ writing (quantity)			✓
▪ writing (organization of ideas)			✓
▪ metacognition (thinking)	✓		

Additional Comments (*optional*):

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Thinking Maps Survey

Name: Meghan Ferguson Saudek

Subject Taught: Counselor

Since the introduction of Thinking Maps, students demonstrate improved…	Observed	Not observed	Not applicable
▪ concept attainment	✓		
▪ abstract thought processes		✓	
▪ reflective thinking	✓		
▪ recall	✓		
▪ retention		✓	
▪ writing (quality)			✓
▪ writing (quantity)			✓
▪ writing (organization of ideas)			✓
▪ metacognition (thinking)	✓		

Additional Comments (*optional*): I have used thinking maps to brainstorm various solutions to problems!

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Thinking Maps Survey

Name: Ashley Reed

Subject Taught: HSI

Since the introduction of Thinking Maps, students demonstrate improved…	Observed	Not observed	Not applicable
▪ concept attainment	√		
▪ abstract thought processes	√		
▪ reflective thinking	√		
▪ recall			√
▪ retention	√		
▪ writing (quality)			√
▪ writing (quantity)			√
▪ writing (organization of ideas)			√
▪ metacognition (thinking)	√		

Additional Comments (*optional*):

Because of the set up of health class, I have not used the maps with extreme frequency.

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Thinking Maps Survey

Name: Alison Apfel

Subject Taught: Health & Student Issues

Since the introduction of Thinking Maps, students demonstrate improved…	Observed	Not observed	Not applicable
▪ concept attainment	✓		
▪ abstract thought processes	✓		
▪ reflective thinking	✓		
▪ recall	✓		
▪ retention		✓	
▪ writing (quality)			✓
▪ writing (quantity)			✓
▪ writing (organization of ideas)			✓
▪ metacognition (thinking)	✓		

Additional Comments (*optional*):

I usually use maps in a large group to introduce a new topic or to explore something (ex. tree map of positive and negative coping strategies); not used by me to be a precursor to a writing assignment because classes are not homogenious in terms of academic ability however I have still found them very useful.

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Appendix D

The following curriculum handbook contains activities that are designed to be used independently and that are non-sequential; any of these visual tools can be adapted as needed. The activities are geared toward a fifth grade level and can be used as part of a teacher-guided lesson, a class discussion, a group activity, independent work, or a learning center. The students must be fluent with Thinking Maps prior to completion of these assignments, and it is suggested that the teacher model the lessons before expecting the students to complete the work independently.

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Chapter Questions Worksheet

Forward

1. Describe Crackers using the "w" words:
    - Who are Crackers?: People who live in the Florida backwoods
    - Where are they from? The Carolinas, Georgia, and West Florida
    - How do they live? They struggle against nature, wildlife, and each other in a primitive, frontier environment
    - What makes them different? They have a different speech pattern that is rich in old English idiom—word, phrase, and rhythm
    - Where did they settle? In the wild Florida backwoods
    - Why do we study them? We need to know our country better, and we need to know and understand people different from ourselves, so we may enjoy our rich American heritage

Prologue

1. How did the Slaters mark their cows? An "S" in a circle
2. Why was Essie trying to alert Pa Slater about the cow? It was in the neighbor's orange grove, eating the trees
3. Who were the Slaters' new neighbors? The Boyers
4. Do you think the Slaters were rich or poor, and why? Poor: Their cow was skinny, the children were filthy and played in the dirt, and their cow was hungry

Chapter 1 – Callers

1. Do the Boyers seem rich or poor, and why? Rich; the family and their house seem well-cared for, the girl has neatly braided hair, they sweep their yard clean, flowers are planted in planters and in a bordered garden, their house is considered a mansion by backwoods standards
2. What do you think "callers" are? Visitors
3. Is this a simile or a metaphor: "She was carrying her baby like a sack of potatoes on her hip"? Simile
4. Why did Ma Slater tell Ma Boyer not to bother growing oranges? She thought the climate was too cold
5. How did the Boyers plan on earning money? Grow fruits and vegetables
6. How did the Slaters earn money? They raised beef
7. How did the Boyers treat their cows differently from the Slaters? Why is this important? The Boyers feed their cows so they could get milk and butter
8. According to Mrs. Slater, why wouldn't her daughters talk? She said they were mean
9. What were the nicknames for the following characters:
    - Robert Boyer: Bunny
    - Bihu Boyer, Jr.: Buzz
    - Dixie Lee Francine Boyer: Dixie
    - Dovey Eudora Boyer: Dove or Dovey

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- Berthenia Lou Boyer: Birdie or little wren
- Jefferson Davis Slater: Shoestring

10. What did Birdie call snarls in Shoestring's hair? Rats' nests
11. What new items hadn't the Slaters seen before? Comb, mirror, tablecloth
12. Why did the Slaters leave the Boyers' home so quickly? They felt the Boyers were better than they were because the Boyers had fancy items in their home
13. Why did the Slaters say they had come to visit the Boyers? To borrow a cup of sugar

Chapter 2 – Fences

1. Why did the Boyers pen the cows up every night? To fertilize a future garden area with manure
2. What did the Slaters do with their cows? Let them run free
3. Over what did Shoestring and Birdie argue? Whether or not the soil was good for crops
4. Where did strawberries first grow in Florida? Galloway
5. What did Shoestring claim to be? cowman
6. What happened when Shoestring tried to ride Semina, the mule? He was thrown
7. Is this a cliché or simile: "Don't count your biddies (chickens) before they're hatched"? Cliché
8. What gift did Shoestring bring for Birdie after their argument? A cooter, or soft-shelled turtle
9. What two things killed Birdie's plants? A lack of rain, and Shoestring's horse on her field
10. What damage did the Slaters' cows do? They ate the Boyers' orange trees
11. What did the Boyers build to keep out the Slaters' animals? A fence
12. According to Shoestring, what was going to happen if Pa Slater built a fence? Shoestring's Pa would make trouble for Pa Boyer
13. What bad habit did Pa Slater have? He drank

Chapter 3 – School

1. In what did school children pack their lunches? A bucket
2. What did the girl at school call the Boyer children? Yankees
3. Why do you think Olema and the other children didn't want anything to do with the Slaters? They were trouble
4. What did the water taste like? Sulpher
5. Why did Billie Sue think Dovey was stuck up? Dovey's dress was new and made of calico
6. Of what was most girls' dresses made? Floursacks
7. Who burst into the school in the middle of the day? Gus and Joe Slater
8. Did Pa Slater support his sons attending school? No
9. What happened when Mr. Pearce tried to discipline Gus and Joe? They beat him up
10. Why was school cancelled for a very long time? Mr. Pearce was injured seriously

Chapter 4 – Hogses

1. To what trouble did Birdie awaken in the middle of the night? The Slaters' hogs were in the Boyers' field
2. What do you think Pa Boyer did to the hog? (opinion)

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3. What kind of food did the Crackers eat? Fried chicken, ham, squirrel, rabbit, sweet potatoes, cowpeas, grits, gravy, cakes, pies, corn bread, biscuits, and cane syrup
4. Why was Birdie afraid for Pa Slater to meet with her dad? She thought Pa Slater might be a fighter like his sons
5. How did Pa Boyer want to settle their problem? Through the law
6. How did Pa Slater want to settle their problem? By using a shotgun
7. Is this a cliché or a simile: "My razorbacks (hogs) can run like a streak o' lightening"? simile
8. Why was Birdie angry with Shoestring? He threw a snake on top of her head
9. How did the Slaters threaten the Boyers? A threatening note was posted on the Boyers' porch
10. What animal did Shoestring bring to show Birdie? A raccoon
11. Why did Shoestring really come to the Boyers' house? To post the threat
12. What did Pa Boyer do to the Slaters' hogs? He cut the tips of their ears off
13. Why did Pa Boyer call Pa Slater a coward? Because he left a note and would not speak with Pa Boyer in person
14. Why did Birdie suddenly become friendly with Shoestring? He also did not want trouble and tried to prevent more fighting between their fathers
15. What did Birdie suggest Shoestring do to try to keep the Slaters' hogs at home? Feed them every night

Chapter 5 – Overalls

1. Why did the Boyers go to town? To buy new hats, a cooking stove, and barbed wire
2. Why did Birdie have to get a new summer hat? She never wore hers after the snake was on it
3. Why did the town seem so far away? The road was new to Birdie
4. What did Miss Liddy believe about every woman? No matter how poor or plain they were, all women loved pretty things
5. What kind of person was Miss Liddy, as shown by her conversation with Ma Slater? Kind, generous, and trusting
6. What did Birdie help Avuloy make? Wax roses
7. What luxury item did the Boyers purchase? A cooking stove
8. What new fencing material did Pa Boyer buy? Barbed wire
9. Who did Birdie see in town? The Slaters
10. From where did the Slaters hope to get money? A steer that Pas Slater was taking to the butcher
11. How do you think Pa Slater was going to celebrate after taking the steer to the butcher? (opinion)
12. Why did the painter call himself the "Lightning Artist"? He painted a picture in ten minutes
13. How did Pa Slater actually celebrate with the butcher's money? He gambled and got drunk
14. Why did Shoestring lie to Miss Liddy about his family's new purchases? He was ashamed

Chapter 6 – The Storm

1. Why couldn't Dovey and Birdie drink much water when they worked in the fields? They would get sick
2. What was Central Florida's weather like in September? Hot, dry, and no breezes
3. What ate Birdie's amaryllis lilies? Grasshoppers

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4. Why was Bunny crying? He sat on an ant hill and was covered in ants
5. What two services did Doc Dayton perform for the Boyers? He pulled Dan's tooth and filed down Semina's teeth
6. How were visiting strangers treated in the 1940s? They were politely spoken to, invited in for a meal, and invited to stay overnight
7. How would your family treat strangers today? (varies—probably opposite than in the 1940s)
8. What changes happened during the storm? Thunder, lightning, cool winds, and fresh air
9. Is this a cliché or a metaphor: "The rain came like sharp pebbles"? Metaphor
10. What damage did the storm do? Trees bent in half, The roof blew off the chicken coop, the yard was a giant puddle, and Birdie's hat was ruined

Chapter 7 – Cane Grinding

1. Why did Pa Boyer tell the neighbors he was grinding cane? To get help
2. What was attracted to the sweet cane juice? Flies, children, and grown-ups
3. What did Shoestring say cane juice looked like? Dirty, soapy dishwater
4. What was the unwritten law of the backwoods? Quarrels between neighbors did not keep them away from frolics
5. What items were made from cane juice? Cane juice, beer, brown sugar, syrup, molasses, and candy
6. What stopped the cane grinding? Semina balked
7. What took place during a frolic? Fiddle music, dancing, yard-play, candy-pull, and singing
8. Why was Shoestring glum at the candy-pull? His Pa had found out about the barbed wire fence
9. What do you think Pa Slater was going to do to the Boyers? (opinion)

Chapter 8 – Cattle

1. Why did Pa Slater cut the Boyers' barbed wire fence? The fence blocked his cattle's path to the watering hole
2. Is this a cliché or a metaphor: "It is better to let sleeping hogs (*or* dogs) lie"? Cliché
3. For what did Pa Boyer want to go to town? White paint for the house
4. Why did Birdie go see Miss Liddy? Azuloy repaired her hat
5. What were the two big commotions in town? Cowmen driving the cattle through the town, and a fight between Pa Boyer and Pa Slater
6. According to Miss Liddy, what are Crackers? People born in Florida or people who have lived in Florida a long time
7. What is a "strawberry girl"? A girl who sells strawberries
8. Over what did Pa Slater and Pa Boyer fight? Pa Slater cut Pa Boyer's fence
9. According to Pa Boyer, what is a "squatter"? Someone who lives on land he does not own
10. Miss Liddy said that Florida would not be a peaceful place to live until what happened? The debate over raising fences was settled
11. What happened to Pa Slater and Pa Boyer after the fight? Pa Slater was okay but Pa Slater was battered badly
12. What did Pa Boyer threaten to do if he saw any of Pa Slaters' cattle or hogs on his land? Shoot them
13. Who else fought besides Pa Slater and Pa Boyer? Buzz and Gus

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14. What happened to Buzz and Gus? Buzz got a black eye, and Gus went to jail
15. What do you think Ma Boyer would do to keep Pa Slater off her property? (opinion)
16. Why was Ma Boyer's strategy successful? Yes—Pa Slater went away and did not harm the Boyers' property

Chapter 9 – Strawberries

1. Why did the Slaters and the Boyers stop fighting? The winter pasture was bad
2. What did the Slaters and the Boyers do together in the winter? They took their cows to Lake Weller to graze
3. Why were the Boyers able to get milk and butter? They kept one cow all winter
4. Why was the winter peaceful for the Boyers? No Slater cows were around to cause trouble
5. Why were some schools in Florida called "Strawberry Schools"? They took their 3 month vacation in winter during strawberry season to allow the children to pick berries
6. What was the penalty for being the fastest berry picker? You had to help slower pickers finish their rows
7. What animal did Shoestring have in his bag? A rattlesnake
8. Why did Birdie risk a rattlesnake bite? To save the bunny from being eaten
9. How did the Boyers protect strawberry plants from freezing? Cover them in pine straw
10. What happened to Shoestring's snake? It froze to death

Chapter 10 – Alligator

1. What was the new method used for shipping strawberries? A Pony Refrigerator (an icebox)
2. Why did Pa Boyer and Birdie rush to get to the train? To ship their berries
3. Why did Osceola, their horse, stop suddenly in the road? The road was blocked by a large alligator
4. To where were strawberries being shipped? Evergreen Strawberry Co. in Philadelphia
5. How long did it take the Yankees to get strawberries using the Pony Refrigerator for shipping? Three days
6. What was the suggestion the stranger offered? Pack berries in pints rather than in quarts
7. Why couldn't Pa Boyer use pints for packing strawberries? His berries were too large
8. How was the Pony Refrigerator returned to the Boyers? The railroad shipped it back for free
9. Why were buzzards circling above the trees? A cow was trapped in the swamp
10. How did Pa Boyer rescue the cow? He used a grapevine to pull her out
11. How did Mrs. Slater react when Pa Boyer brought the cow to her? She wouldn't do anything to save the cow
12. How did Shoestring claim he caught a fish? He said it dropped out of the sky
13. How did Pa Boyer punish Shoestring? He whipped him hard
14. What are the two reasons why Ma Slater bought a Bible? She felt obliged because Ma Boyer had purchased a Bible, and she heard it was bad luck not to buy one
15. What do you think would happen if Pa Boyer whipped Shoestring in 2003, instead of 1945? (opinion—probably Pa would be sued by the Slaters or arrested for abuse)

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Chapter 11 – Spotted Calf

1. Why did trouble between the Slaters and the Boyers begin again in the spring? The cows returned from their winter pasture
2. What was Pa Boyer's brand, and what did it stand for? "BB" for Bihu Boyer
3. What did Pa Slater steal from the Boyers? Their spotted calf
4. Why couldn't Pa Boyer change the brand on the spotted calf? He would go to jail
5. What did Pa Boyer do when he found Pa Slater's hogs in his yard? He killed them
6. How did Pa Slater respond to his hogs being killed? He wrote a note in which he threatened to burn the Boyers' home
7. Why did the townspeople call Birdie a "strawberry girl"? She sold berries on a street corner
8. What did Pa Slater do to Semina? He poisoned and killed her
9. Why did Pa Boyer call Pa Slater a skunk? He stunk as a human being
10. What other animal could Pa Boyer have called Pa Slater? (varies)

Chapter 12 – Grass Fire

1. Why did Shoestring claim that Birdie and her family were better than other people? They were painting their house white
2. Where did Ma Boyer wash clothes? In a wash pot in the back yard
3. When Birdie went to get help from the Slaters, how did they respond? They ignored her
4. Who was the only member of the Slater family who offered to help the Boyers put out the fire? Ma Slater
5. Who was trapped in the palmettos during the fire? The Slater and Boyer children
6. What building did the fire destroy? The schoolhouse
7. Who would have been the new teacher? Miss Annie Laurie Dunnaway

Chapter 13 – Brown Mule

1. What job did Pa Boyer prefer over being a cattleman? Being a farmer
2. What did Pa Boyer bring to trade for a mule? A cow
3. How did the Boyers plan to keep their mule safe from the Slaters? They were going to keep her locked up when she wasn't working
4. Why did Essie and Zephy come to see the Boyers? To invite them to a chicken pilau
5. Why did Ma Slater have a chicken dinner for all the neighbors? Pa Slater got drunk and shot off the heads of all their chickens
6. Where was Mr. Slater, and why did he leave? He went away for a few days to get sober
7. What is "chicken pilau"? Chicken, rice, and seasonings
8. Why would Ma Boyer have buried the chickens instead of having a frolic, like Ma Slater? She would have been ashamed of what her husband did
9. What effects did Mr. Slater's drinking have on his family? They had no money because he spent it all on liquor, they had no new clothes, and they lost all their egg money to pay for household items
10. What changed between Ma Slater and Ma Boyer? They apologized and made up

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Chapter 14 – The Preacher

1. Why did Shoestring come to the Boyers' house in the middle of the night? His family was sick
2. Did Ma Slater and her children recover from their illness? Yes
3. What did Shoestring do while the Boyers were taking care of the Slaters? He took care of the house and helped Ma Boyer
4. Who came to visit the Slaters' house? The Preacher—Brother Jackson
5. Do you think it was fair that the hungry children were not allowed to share supper with the preacher? Why or why not? (opinion)
6. Why did Shoestring climb the kitchen wall? To see if there was any food left
7. Why did Essie and Zephy cry? The food was eaten
8. Why did Shoestring return home, even though he expected a whipping? He was hungry
9. What two things did Shoestring tell Mrs. Boyer? He was thankful for her help and was sorry for the things his family did to the Boyers
10. How did Pa Slater first react when he saw Ma Boyer in his house? He was furious and yelled at her to get out
11. Why did Pa Slater change his attitude toward Ma Boyer? He was grateful when he found out she saved the lives of his wife and children

Chapter 15 – New Organ

1. Why did Pa Slater change and become a better man? He found God and became religious
2. Who helped convert Pa Slater? The Preacher
3. What two things did Pa Slater hope to become? A good father and neighbor
4. How was land in Florida changing? The Open Range policy was changing and fences were being raised
5. What company moved near the Slaters and the Boyers? A phosphate company
6. What is phosphate used for? Fertilizer
7. How is phosphate removed from the earth? Strip-mining
8. What were two ways Pa Slater was affected by the phosphate company? He sold his cattle and got a job as a dynamiter with the company
9. What was Pa Slater finally going to let Shoestring do? Attend school
10. What was Ma Slater planning on growing, since Pa Slater had a job at the phosphate company? Strawberries and seedless grapefruit
11. Why was Miss Annie Laurie Dunnaway frightened on the first day of school? She thought Shoestring would beat her up, just as Gus and Joe beat up Mr. Pearce
12. What surprise awaited Birdie when she returned home from school? A fancy parlor organ
13. Why did Pa and Ma Boyer purchase the organ for Birdie? She had worked so hard on the strawberry crop
14. What did Birdie hope to do someday? Play the organ in church

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Appendix E

The following worksheets are graphic organizers which can be used individually and non-sequentially; any of these visual tools can be adapted to different classroom activities.

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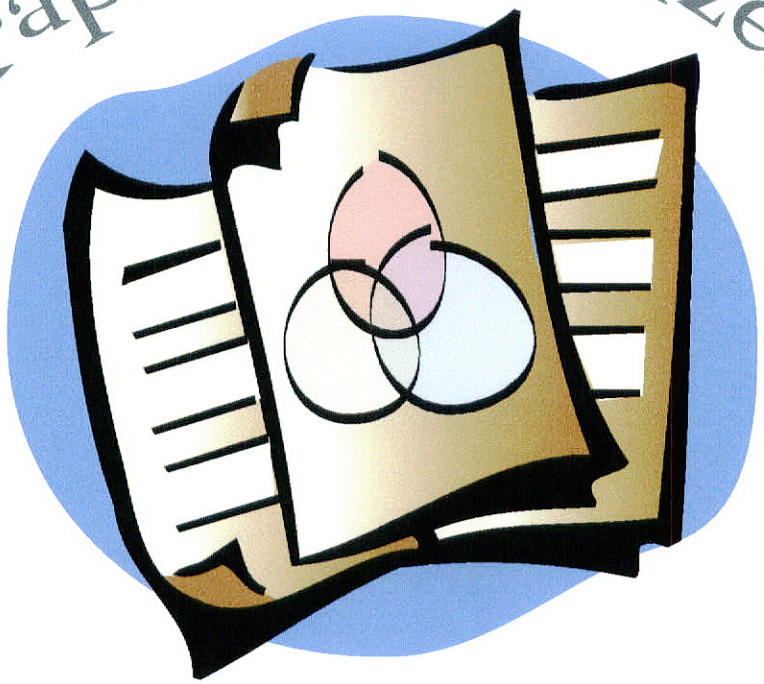
Books on the Run
presents

Reading Graphic Organizers



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- Your paycheck is limited.

Books on the Run were created to give you inexpensive, quality materials organized around a topic for specific grade levels. These printable books are available on seasonal topics, holidays, teaching aids, subject areas, and current issues.

Let us know what topics you would like to see covered in future *Books on the Run*.

Books on the Run Editors

Sue Ritchie

Sue taught for over 20 years in the elementary classroom, and spent summers working in early intervention, teacher training workshops, and continuing education programs. In 1999 Sue completed a Masters in Technology in Education, and joined the team that launched TeacherVision.

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Rebecca taught the elementary and middle grades for ten years. Her summers were spent on professional development classes and teaching summer school. In 1992 she completed a Masters in Elementary Education, with a concentration in the Application of Computers in the Elementary Classroom. Rebecca joined the TeacherVision team in March of 2001.

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Title _____

Read the title and look at the pictures in the story.
What do you think a problem in the story might be?

I think a problem might be _____

_____

_____

After reading _____ ,
draw a picture of one of the problems in the story.

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Title and Story Sequence

Read the title and the story words.
What do you think a problem in the story might be?

I think a problem might be _____

_____

_____

After reading _____ ,
draw a picture of one of the problems in the story.

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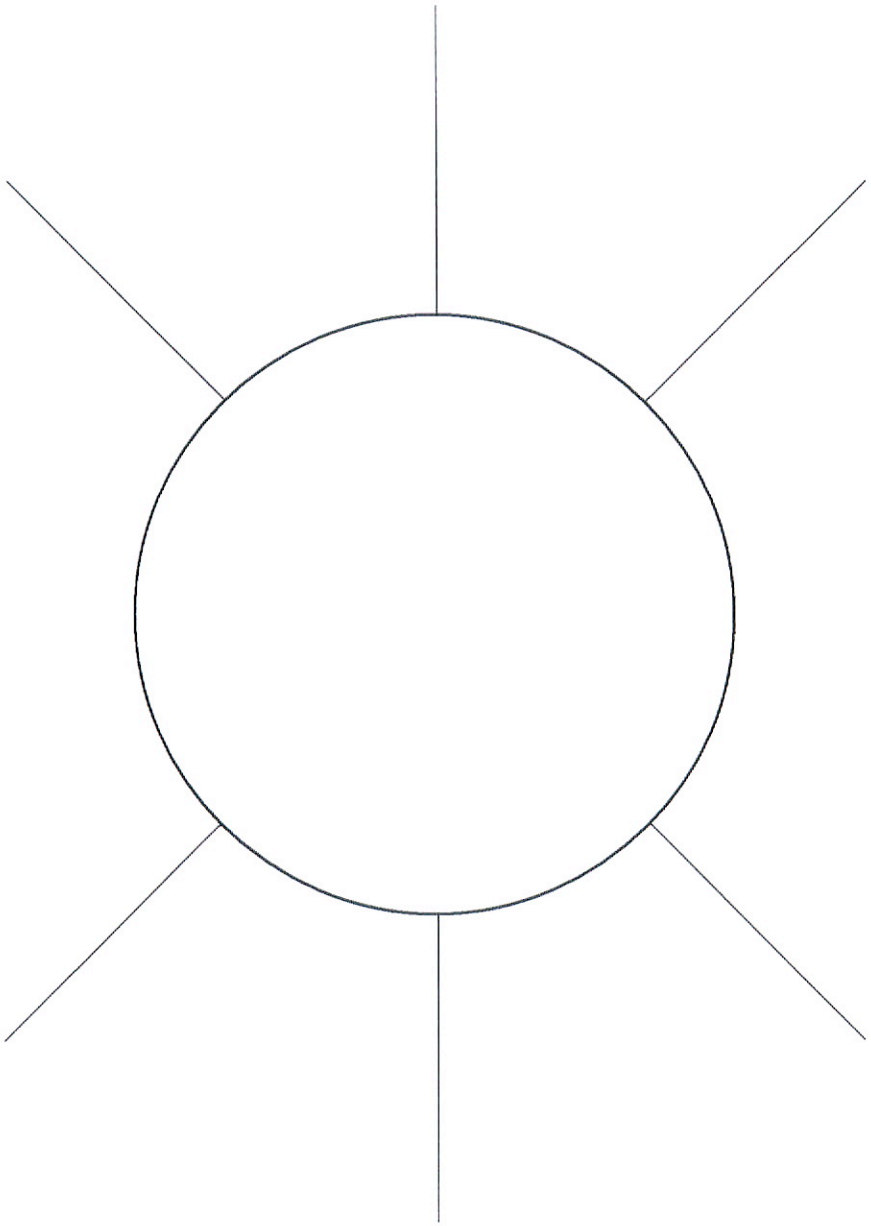

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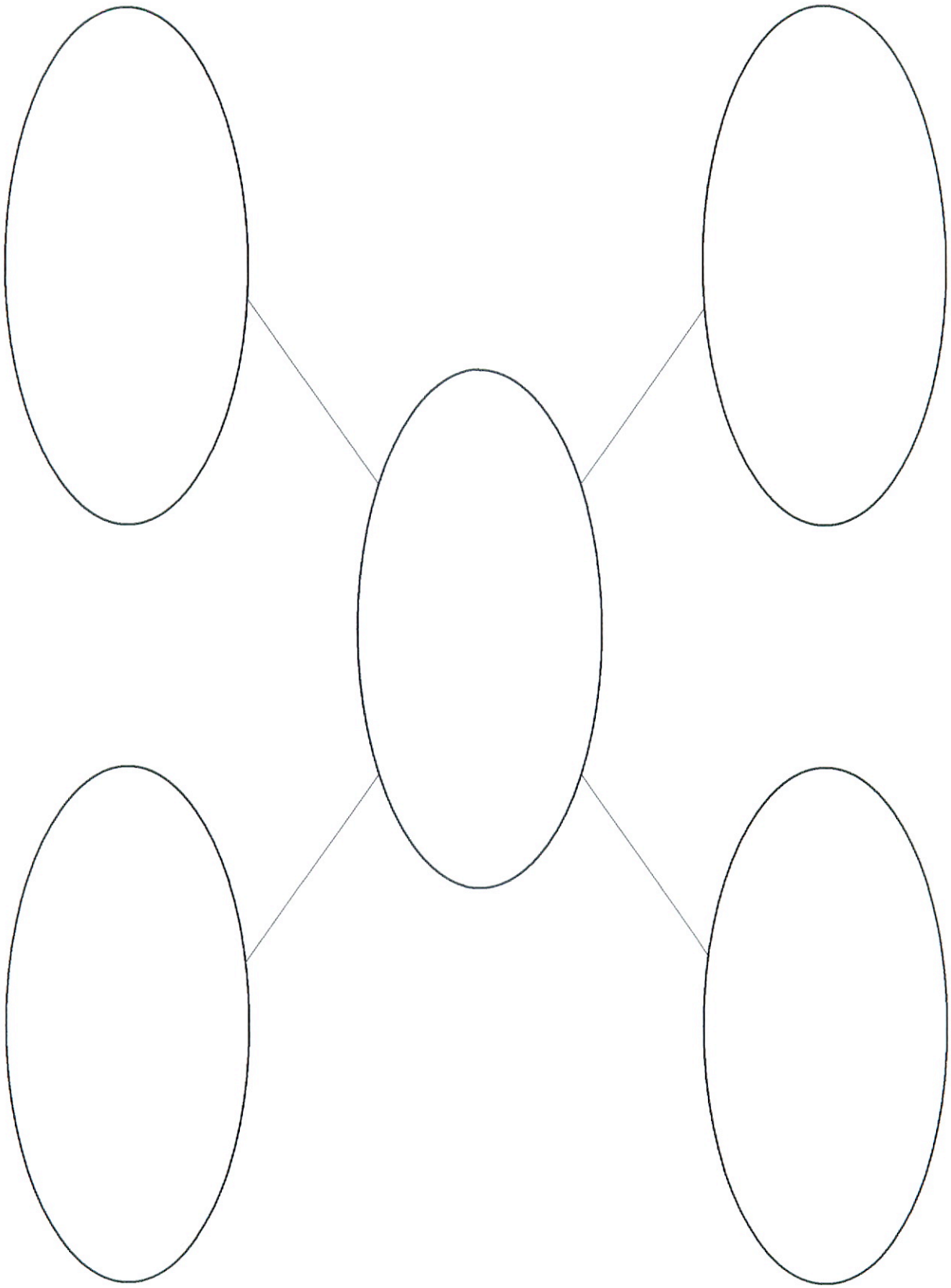

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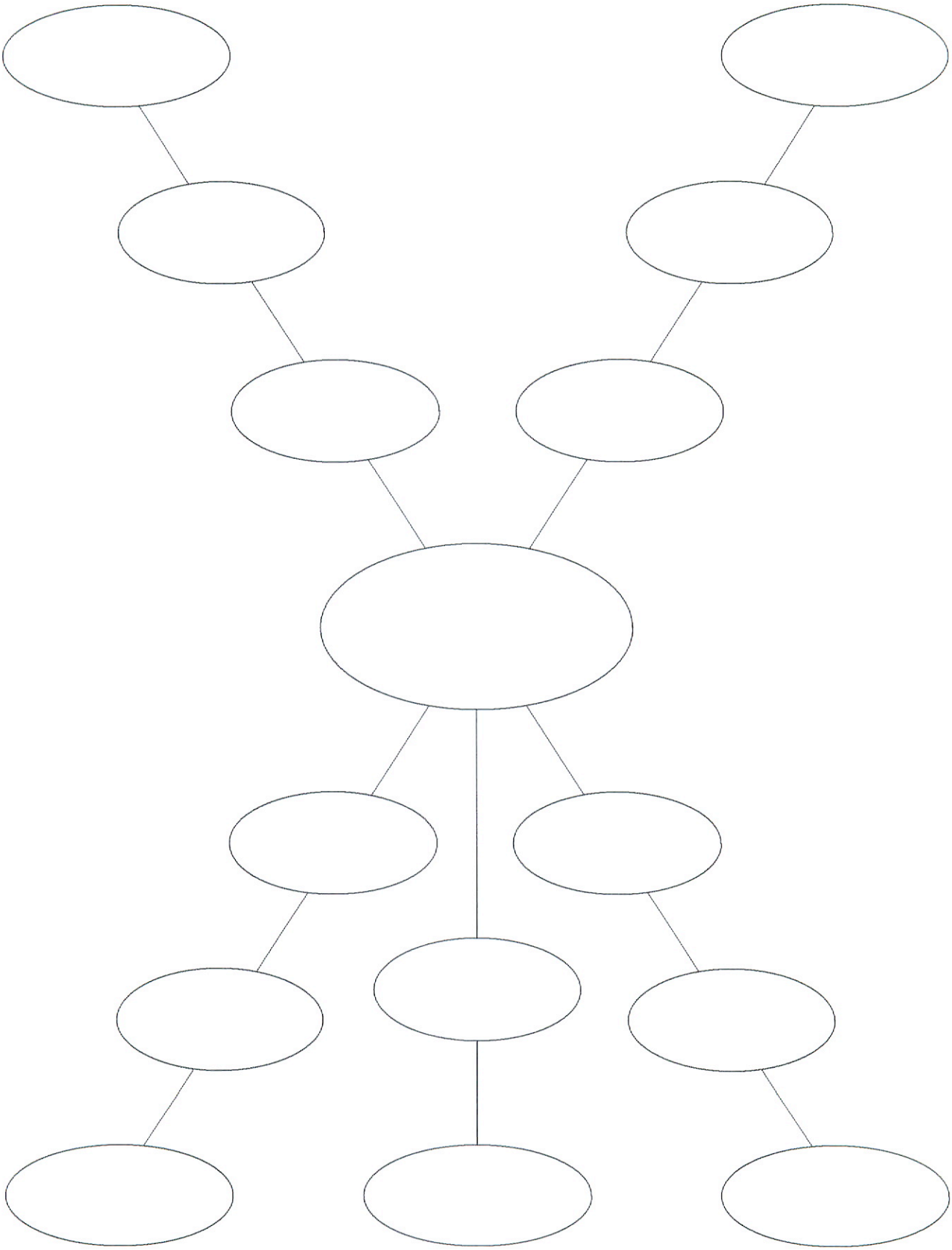

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Topic _____

K-W-L Chart

• What We **K**now

• What We **W**ant to Know

• What We **L**earned

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Word

Association or Symbol

Predicted definition _____

One good sentence _____

_____

_____

_____

Verified definition _____

_____

_____

Another good sentence _____

_____

_____

_____

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Title _____

Beginning

Middle

End

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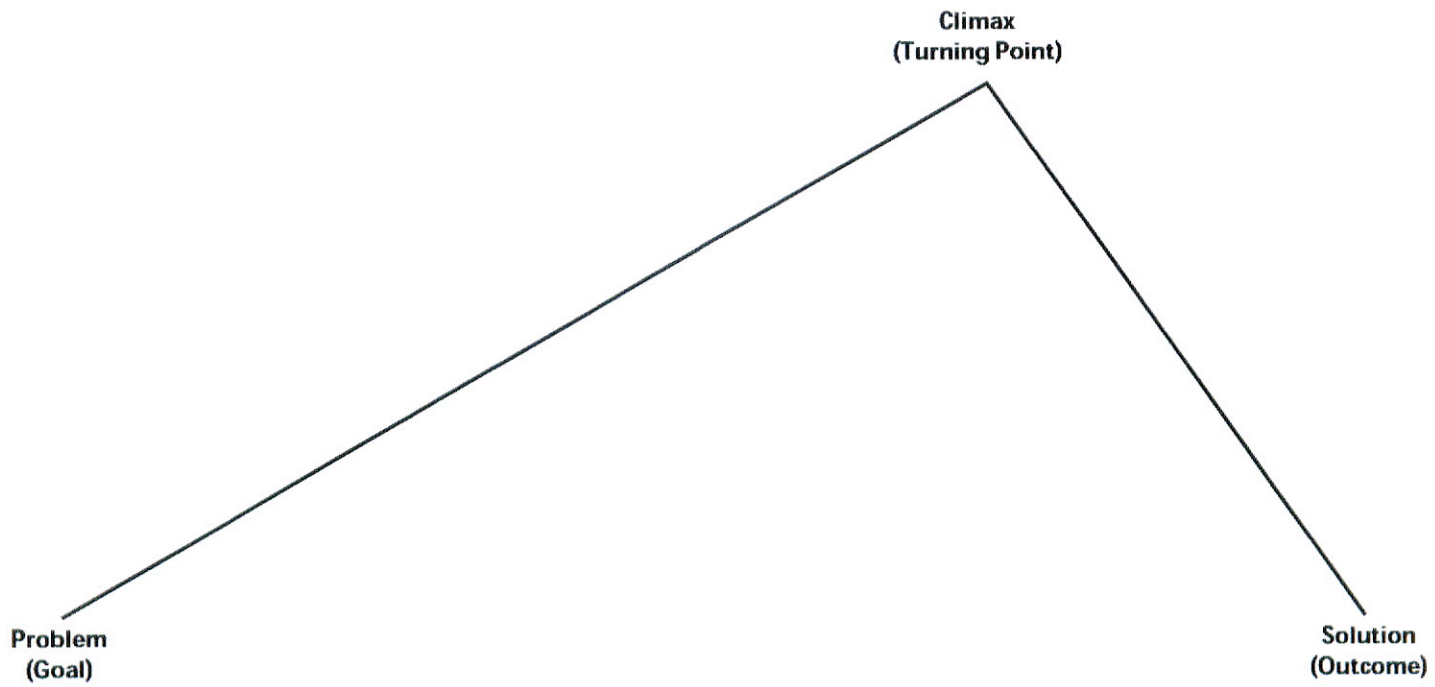
Setting

Characters

Rising Action



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Title

Characters

Problem

Events

Solution

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Title A _____

_____

Characters

Setting

Events

Ending

Title B _____

_____

Characters

Setting

Events

Ending

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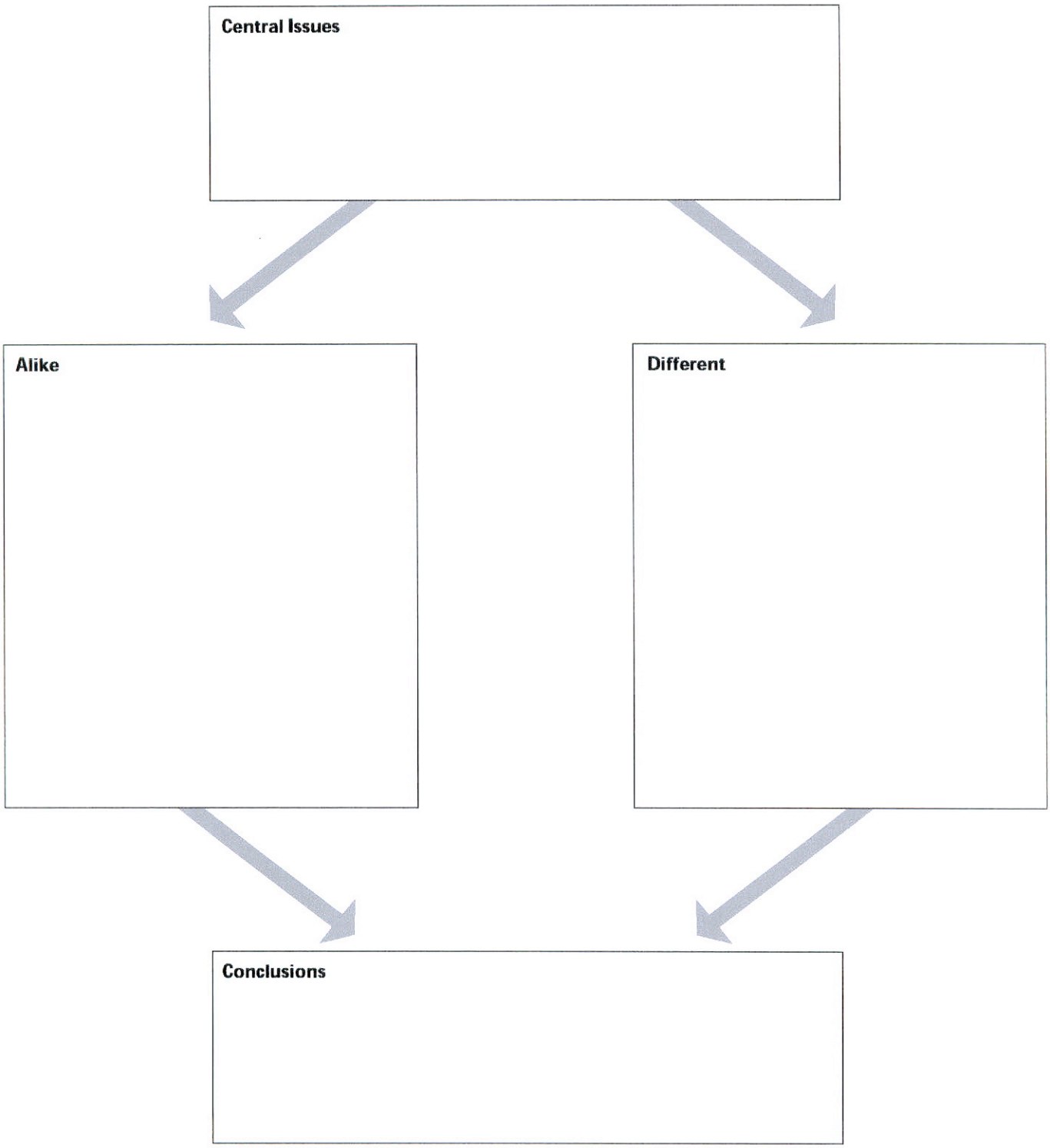

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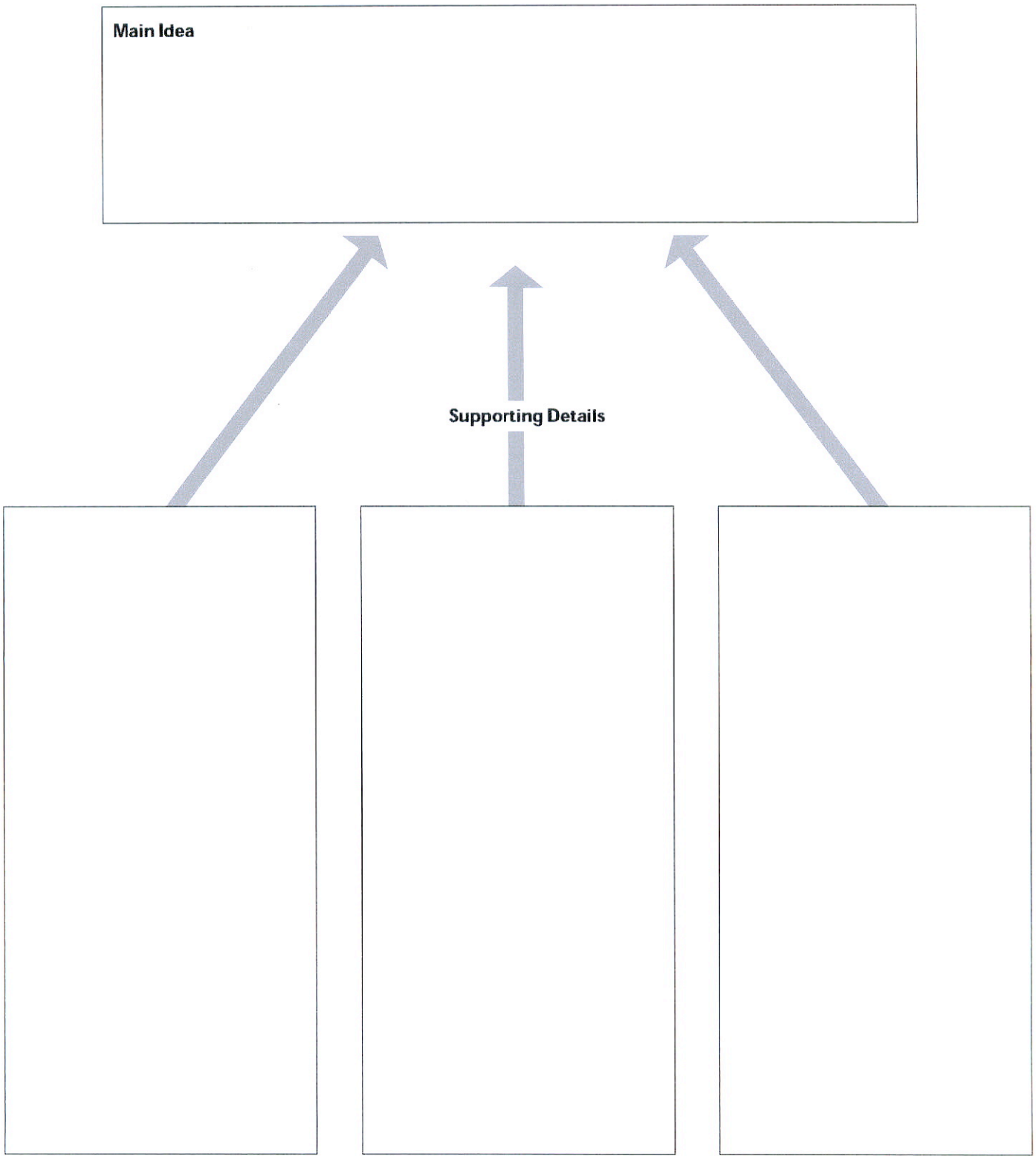

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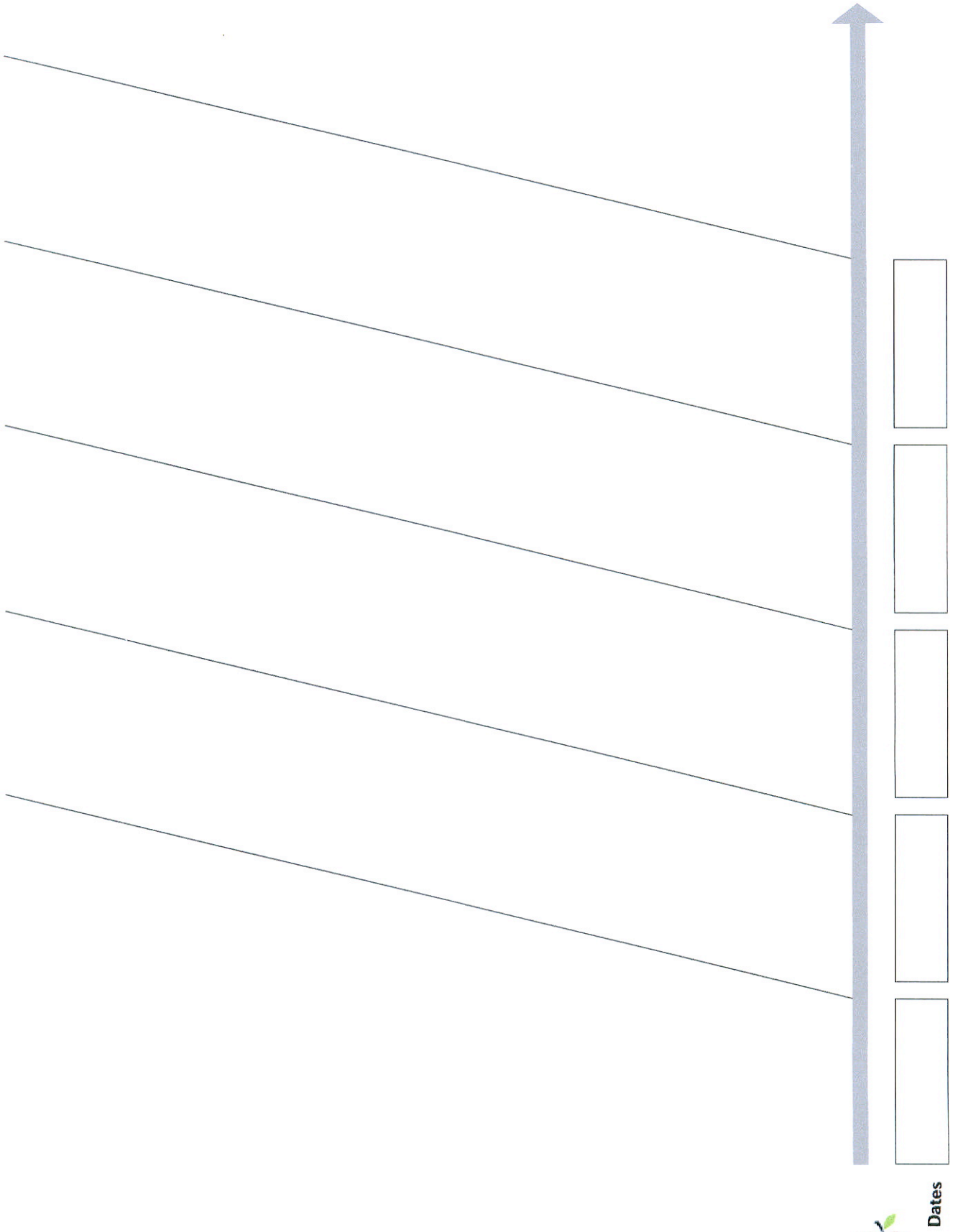

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This story is about _____

_____

(name the characters)

This story takes place _____

_____

(where and when)

The action begins when _____

_____

_____

Then, _____

_____

Next, _____

_____

After that, _____

_____

The story ends when _____

_____

_____

Theme _____

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Cause	Effect
Why did it happen?	What happened?
Why did it happen?	What happened?
Why did it happen?	What happened?

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Problem

Solution

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Problem

Attempts to Solve the Problem

Solution

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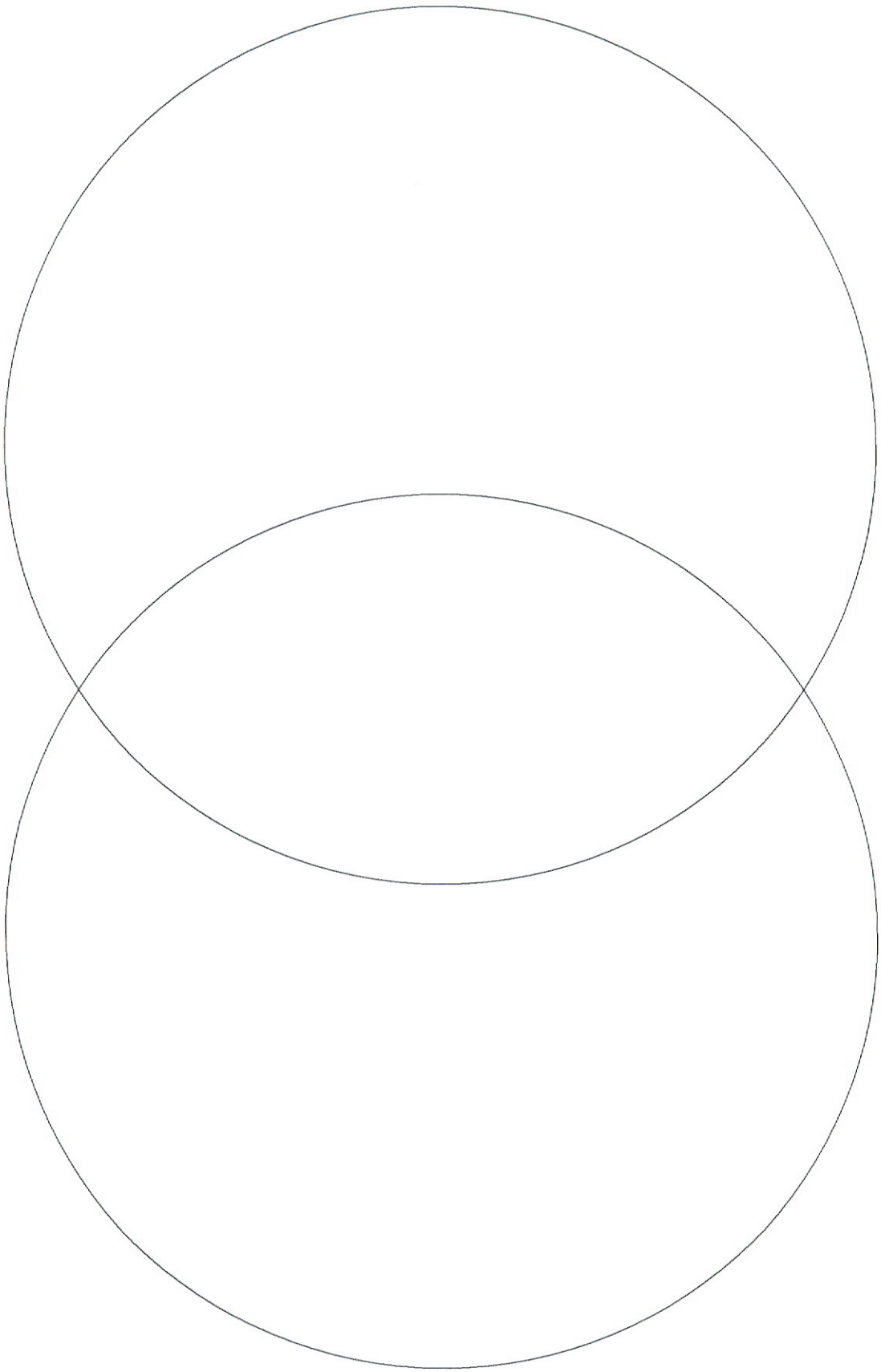

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1

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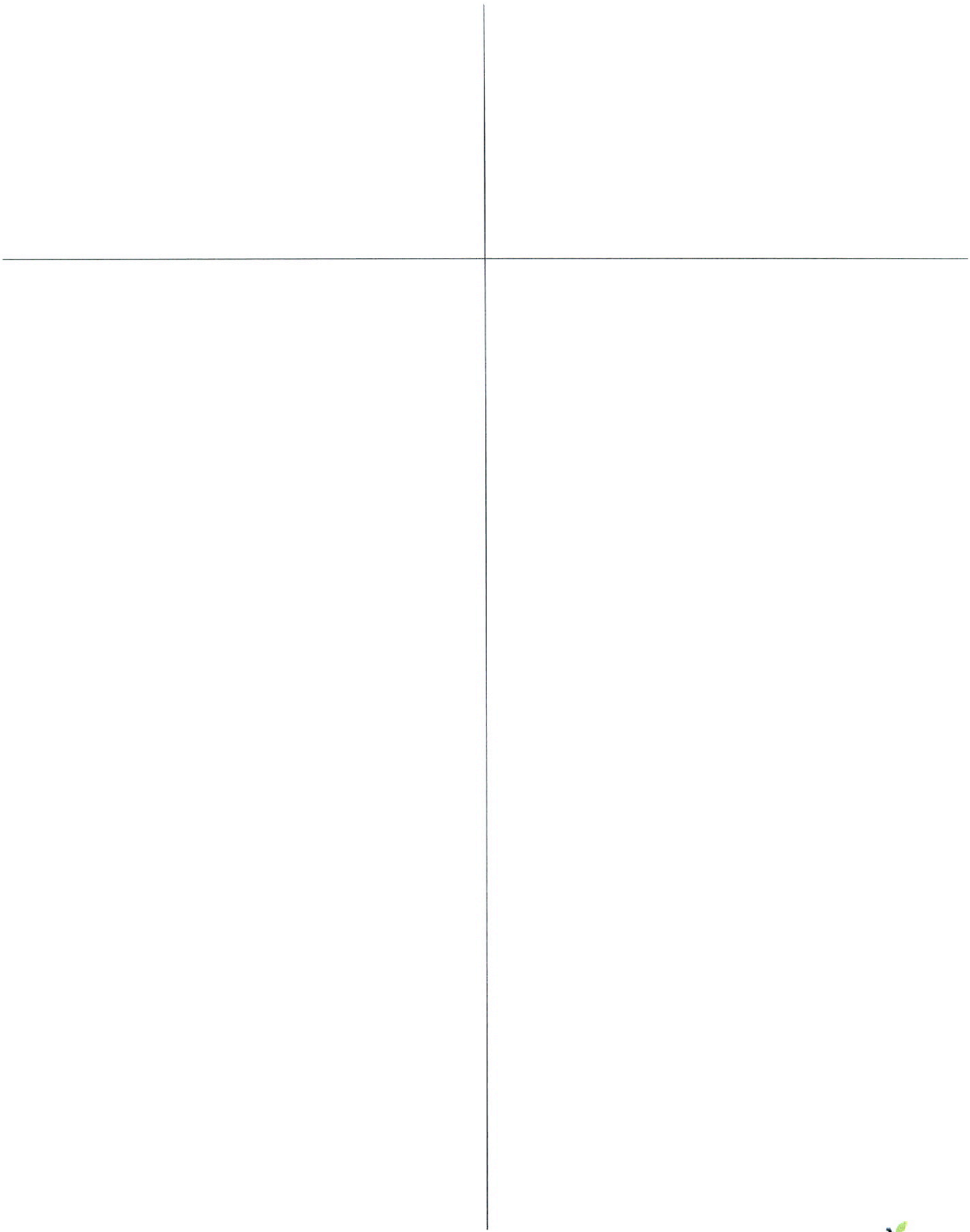

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