

# It's About Writing

A writing

resource

for science

social studies

by Kathy L. Balsamo

math and

language

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A writing resource for science,  
social studies, math and language arts

by Kathy Balsamo

Ray  
Thomas  
Big Sky  
8/95



1610 Brook Lynn Drive  
Beavercreek OH 45432

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Printing No. 543  
ISBN 0-9623835-2-X

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## Preface

*Having always been interested in and excited about transferring thoughts and visions into words and onto paper, I remember finding it hard to understand why others simply could not "just write". After teaching in both regular and gifted classrooms and tutoring remedial students, I found that no organizational framework was being taught to those who could not "just write" other than a vertical sequential outline. And outlines to me were the things you wrote AFTER you wrote your story, essay, or term paper to make it fit your thoughts!*

*I was lucky to meet webbing/mindMapping as a state consultant in the Illinois Gifted Program. Too often, however, I saw teachers use it as a one time experience or an activity the children enjoyed. No educational purpose or follow-up was experienced. It can be so much more.*

*Any method can be driven into the ground. But if students can find a SUCCESSFUL method of doing an activity that they are being asked to do more of in the 90's, let them experience mindMapping. And have fun - whether in a technical or creative writing mode!*

## Acknowledgements



*To my husband, Stan, for his technical help; to my young son Steven whose writing ability amazes me; to Brenda Odell for the Baroque music and Rameau's music which was a constant background while I wrote this book at my computer; and to Joey, his illustrations, and his paper route which gave me the valuable time I needed.*

Just as Gabriele Rico found that Tony Buzan was formulating "mapping" at the time she was formulating "clustering" I heard the term "mindmapping" at a conference session. It lit all sorts of "ahas." May this book do the same for you.

A special thank you to Michelle Knox, MacKinley Thomas, and Thomas Whalen, and primary students Adina and Janessa, students in my MindMapping classes at Wright State University Saturday Enrichment Program, Dayton, Ohio.

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## MINDMAPS FOR ADMINISTRATIVE PLANNING

# Reflecting

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## **WHY do you teach "writing"?**

- a. I love writing myself, am enthusiastic, and convey that feeling to the student who in turn responds to my teaching and produces flowing written communication.
- b. I teach "language arts" and it is a component of the curriculum.
- c. The school says I should.
- d. The district says I have to.
- e. The state mandates it.
- f. It's in the textbook I use.
- g. I don't know why.

## **Why do YOU teach "writing"?**

- a. I believe that no matter what subject and which children I teach, all need to be able to communicate their knowledge and feelings competently through written and verbal forms.
- b. I teach language arts and it's part of my assigned responsibilities.
- c. I don't know.

## **Why do you TEACH "writing"?**

- a. The vast majority of people do not know a process for generating ideas, organizing the ideas, and creating flowing communication.
- b. I don't. I teach science.
- c. I don't. I teach social studies.
- d. I don't. I teach math.
- e. I don't. I teach music.
- f. I don't. I teach art.
- g. I don't. I'm an administrator.

## **Why do you teach "WRITING"?**

- a. To promote effective communication between and among people.
- b. It is part of my curriculum in the fourth unit after parts of speech.
- c. Because the textbook made it a lesson in every chapter.
- d. I don't. I teach science.
- e. I don't. I teach social studies.
- f. I don't. I teach math.
- g. I don't. I teach music.
- h. I don't. I teach art.
- i. I don't. I'm an administrator.

## WHY DO YOU TEACH "WRITING"?

Who doesn't need to be taught "writing"? In what subject is no "writing" necessary?

What are your objectives for teaching "writing"? Your district's? Your state's?

Does it make a difference *what* you teach if you include "writing" in your curriculum?

Does it make a difference *who* you teach if you include "writing" in your curriculum?

Why do you ask students to write? Is the reason different for different content? Is there transition from learning *how to write* in one class and writing *about a subject* in another?

Which teacher is responsible for seeing that the student is able to make that transition?

What type of attitude do you have toward "writing"? What type of attitude do your students have toward "writing"? Why? Is "writing" really hard?

We often give students these writing choices: Write about *whatever you want* or *about a tree*. Students respond, "*I don't know what to write about,*" or "*Who cares about a tree?*"

**Is it time to look at the teaching of writing from a different perspective and to modify our attitudes about "writing"?**

If we are teaching the *skill* of writing, we may have very different objectives as we teach. We look for topic sentences, subjects, predicates, complete sentences, compound sentences, complex sentences, capital letters, punctuation, spelling, indentation and "**Flowing Thought**" — a logical sequence so that the reader understands what the writer is saying.

On the other hand, if we are asking the student to tell us in a written form what he knows and understands about a specific academic subject, how he can apply what he has learned, if he can analyze and evaluate it, we are interested in his writing *skill as it relates* to us the reader of the learned writing skill of "**Flowing Thought**."

Rather than lay blame for inadequate teaching of both writing skill and flowing thought, offered here is a process for learning the skills and producing flowing thought whether you are the one responsible for the teaching of "writing" or the one responsible for imparting academic knowledge and receiving evidence of learning.

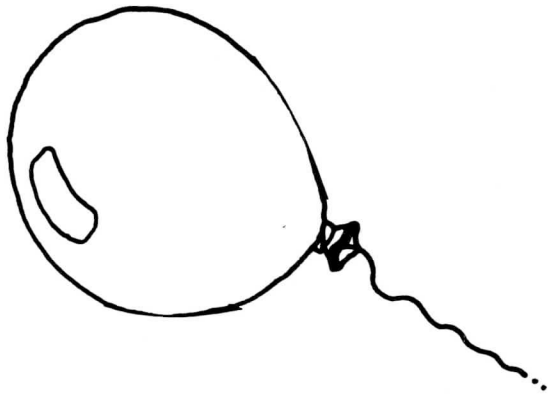
**IF THE STUDENT HAS THE PROCESS ACCESSIBLE TO HIM**

**HE WILL BE ABLE TO WRITE**

**WHATEVER HE WANTS OR ABOUT A TREE**

**SUCCESSFULLY.**





**Brainstorm**



**SCAMPER**



**MindMap**



**Elaborate/Create sentences**

**Sequence/Use sequence words**



**Combine sentences into paragraphs**



**Edit/Rewrite**



**Combine paragraphs into a complete  
written product**





# ATTITUDES

## WRITING IS ...

*a life-long learning experience.* Success in writing begins with **positive feelings** about one's abilities and ends with **a product** in which the writer has pride. The processes between feelings and product include generating ideas into a framework, organizing ideas, and transferring ideas into flowing thought. The processes are continually reinforced and supported by the teacher.

- **The pre-writing process of mindMapping allows students to feel confidence and see worth in their ideas. It provides for the transfer of their ideas into good sentences, logical paragraphs, and well-written products.**

## WRITING IS NOT ...

*once down — done.* It is not enough to tell students to think about what they want to write and then write well-developed sentences and paragraphs. Most students have no intuitive organizational framework that guarantees success. Most minds, at first writing, are not naturally adept at converging images of the right hemisphere into the left hemispheric domain of words and logical, sequential paragraphs

Story starters, often used as motivation for a writing activity, do not make the written communication the student's.

- **When writers are physically or emotionally involved in their topics, the commitment to those topics manifests itself in a higher quality product.**

Competent communication through writing requires a period of work on the part of both the learner and the teacher.



## THE PROCESS IS . . .

### **Brainstorming . . . SCAMPERing . . . MindMapping . . . Writing**

Brainstorming is the strategy for generating ideas. **SCAMPERing** adds creativity to generated ideas. **MindMapping** is a tool for visualizing the brainstorming and SCAMPERing processes.

MindMapping is **a written framework upon which generated ideas are placed**. It involves the identification of concepts, the organization of those concepts, and the formation of relationships between related and non-related concepts. MindMapping stimulates elaboration, sequencing, combining, deleting, editing, rewriting.

MindMaps serve several functions. The first mindMap may or may not be the final mindMap from which ideas are transferred into written communication. Parts of a mind-Map may be discarded. MindMaps may be organizational in character providing a sequential framework from which to write. They may become elaborative providing a framework to detail concepts and create sentences. They may be a creative mental exercise to stimulate productive thinking. **MindMaps are a beginning visual framework for writing.**

# PROCESSES . . . For Idea Generation

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## BRAINSTORMING

We know brainstorming is much like making a grocery list when the cupboard is bare. An infinite number of items can be put on the shelves, even some the cook doesn't really need. We've been using this idea-generating process since its introduction by Osborn in the 1930's and for years the method has followed the same simple rules.

- Every idea is to be accepted without criticism, evaluation or censorship.
- All ideas are encouraged even though at the time they may appear outrageous. (Never say no to an idea. With one SCAMPER an idea may turn into a solution.)
- Fluency, or quantity, is an important brainstorming component. Fluency encourages originality. Encourage piggybacking or hitchhiking on someone's idea.

Brainstorm individually on paper or in a group verbally. This technique is especially useful when a student has "writer's block."

- **All writing starts with ideas. And those ideas flow out through the process of brainstorming.**



## Questioning Techniques to Enhance Brainstorming Responses \*

The questions an educator asks make a difference. Some questions provide for higher-level thinking responses and more creative answers.

### I Quantity Questions

#### Reproductive

- List blue things. **Name** all the kinds of bears. Or play the \$10,000 Pyramid game. In partners, one student is given a category such as *tools*. He then **lists** all the tools he can think of so that the partner will guess *tools* as the category title.

**Connecting academics — Reading:** **List** words that begin with ch. **List** words with a long e sound. **Science:** **List** green vegetables. **List** the planets. **Name** all kinds of weather. **Name** all kinds of birds. **Social Studies:** **List** the products of your state. **List** landforms. **Name** the different kinds of workers in your community. **Name** places of interest (historical sites, too) near or in your city. **Name** titles of relatives (aunt, nephew, mother).

#### Productive

- **How many ways . . .** can you get to school?

This way of questioning stimulates *imagination* and *originality*. Students may respond *magic carpets*, *broomsticks*, and *slowly*.

- **How many ways . . .** could you get a dog into a doghouse without touching him?

**Connecting academics — Math:** **How many ways** can you find the answer "5"? **Social Studies:** **How many ways** can you say *no thank you*? **How many ways** could you report an emergency (such as a fire)? **Science:** How many ways could you heat your home in winter?

- **What would happen if . . .** everything green were red?

**Connecting academics — Science:** What would happen if water boiled at 95 ? **Math:** What would happen if squares had 5 sides?

\* from *Questioning Makes the Difference*, Nancy L. Johnson, Creative Learning Consultants, Dayton OH, 1990

## **II Compare/Contrast**

- How are your faces alike?
- How are all Americans alike?

### **Forced Associations (Higher-level thinking)**

- How is laughing like crying? Why?
- How is building a treehouse like building a relationship? In what ways?

## **III Feelings/Opinions/Personification**

- How do you feel about eating spinach at every meal? Why?
- How do you feel about making a longer school day? Why?

### **Higher level thinking**

- How does a car door feel when it is slammed shut? Why?
- How does a bat feel when a baseball hits it? Why?

**Connecting academics — Science:** How does rain feel when it hits the ground? How does an electron feel constantly being in motion? Why? **Art:** How does clay feel as it is being sculpted? Why?

## **IV Prediction/Imagination**

- What would happen if . . . a fish could fly?
- If a crayon could sing, then a piece of paper could . . .
- What if . . . there were molecular attraction but no gravity?





## SCAMPER+

The SCAMPER process, introduced by Bob Eberle, allows students to use their imaginations while brainstorming. They can find **new** ideas, interpret symbols, and offer unique solutions to problems.

Questions and activities using the following verbs will stimulate original responses.

**\*S Substitute** *Have a thing or person act or serve in another's place. How could you substitute \_\_\_\_ for \_\_\_\_? What else may work?*

**\*C Combine** *Bring together or unite. What "things" could be brought together?*

**\*A Adapt** *Adjust to suit a condition or purpose. How could you make something "fit" a purpose? What else is like this? What could you change?*

**\*M Modify** *Alter or change the form or quality. What would happen if you changed the meaning, form, shape, or texture?*

**Magnify** *Enlarge or make greater in quality or form. What would happen if you made "it" larger, fatter, higher, or taller?*

**Minify** *Make smaller, lighter, slower, less frequent. What would happen if you made "it" smaller, thinner or weaker?*

**\*P Put to Other Uses** *Use for purposes other than the one intended. In what other ways could you use "it"? How many ways could you use \_\_\_\_?*

**\*E Eliminate** *Remove, omit, get rid of a quality, part or whole. What could you do without?*

**\*R Rearrange, Reverse** *Change the order or adjust; create another layout or scheme. Place opposite or contrary to the original position or turn it around. What would happen if you turned it around? What would happen if you changed "its" order?*



## SCAMPER EXAMPLES

- **Substitute . . .** What could you substitute for a paper clip to hold papers together?  
**Connecting Academics – Science:** What could you substitute for a leaf on a tree to make food?
- **Combine . . .** Combine a pencil with a motor to make a new writing tool. Explain how it will work. Combine a glue stick with a toothpick. Explain how it will work.  
**Connecting Academics – Math:** What could you combine with a calculator to make math easier for the mathematician?
- **Adapt . . .** How could an alligator survive at the North Pole? How could you change a garbage truck for use at a space station? How could you use the ideas of dental instruments for use in construction work? **Connecting Academics: – Social Studies:** How could a native American Indian survive in a city like Los Angeles? How would war change if there were no guns?
- **Magnify, Minify, Modify . . .** How would an ice cream scoop change if it were made larger? smaller? **Connecting Academics – Music:** How would a violin change if it were made larger? smaller?
- **Put to other uses . . .** For what other uses could you use a bookshelf? A policeman?  
**Connecting Academics – Science:** How could you improve something by using velcro?
- **Eliminate . . .** How would a TV change if you removed the audio? What if a doctor had to operate without light? **Connecting Academics – Language:** How would communications change if we did not have the word "I" ?
- **Rearrange . . .** What would happen if you changed the order in a recipe?  
**Connecting Academics – Science:** What would happen if roots were on top of a tree?



# A FRAMEWORK...

## For Idea Transfer and Manipulation

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### MINDMAPPING

We do not lack ideas; they can be multiplied through the deliberate interplay of the right and left hemispheres. We have a process for tapping that richness: brainstorming. **MindMapping presents a right hemisphere visual framework for those ideas from which to produce the written product.** The framework allows fantasy and imagination, language rhythms, patterns, associations and metaphors to emerge into an **organizational framework** to then be explained, elaborated upon, connected, clarified, edited, refined, revised and applied by the left hemisphere.

#### \* And how does mindMapping occur?

MindMapping is a vital and dynamic component of the communication process. It is the stage of the writing process between idea generating and written product.

Although the left hemisphere may initially resist the process and path of the mindMap, with practice, **this technique can be used for technical writing and speaking, administrative program planning, teacher organization of interdisciplinary programs, activities and products, and provision for unique learning styles.**

MindMapping begins with simple **brainstorming** techniques. Many of the **creativity components** (fluency, flexibility, elaboration, originality and risk taking) can then be used in the written framework. SCAMPER techniques (substitution, combination, adaptation, modification, putting to other usage, elaboration, and rearrangement) are utilized, even for technical products.

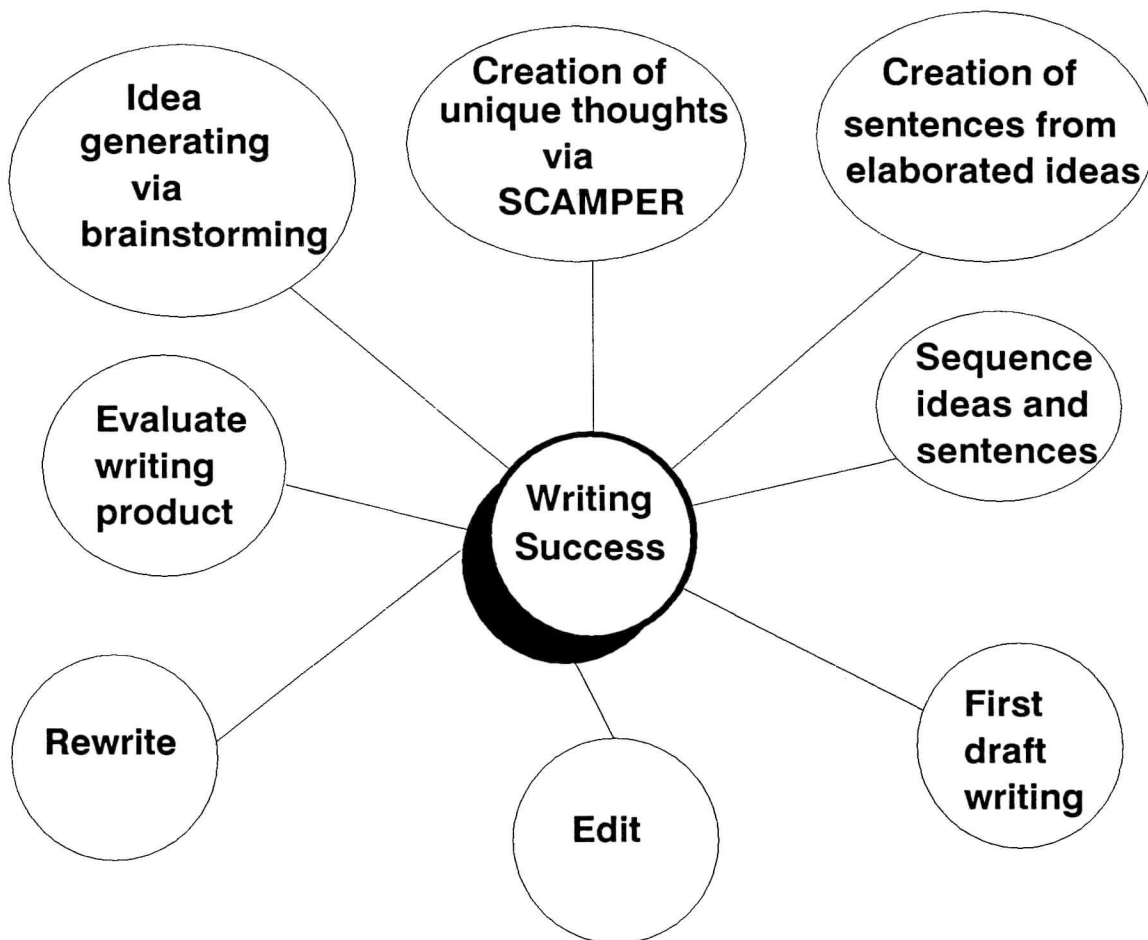
At some point in the brainstorming process while ideas are being placed on the mindMap framework, the right hemisphere experiences an "aha", **a topic for writing becomes clear** to the writer. A **purposeful direction** of thought is taken over by the left hemisphere.

Part of the mindMap may be left or discarded. A New mindMap may emerge using the chosen topic as the new center or focus.



The learner is then led to **elaborating, sequencing and connecting ideas**, moves to **sentence structuring**, and ends in **paragraph formation**. Informal research shows **spelling, grammatical errors and poor usage lessen** when using this technique because the student becomes more involved in the whole than in each of its technical parts. Research also tells us **the more students write, the better their reading, writing and spelling will become**.

## MindMap of Writing Success



The process of mindMapping ideas stimulates the flow of thoughts to produce a written, verbal, abstract or concrete product. Organizing concepts in this manner is a viable alternative to outlining. Right brain dominant learners are surely benefactors of the mindMapping process.



# Step by Step MindMapping

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## THE WRITING FRAMEWORK

This book uses two terms to introduce the writing framework — *webbing* and *mindMapping*. Students are better able to visualize a "web" than a "mindMap"; therefore *web* is used first. *MindMap* is then introduced and explained, and both words are used interchangeably. Once the concept of mindMapping is internalized, only the term *mindMapping* is used.

### COMPONENTS

The middle of each mindMap is called the **FOCUS**. Like a word association game, a question is asked.

It may be a simple association question — **What do you think of when you think of (focus)?** Or it may be a SCAMPER question — **How many ways could (focus) be used?** It may be a prediction question — **What would happen if (focus) could not talk?**

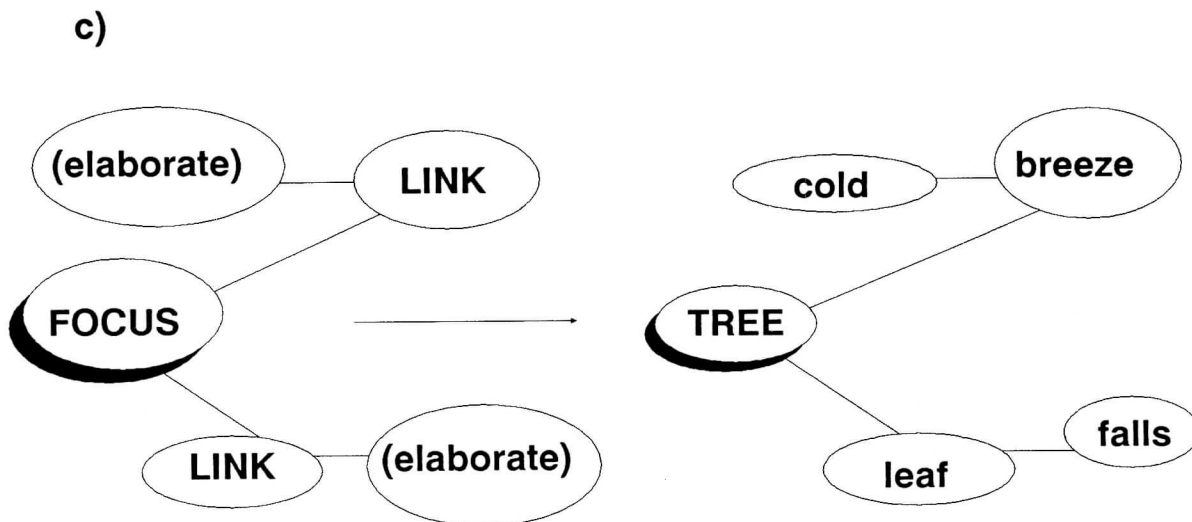
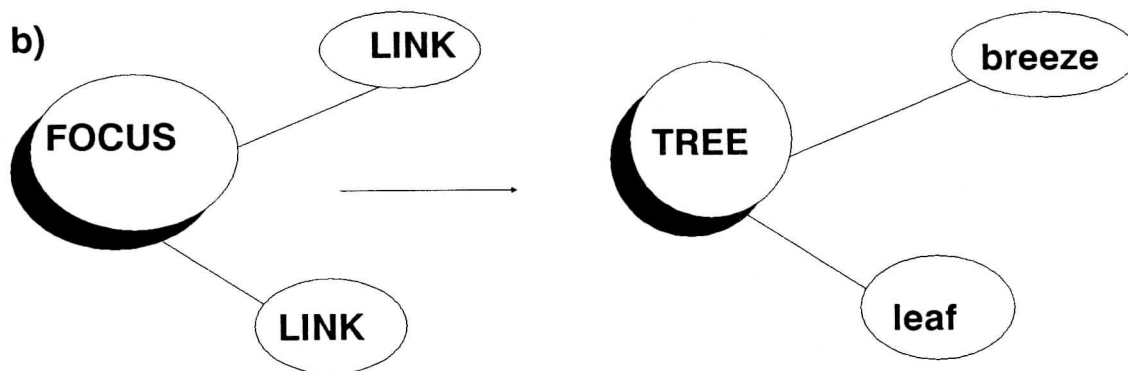
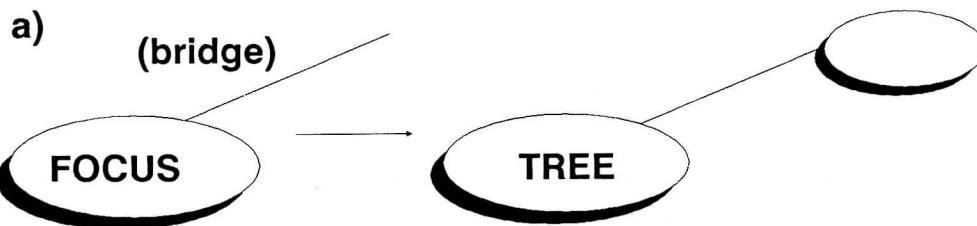
Each **line** from the **FOCUS** is called a **BRIDGE**. It **connects** the **FOCUS** to the **LINK**, the circle in which the answer to the question is placed.

To elaborate, ask a question — **What do you of when you think of (link); How many ways can we substitute (link); What if (link) was electronically controlled; What would happen if we eliminated (link)?**





# Steps in the MindMapping Process





# Introductory MindMapping Experiences

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## Primary Students

- 1) Bring spiders in jars into the classroom. Encourage students to bring in live spiders and watch their movements. Watch as they build webs.
- 2) Discuss how the web is made, what it is made of, its strength.
- 3) Pass out rubber spiders for each student.
- 4) Introduce "Itsy Bitsy Spider". The music can be played by the music teacher, sung and recorded by another class, or play "Itsy Bitsy Spider" by Carly Simon from her album *Coming Around Again*, Arista Records, 1987. Sing together. Use hand movements.
- 5) Discuss vocabulary words in the song – itsy bitsy, water spout
- 6) Compare the size of an itsy bitsy spider with a water spout.

### Verbal Listing and Brainstorming

- 7) For what reasons would "The itsy bitsy spider climb up the water spout"?
- 8) What feelings would you have if you were the itsy bitsy spider and "Down came the rain and washed you out"?
- 9) What words describe how you would feel when "Out came the sun and dried up all the rain?"
- 10) For what reasons would an "itsy bitsy spider go up the spout again"?
- 11) Discuss the spider's traits of risk taking and persistence. Tie these traits to the concept of writing—write about new things, try, and remember "Once down NOT done". Ask students to brainstorm reasons for the statement.
- 12) Emphasize the spider's strength. Compare students to spiders who will be strong, take risks, and keep trying.
  - Make a transfer from the concept of a web to its similarities with a map by making a drawing on the board of a spider web. Ask students if they know of any other

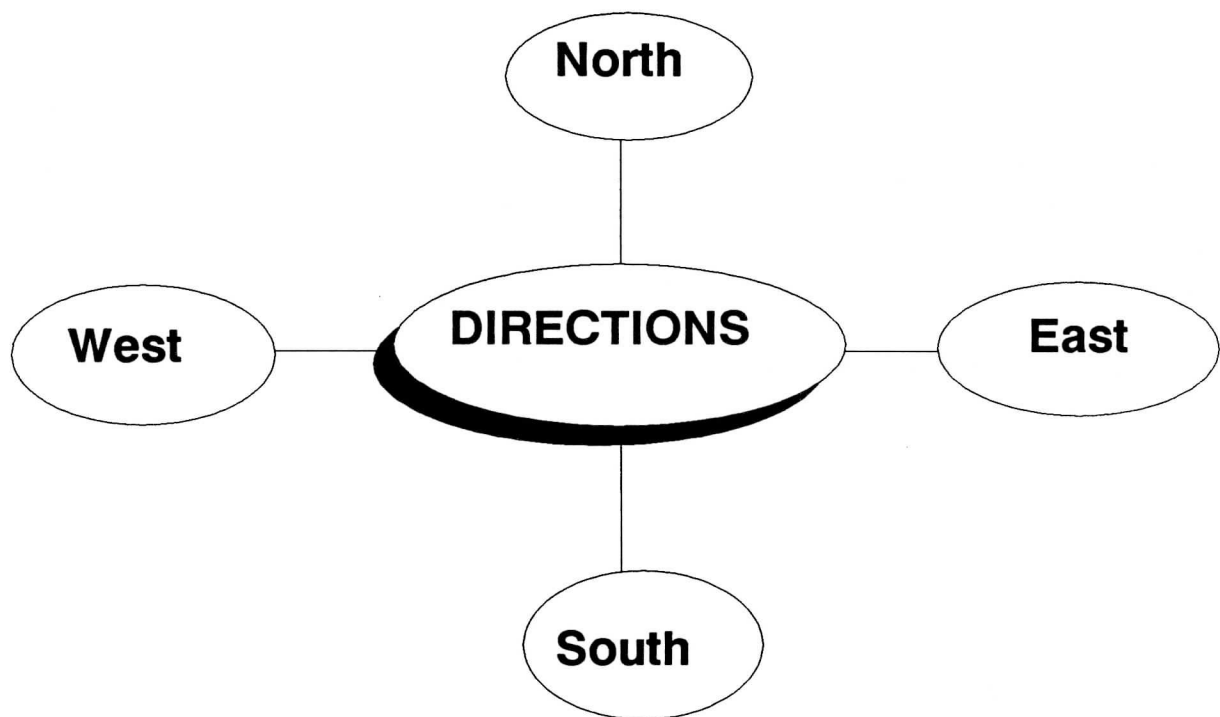
type of drawing that looks like a spider web. Lead them to the discovery of road maps.



Discuss the purposes of a map. How is the purpose of a road map like the purpose of a spider web?

13) Compare a web to a map. List similarities of a web and map. Show the students a roadmap of their state and a city map. Discuss cardinal directions.

- Make a transfer from the concept of mapping to "MindMapping". Draw a mind-Map with *directions* as the focus and each of the cardinal directions in the links:



14) Explain "webbing" and "mindMapping" are two names for a way of putting thoughts on paper. Discuss the risk of putting your thoughts on paper. Share personal experiences about your writing.

Allow students to determine the definition of mindMapping. Ask students if they can draw an empty framework of a mindMap.

Explain the terms and locations for **focus**, **bridge**, and **link**.

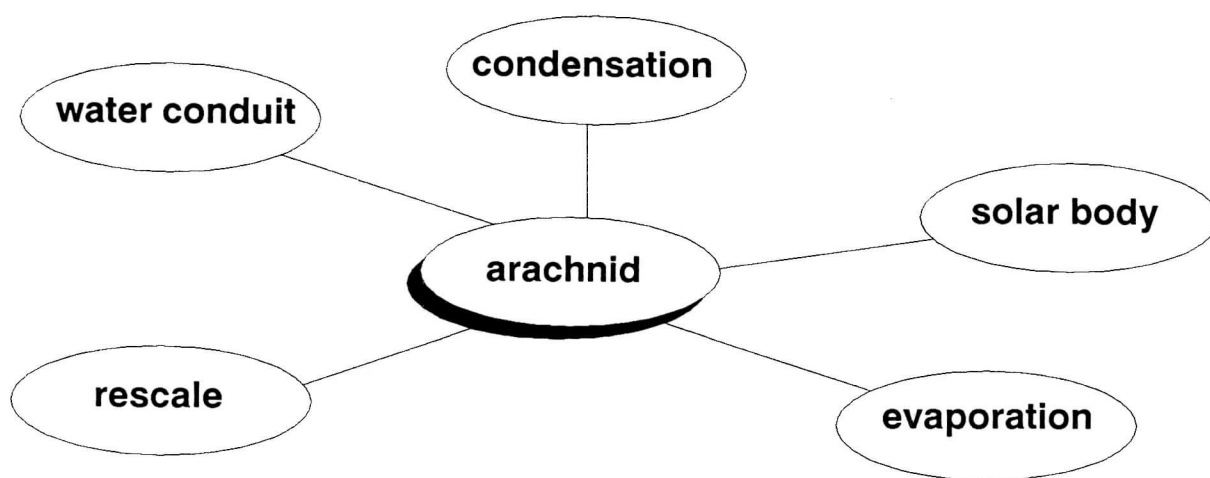


## For Intermediate – Upper Students

The miniscule arachnid scaled the summit of the water conduit. Abruptly the dreaded condensation of the upper atmosphere befell and doused the arachnid from the precipitation pipe. Due to the appearance of the solar body, however, the moisture evaporated and the tiny arachnid rescaled the water conduit.

Give each student a copy of the above description. Have students analyze the description. Encourage them to find the nursery rhyme it describes. Once "The Itsy Bitsy Spider" has been discovered, work through questions 7 through 14 in the primary mindMapping experience. Ask questions that elicit higher-level thinking responses.

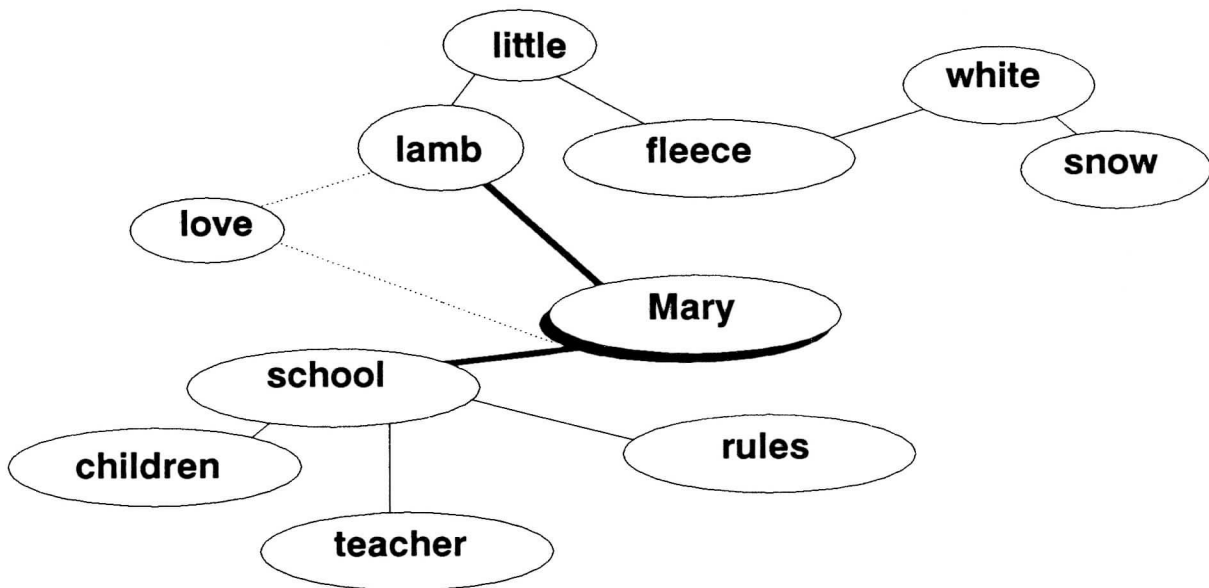
Have the students make a mindMap of the nursery rhyme.



## Primary And Upper Students



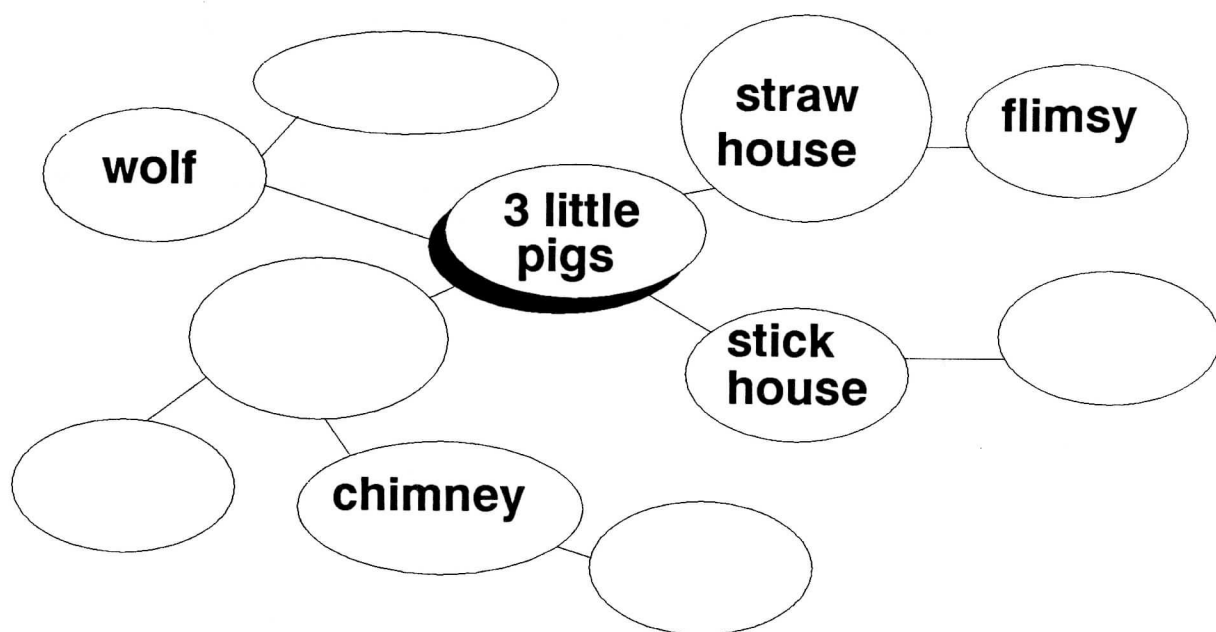
Help students mindMap *Mary Had a Little Lamb*. Use **Mary** as the **focus**. Each **link** should answer the question, "What do you think of when you think of (focus) or (link)?" Because you are using established characters, settings, and plots, the student exercise of mind-Mapping provides a successful experience for the student. They also see relationships between a **focus** and **links**.



Distribute the mindMaps on the next page. Have students complete the links for *The Three Little Pigs*. Then have them complete their own mindMap of *The Three Bears*.

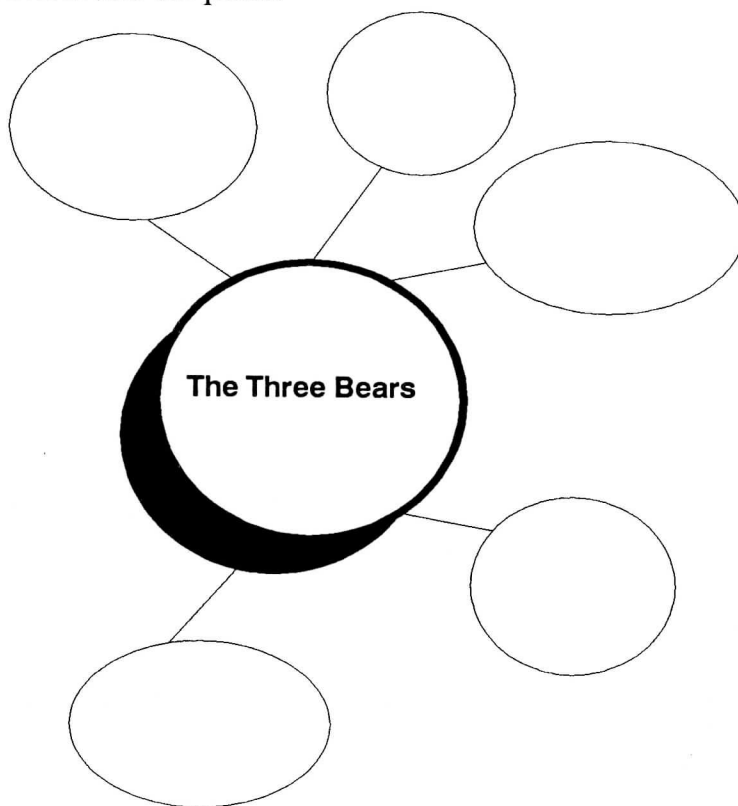
Try other rhymes - *Hey Diddle Diddle*; *Humpty Dumpty*; *Jack and Jill*; *Little Jack Horner* and stories *Little Red Riding Hood*, *Charlotte's Web*, *the Whipping Boy*.





Fill in the links with words and phrases that are about the **Three Little Pigs**.

Fill in the links with the characters and place in the story **The Three Bears**. Add words to describe the characters and the place.



# Manipulating the MindMap

---

## Primary Students

### ● Lesson One Listing

Display animal pictures on a bulletin board titled "*All Kinds of Animals*". Have the class identify each animal. then have students list other animals not pictured. Encourage them to include endangered species, odd-looking animals, and animals from other countries. Ask students to bring pictures of animals. Refer to the activity as a **listing** activity.

### ● Lesson Two Listing

Title a second bulletin board "*All Kinds of Plants*". Have students search for pictures in magazines and also draw different kinds of plants. Pin them on the bulletin board as each is identified. Refer to the activity as a **listing** activity.

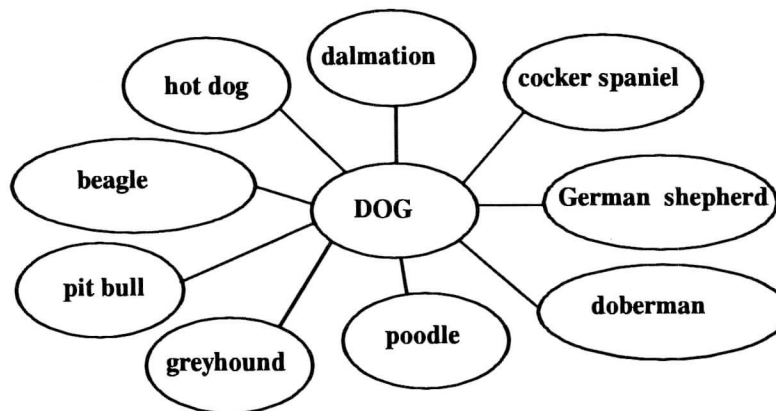
### ● Lesson Three Reinforcement

Identify the *Animal and Plant* activity as "**brainstorming**" a **list** of many things in a category. On the chalkboard write "*Keys*". Have the students list or brainstorm as many types of *keys* as they can. When a seemingly inappropriate response is given, (*monkeys, donkeys, kiwi fruit*) introduce the **rules** of brainstorming and later the teaching of **SCAMPER**.

### ● Lesson Four Listing & Brainstorming

Choose one type of animal from the Animal display — for example, "*dog*". Have students list as many kinds of dogs as they can.

As they list the types of dogs, begin a mindMap on the chalkboard or overhead with *dog* as the **focus** and each *type of dog* as a **link**. Use the terms mindMap, focus, and link. The students will become familiar with the format of the mindMap framework.





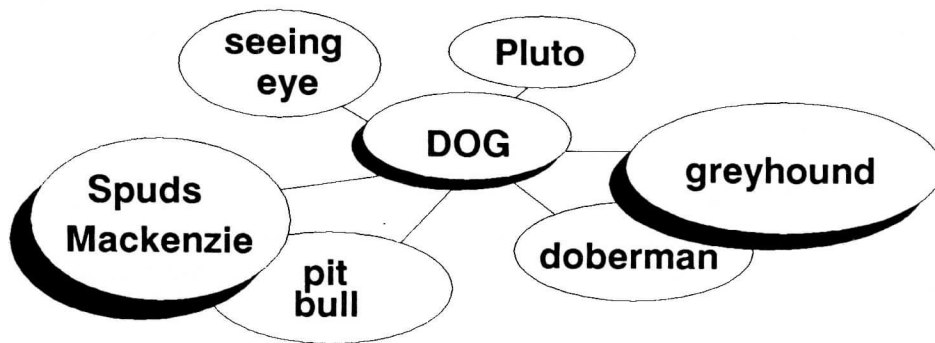
## INTERMEDIATE STUDENTS

### Lesson One Listing

Bring in different types of pasta and identify it by name: spaghetti, fettucini, linguine, macaroni, etc. Explain that the category is "*Pasta*" but that each member in the category has a specific name. Refer to the activity as a **listing** activity. Have students list video games, sports equipment, or school supplies.

### Lesson Two Listing & Brainstorming

Have students list or brainstorm the category *dogs*. On the chalkboard or overhead projector use *dog* as a **focus** and mindMap the responses. A typical mindMap may include the following:

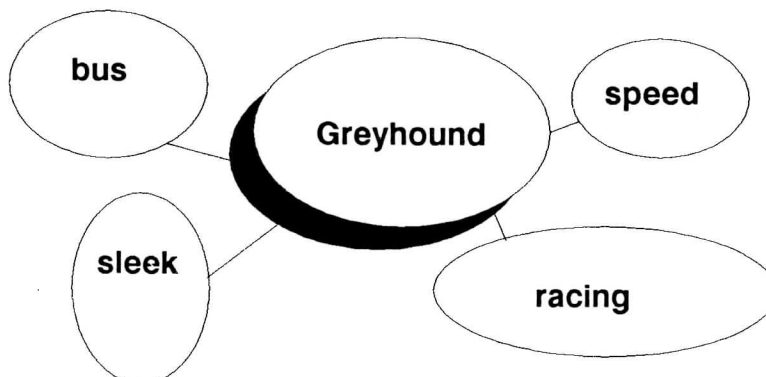


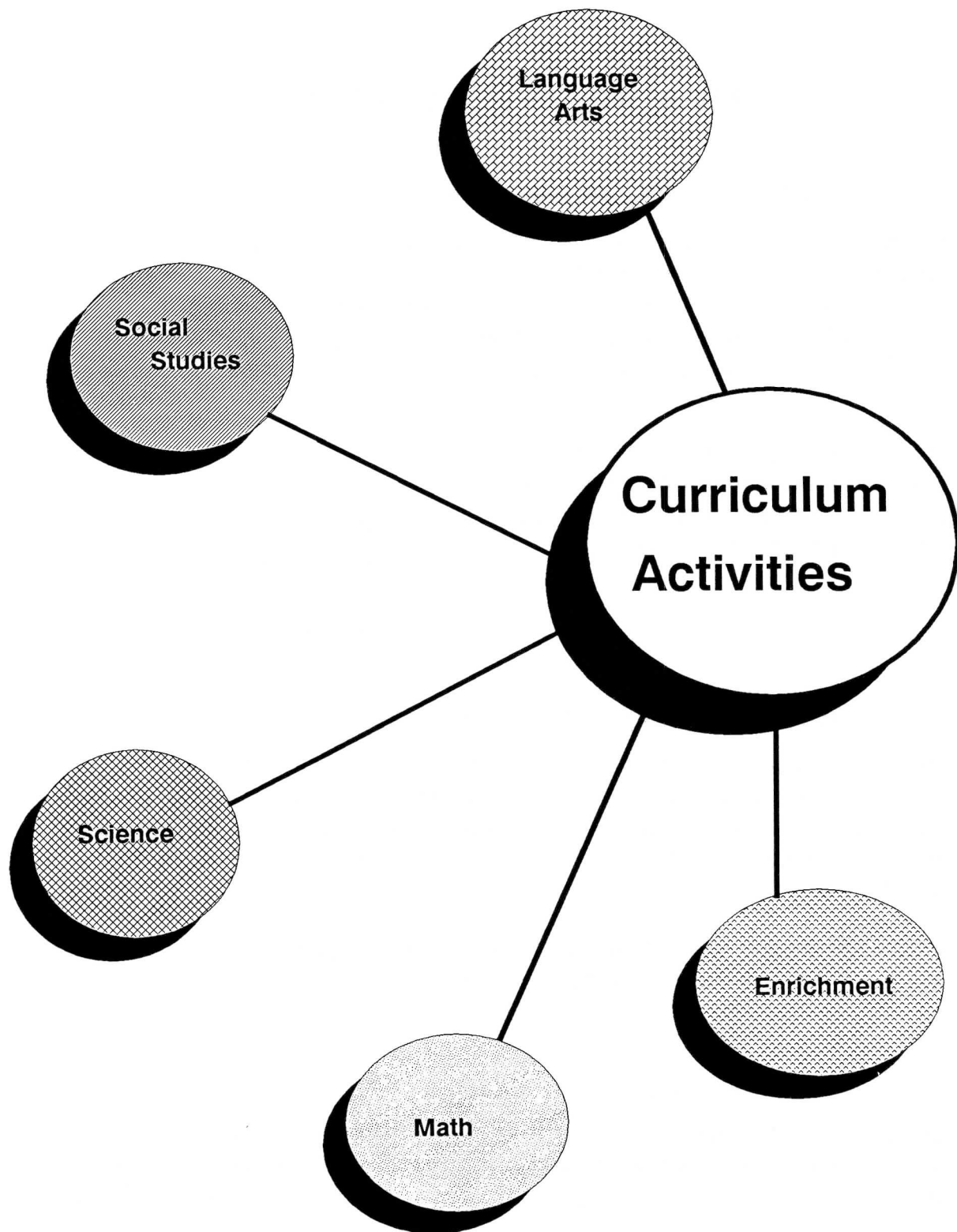
When a student offers a response such as "Pluto", accept the answer. This is the time to introduce brainstorming rules. Parallel to the teaching of brainstorming and writing might be the teaching of the components of **SCAMPER**.

### Lesson Three Listing & Brainstorming

From the *dog* mindMap, use one of the types of dogs as a new focus. For instance, *greyhound* may be used. Have students list thoughts that come to their minds as they think about *greyhound*.

Again, draw the mindMap framework on the chalkboard or overhead as students respond.







# MindMapping Experiences

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## "Dealing With Feelings"

### ● Lesson One Listing and Brainstorming

Ask students to think about things that smell, have special textures, have a distinct taste, are recognizable sounds, are easily identifiable when seen, and elicit strong emotions. Discuss both good and bad things involving the senses. Brainstorm a class list or share in small groups. Then have students make individual choices by making a **list** of "Yums" and "Yuks". These items must involve the senses directly. To help students:

Find magazine pictures of those things students do and do **not** like that involve the senses. Students may want to bring items to share with classmates.

Have students draw things involving the senses. Let other students guess what is happening in the picture and what sense is involved.

### ● Lesson Two Listing and Brainstorming in a Framework

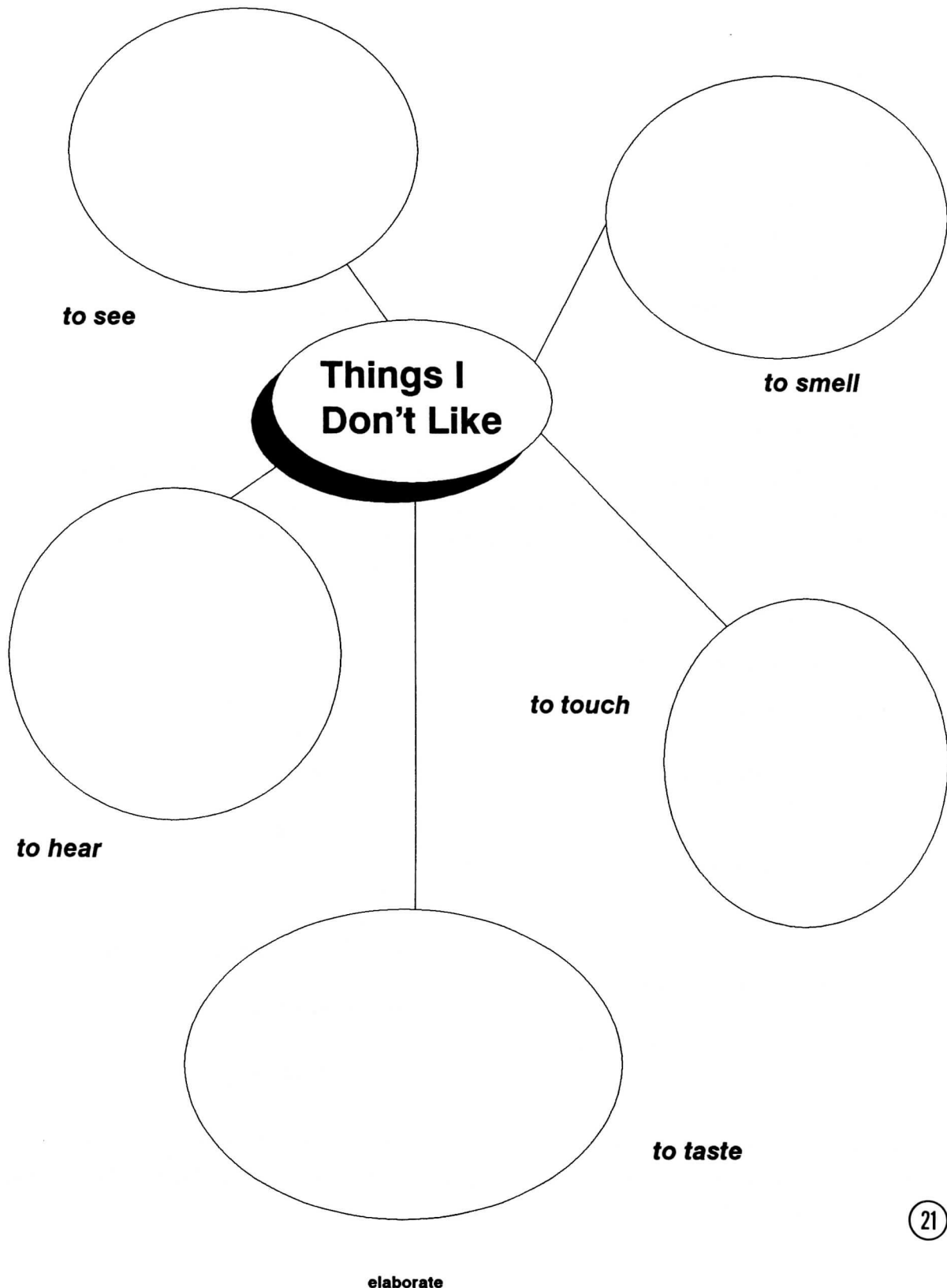
Make an overhead transparency of "*Dealing With Feelings*". This will allow students to learn the mindMapping format as you show them the **focus** (Things I (*Don't*) Like) and the **links** (to see, to smell, to touch, to hear, to taste). Fill in your own mindMap as the students watch where, how, and why — What do you think of when you think of (**focus**) or (**link**)? — circles are filled in.

Distribute the student page "*Dealing With Feelings*". Let students choose *likes* or *dislikes* for the focus and have them complete the mindMap.

### ● Lesson Three Listing and Brainstorming

Ask students to pick one of the topics (**link**) that involves the senses. Have them **list** all the reasons they like or do not like the link. Have them think about how they would explain their feelings to someone else. Follow-up with a written assignment entitled "**I Feel**".

# Dealing with Feelings





# "MindMapping Nouns"

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Brainstorm examples of places, materials, things and people which are identified as nouns.

## ● Lesson One

Have students make a collage from magazine pictures, one showing persons, one depicting places, and one illustrating things.

For older students, encourage inclusion of abstract nouns — love, hate, friendliness, peace, and events such as birthdays, holidays, and celebrations.

## ● Lesson Two

Divide the students into groups. Review mindMapping terms **focus**, **bridge** and **link**. Show students where responses are to be placed on the mindMap. On the student page have each group mindMap categories of nouns. Ask students to "List things. Name places. List careers of people."

## ● Lesson Three

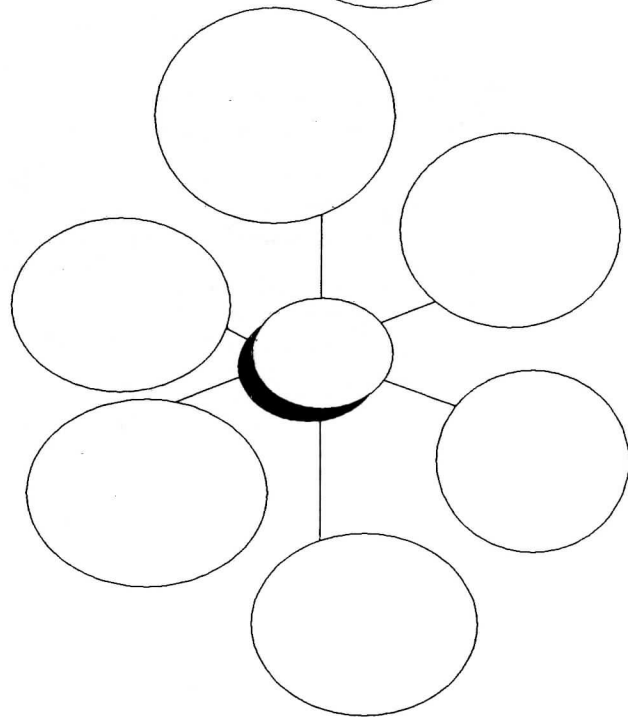
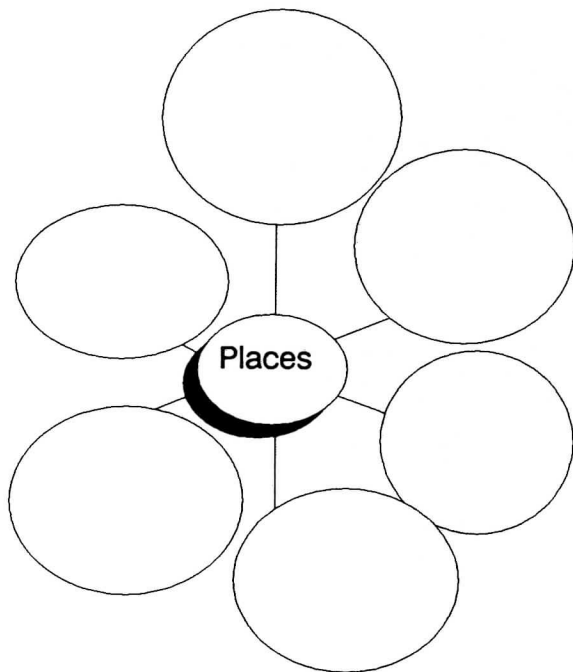
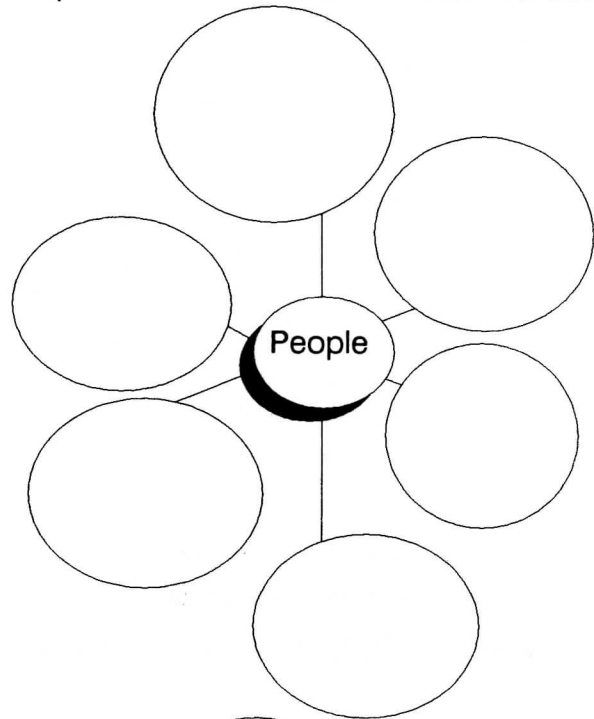
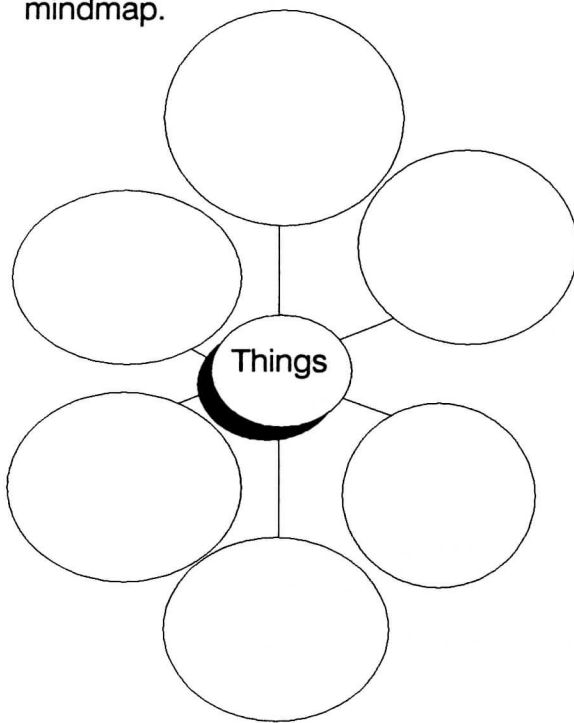
Brainstorm and mindMap the following categories:

- |                                       |                                   |
|---------------------------------------|-----------------------------------|
| * places that begin with "s"          | * memorable events                |
| * kinds of food that are one syllable | * noisy things                    |
| * things in a department store        | * political ideas                 |
| * things that end in silent "e"       | * mathematical items              |
| * places in the community             | * historical places in your state |
| * people who have special jobs        | * trends they like                |
|                                       | * movies they like                |

Follow-up with a written assignment. Ask students to write a short story starter — three sentences — about a character (*person*), setting (*place*), and an important item (*thing*) in the story. Exchange story starters and finish the story.

# MindMapping Nouns

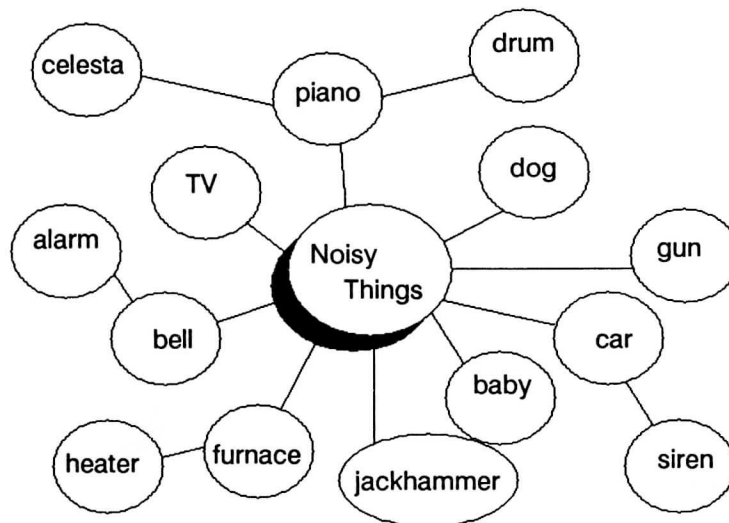
Brainstorm kinds of nouns on each mindMap. Choose events or ideas for the last mindmap.



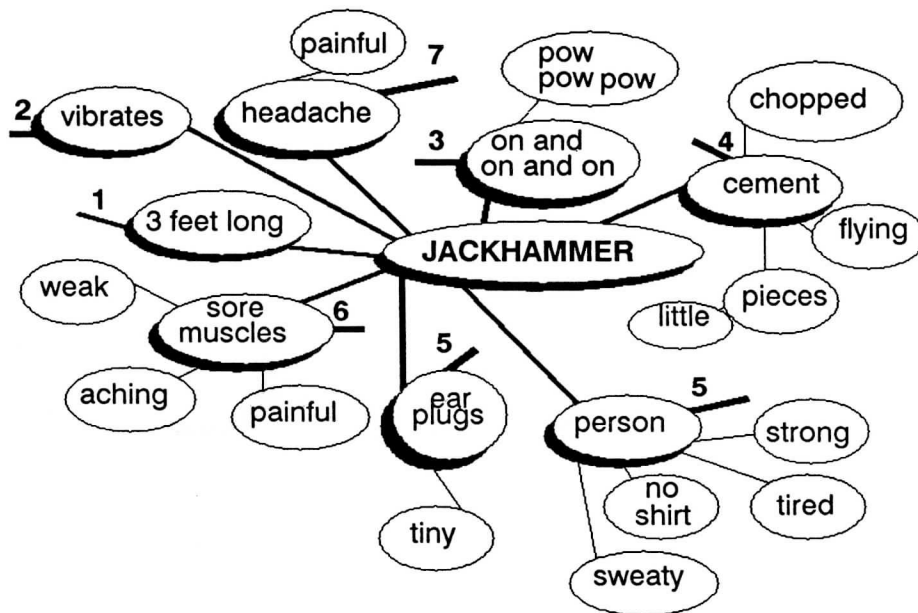




- Example of an intermediate students "MindMapping Nouns".
- What do you think of when you think of **noisy things**?



- The student then was asked to choose one of the links he might like to write about. He chose *jackhammer*. Before writing, he mindMapped *jackhammer*.
- This example shows how the student **added adjectives to the links**.



- He then **sequenced** his thoughts before creating sentences.



## **The Results**

1. A jackhammer is 3 feet long.
2. It vibrates up and down.
3. It makes a noise on and on and on.
4. It breaks cement into little pieces.

The chopped pieces go flying everywhere.

5. The tiny earplugs must go on the tired and sweaty person.
6. When you finish you will have weak, aching sore muscles.
7. And you won't forget a painful headache.

After teacher intervention and student suggestions editing and rewriting, the following paragraph was written by the student.

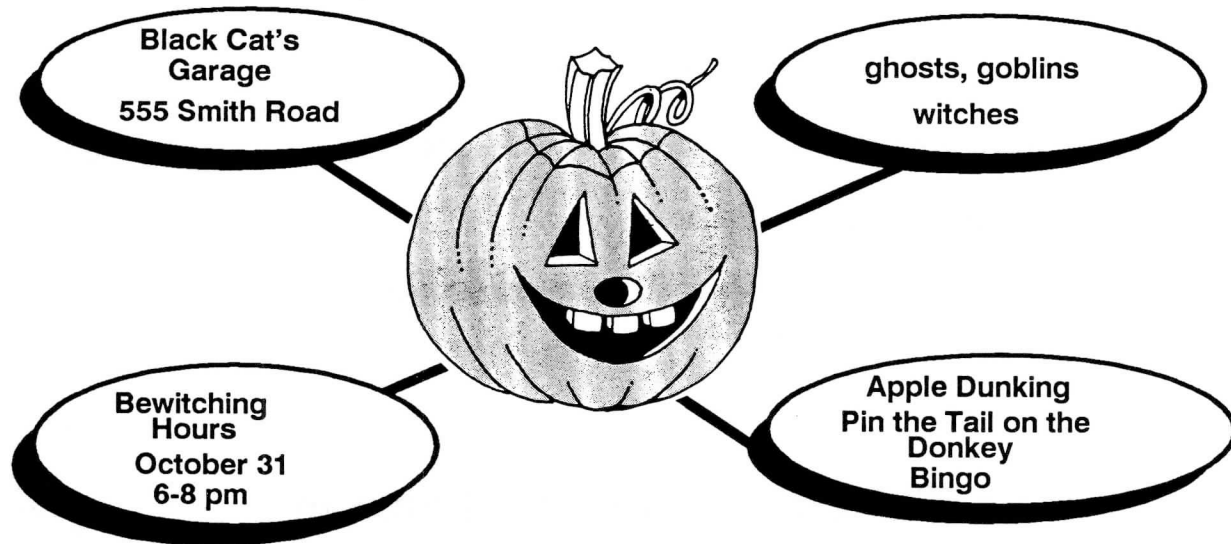
## **The Effects of a Jackhammer**

**A jackhammer is 3 feet long. It vibrates up and down and makes a noise on and on and on. It breaks cement into little pieces. The chopped pieces go flying everywhere. The tiny earplugs must go on the tired sweaty person. When he finishes he will have weak aching sore muscles. He won't forget a painful headache, either.**



# Invitations

Everyone likes a party! Discuss the information someone needs to know if he wanted to give or go to a party. Draw the following mindMap on the board or overhead without the **focus pumpkin**. Have students identify the category of each **link** (*where, who, when, what*). Then have them guess the **focus** (*Halloween Party*).



Have students make a mindMap for their own birthday party. *My Birthday Party* is the **focus**. **Links** identify *who, what, where, and when*.

Distribute the *Invitation MindMap*. Brainstorm all the where's who's, what's, when's, and why's for a particular kind of party. Is there special information – costumes, gifts?

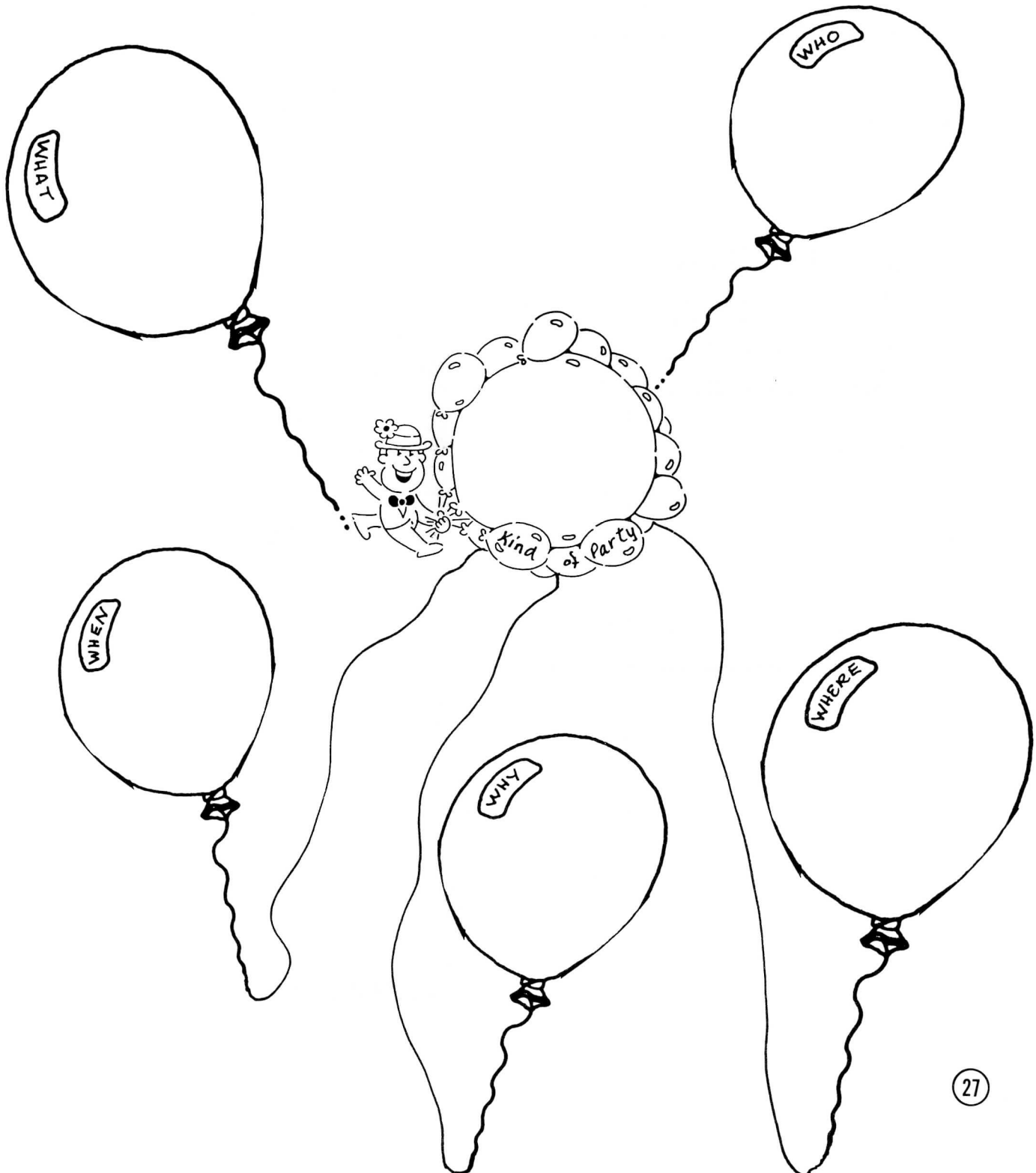
In groups of three trade mindMaps to see if other students understand all they need to know about the party.

Have the receiver of the mindMap tell a 3rd student about the birthday party without showing that student the mindMap. The third student can then repeat the information to the creator of the mindMap to verify information.

This is an important step in pre-writing. It will help eliminate the "Once down, done" syndrome. If the information is incorrect or incomplete, students will see the need for revision.

# Invitation MindMap

Make an invitation to a special party. Decide who is invited, where it will be held, and when the party will be. Decide what will happen at the party and why you want to have the party.

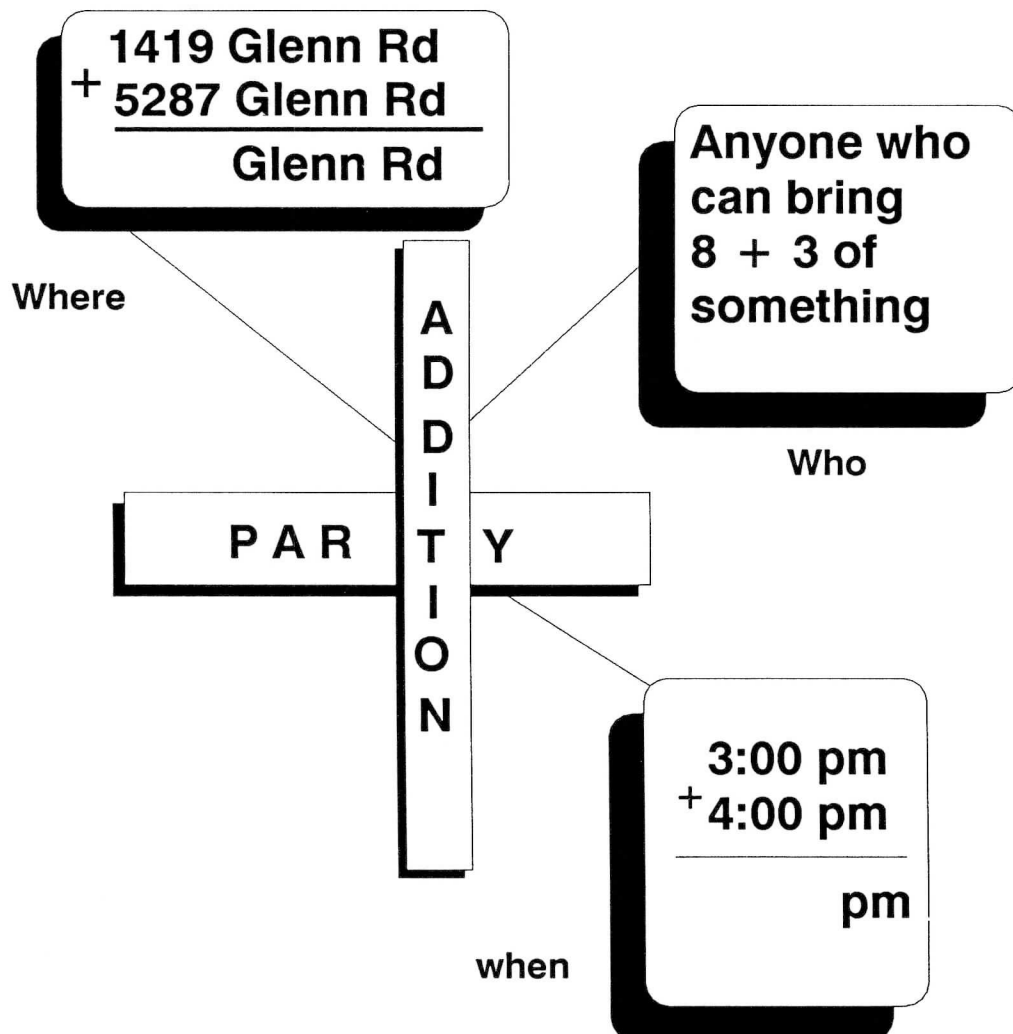




## Writing Across the Curriculum

**Social Studies:** Make mindMaps for invitations to birthday parties for Lincoln, Washington, or King. Make mindMaps and invitations to celebrate Halloween, Thanksgiving, Valentine's, St. Patrick's, Memorial Day, Labor Day, the Fourth of July, your city or state's birthday. Choose national birthdays of countries you are studying. If you were having a party to celebrate an invention or discovery (light bulb, calculator, Pythagorean theorem) who would you invite, where would you have the party, what would you do during the party?

**Music:** Choose music for the parties. Read the lyrics. SCAMPER with the lyrics for one holiday song so they will fit another celebration.





**List** different *academic* parties. How would a Math Party mindMap look? A Social Studies MindMap or P.E. invitation? Choose a specific topic in an academic area, make a mindMap and create an invitation.

**Language:** To reinforce the use of "who, what, why, where, when, and how" use one of the academic party mindMaps and write a news release for the local newspaper about the party. The news release can be written from the invitation mindMap. Sequence **links** in order of reader importance. Write sentences about each link and develop them into paragraphs.

**Art:** Draw a picture or cartoon to go with the news article showing an activity at the party. Make games for the party that relate to the **focus** or the **links**.

**Reading:** Choose a well liked author from the literature of the reading basal or favorites such as Judy Blume, Betsy Byars, Beverly Cleary, Shel Silverstein, Jack Prelutsky, Donald Sobol, or E.B. White. What kind of party would they have (had)? MindMap the party with the party theme as the **focus**. For example, E.B. White may have had a "pig" or "spider" party for Charlotte. Jack Prelutsky may have a humorous "rhyming" invitation for a poetry party.

For one of the student's book reports, have them choose a main character from the story. Imagine that character will have a party and invite the rest of the characters in the book. MindMap his party invitation. Pay particular attention to the "why" **link** for reading comprehension information.

**Creative Writing:** Elaborate upon any of the party mindMaps. Encourage students to use as many adjectives and verbs as they can think of for each **link**. Then write a mystery about an invited character (one of the who's) that might have disappeared during the party. By sequencing the **links**, a logical story line will appear. For more advanced students, make **bridges** between **links** (how is "where" related to "why") to structure a plot.

**Science:** Correlate a scientific personality with the science topic you are studying. Find out about her as a person and a scientist. MindMap a party that she might give. Make an invitation.

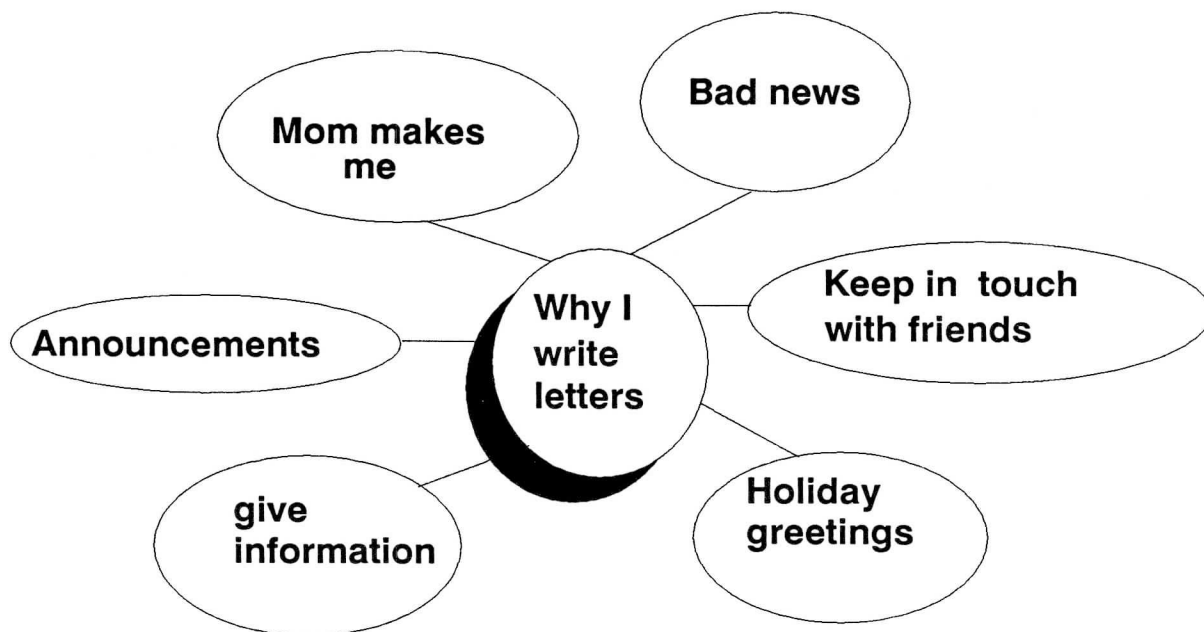


# Writing Notes and Letter Writing

"Hello. How are you? I am fine. What have you been doing?"

In this mobile society, students have more opportunity for writing than in past years. Help students write interesting letters.

If students have friends or relatives who have moved or if you have arranged for pen pals — whether in the same building, same district, or different city, state, or country — one way to stimulate more writing is to begin by listing reasons for writing notes and letters. Use the mindMap framework.

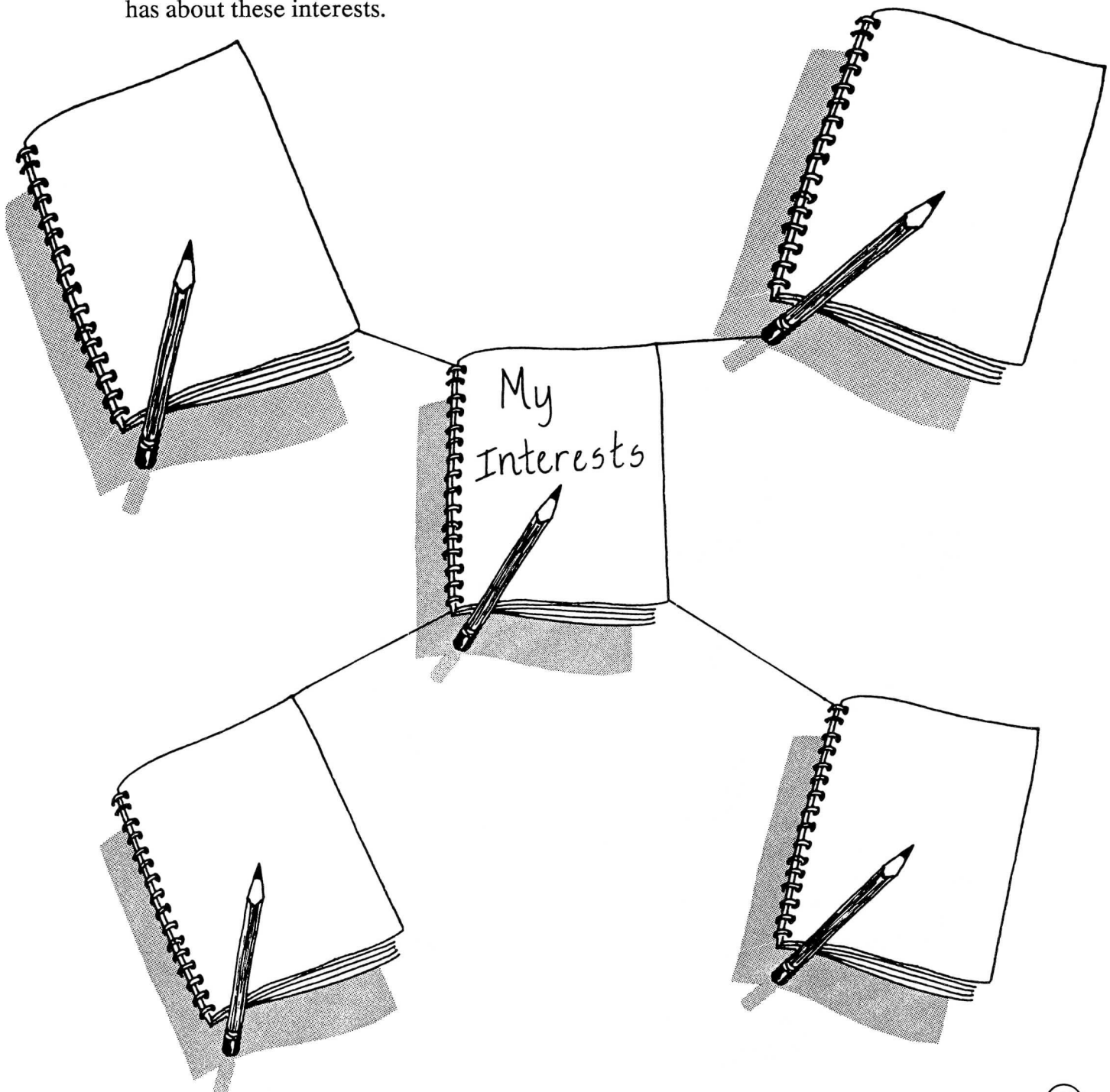


Use one of the topics as a **focus** for a new mindMap (for example, winning a sports event *announcement*). Brainstorm **links** about the announcement. Write a note using the links of the new mindMap. Use each link as the main idea of a sentence or paragraph. Give the note to the classmate. Have him mindMap the note. Compare the sender's mindMap to the receiver's mindMap.

Another mindMap may **focus** on the writer. The **links** are his *interests*. Use adjectives and verbs to **elaborate** upon the interests. **Sequence** the interests according to the week or month in which participation occurs. Create sentences from the **links** and **elaborations**. Each interest is a new paragraph. Create a general opening sentence about the **focus** (the writer). Complete the letter and mail it to a friend or relative.

# Letter Writing MindMap

List ideas (phrases and words) about the topics on the sheets of paper. Then number the sheets, ranking the one you like best as 1. Use the ideas to write a letter to a friend. Send a blank mindMap like this to your friend. Ask your friend to fill in the sheets with ideas he has about these interests.







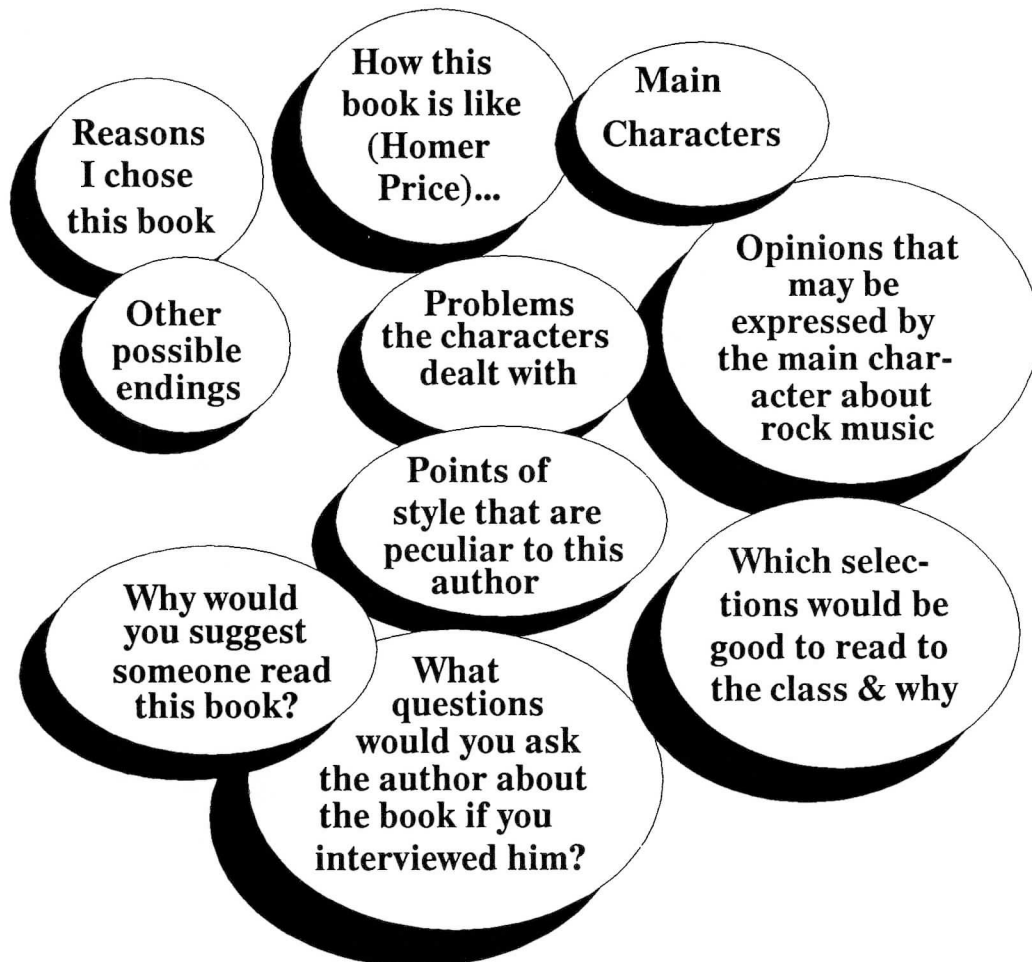
# Book Shares

Many students resist oral presentations because they haven't had consistent opportunities to make "stand up" deliveries followed by encouragement and suggestions. Using literature as a motivator, a bookshare mindMap will give students a handle on their way to improving their oral presentations.

The mindMap helps students organize thoughts about a book. Students manipulate ideas and put them into an **interesting sequence (outline)** or create a **unique approach** or **point of view** to the story using the visual framework.

Have students choose the focus for the book they are reading. Have the teacher choose the framework (that is the number of **links**, **elaboration lines**, and **bridges**). Have students develop sentences and then create a paragraph. The **focus** is the subject of the topic sentence.

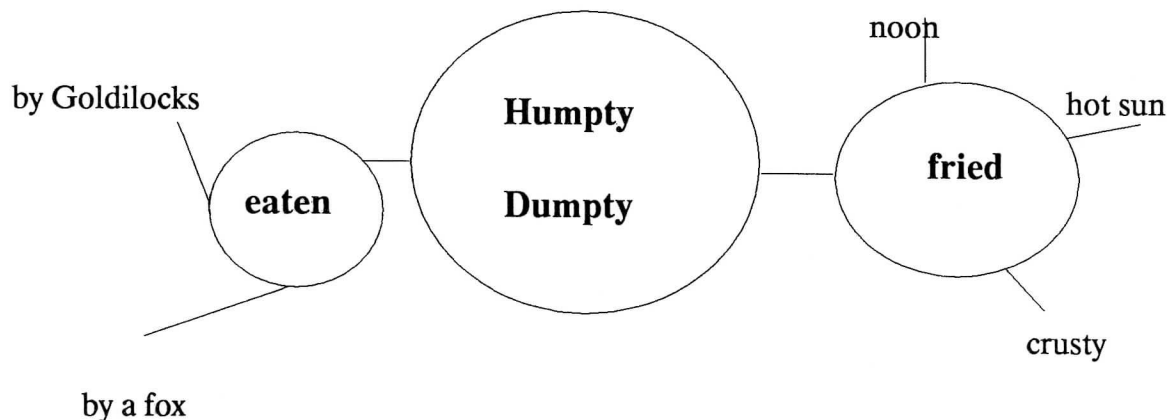
If students use more than one **focus**, they may develop each into a paragraph and sequence the paragraphs into a written or oral bookshare to give to the class. Focus ideas may include:





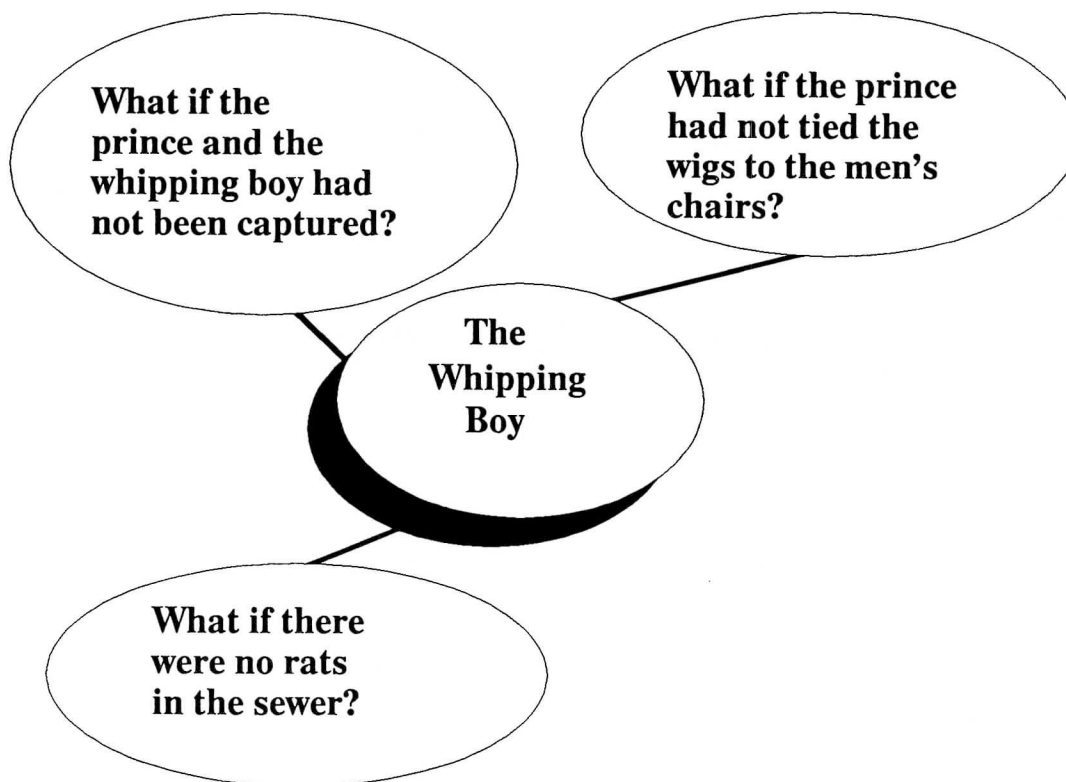
## Primary Students

Have students choose a particular book. Ask them to use "Other endings" for the focus. Do an example together.



## Intermediate – Upper Students

After students have given their ideas, elaborate upon each link. Sequence the ideas into a **new story** to share. Write the new story on the board as dictated by the students. Or each student can write his own new story using the links and elaborations suggested.



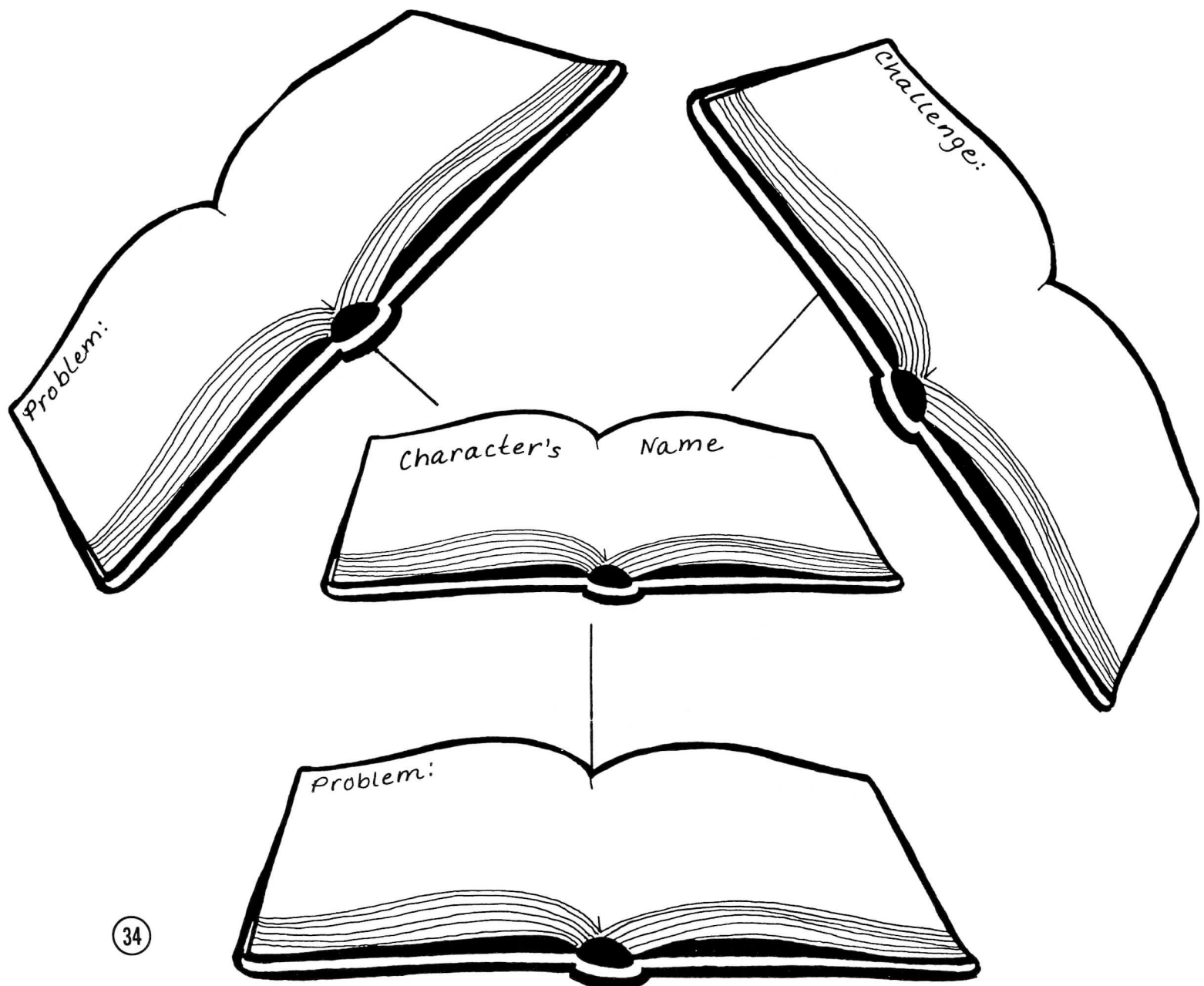
# SHARING MY BOOK

Title \_\_\_\_\_

Author \_\_\_\_\_ Copyright Date \_\_\_\_\_

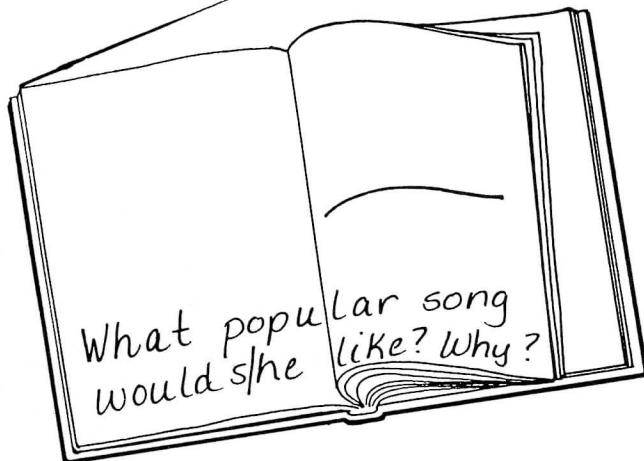
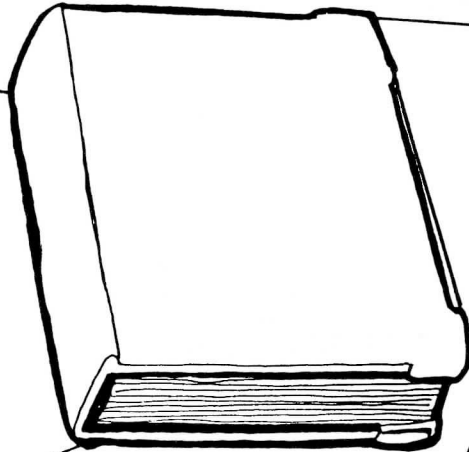
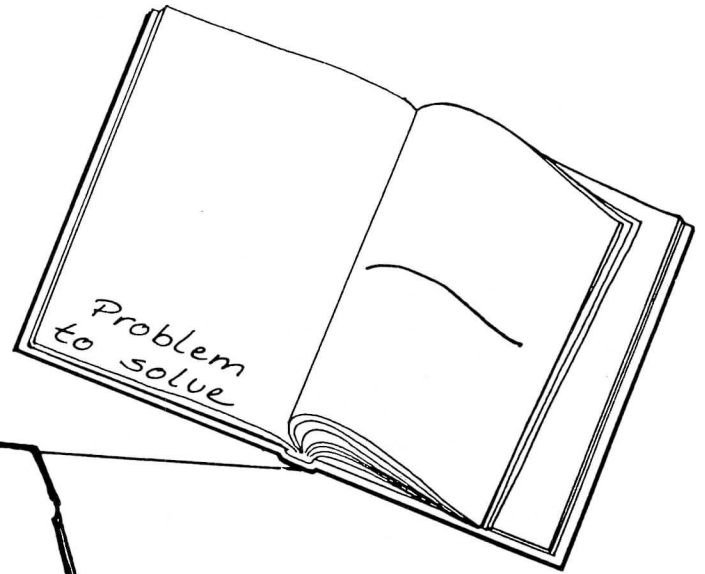
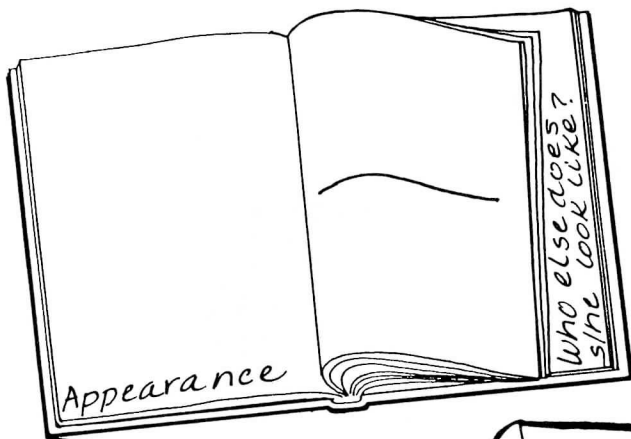
Publisher \_\_\_\_\_ Illustrator \_\_\_\_\_

Fill in the links with problems and challenges the characters faced. Share with a classmate. Let your classmate choose a problem. Tell more about the problem or challenge. Discuss solutions with each other. Then tell your classmate how the character solved the problem.



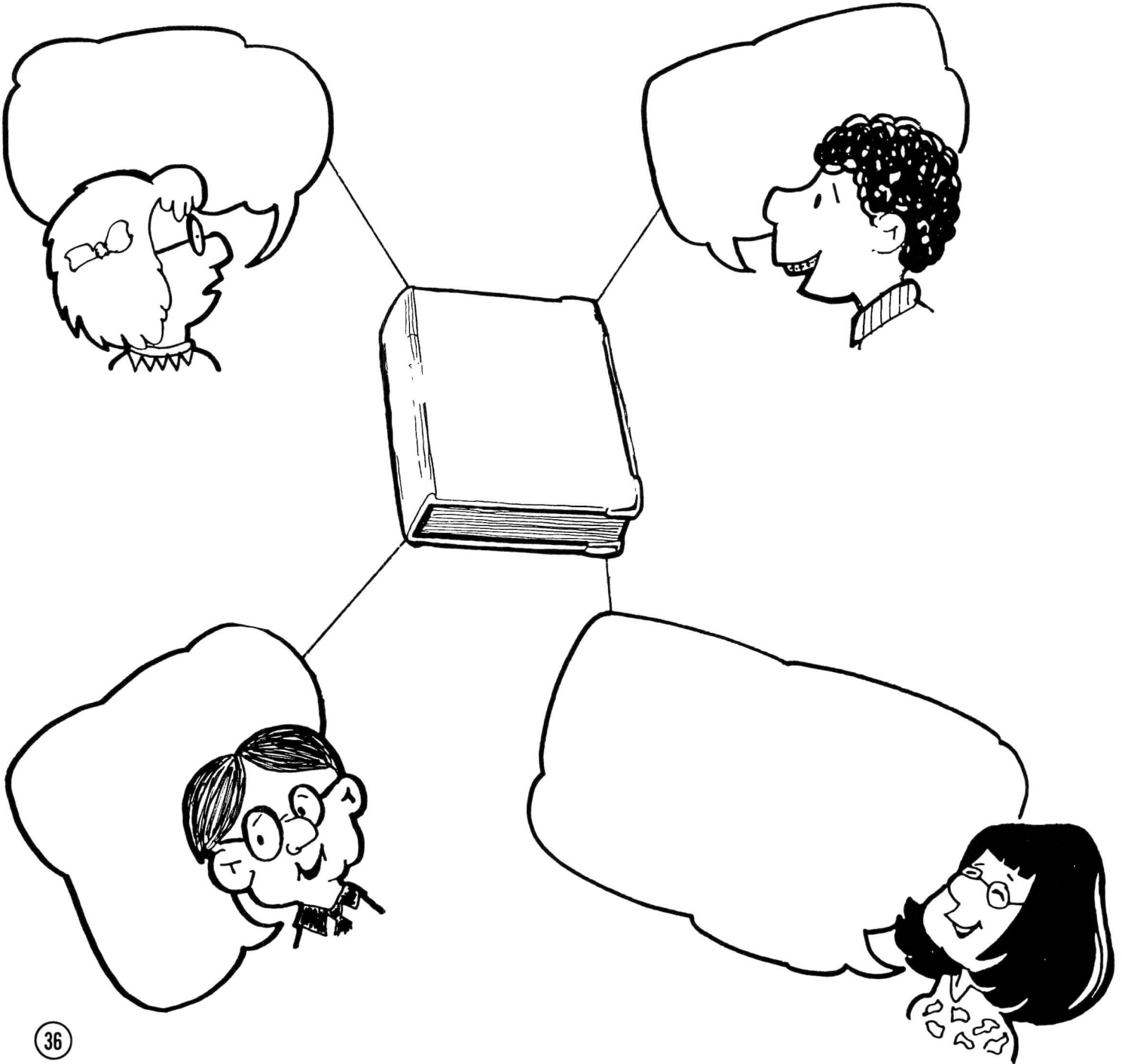
# New Life to Bookshares

Write the name of the main character and the name of the book in the focus. Put the character's name in each of the blanks of each link. Then elaborate by responding to each link.



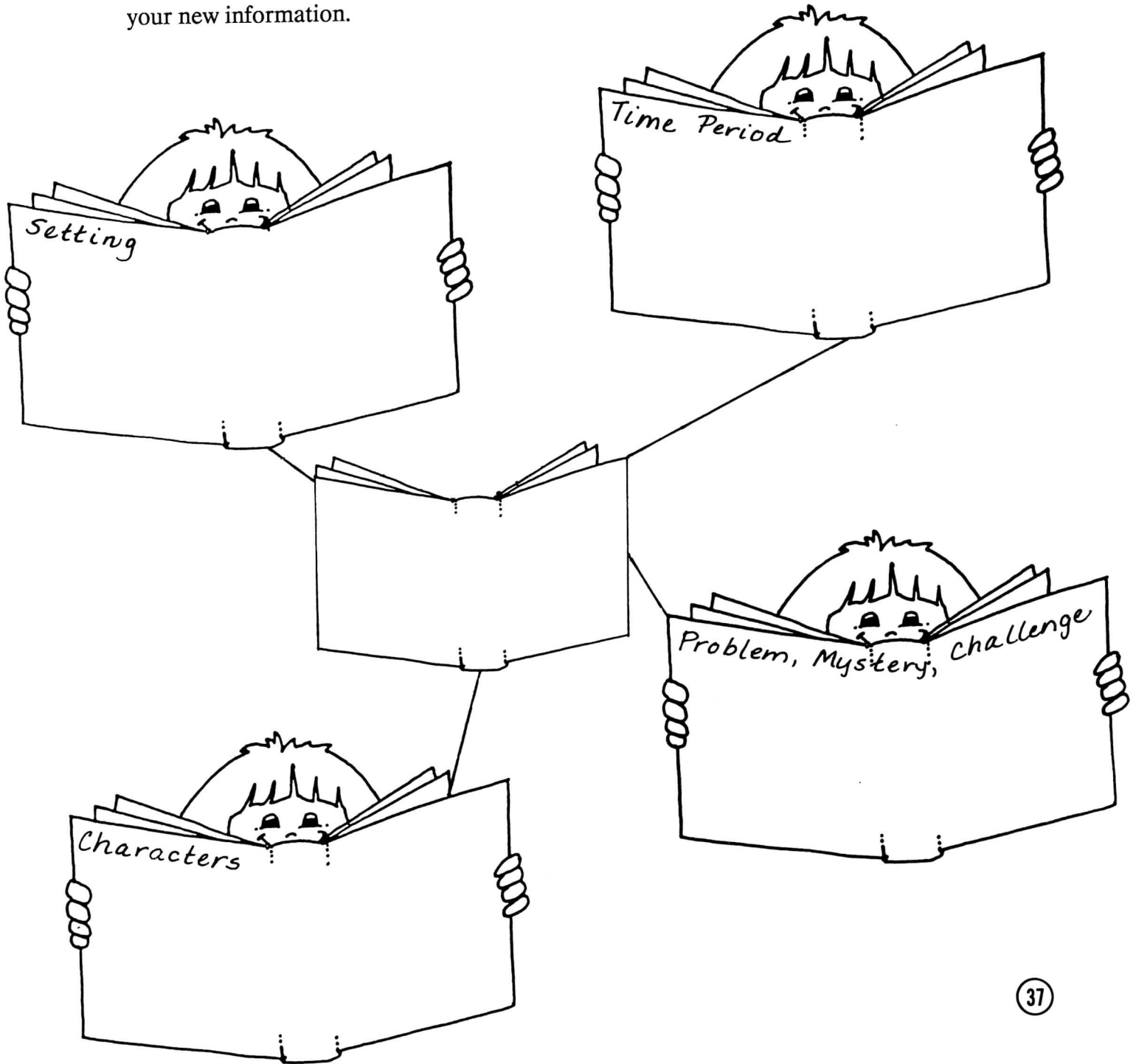
# Connecting Characters

Write the name of a character in your book under each person. Pretend the character is talking to one of your classmates. Fill in the talking bubble with something the character might say about himself. You may want to tell something interesting, exciting, or mysterious about the character. Or you may want to describe them.



# Sharing My Book

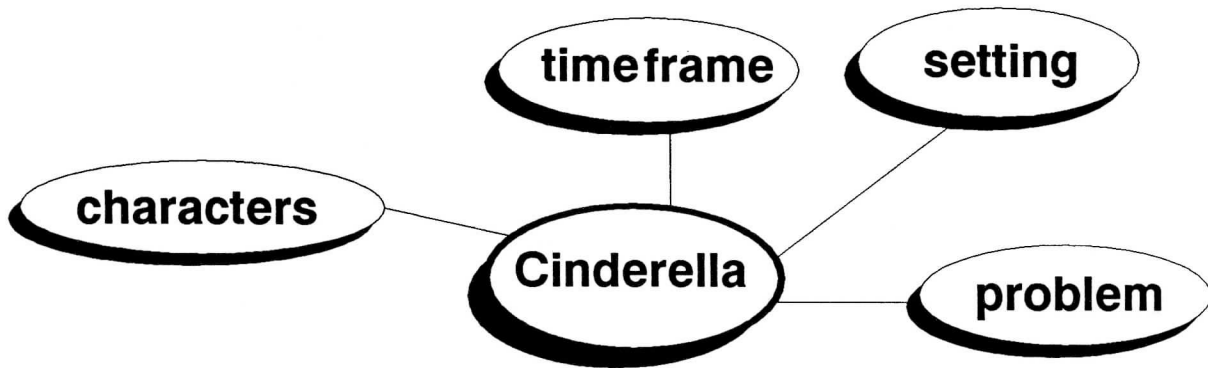
Fill in the links with the setting, time, characters, and problems or mysteries of the book. Use this information to write a report about your book or give an oral report. You may want to cut out each link and trade with classmates so that you have a combination of setting, time, characters, and problems/mysteries to create a new story. Write the new story using your new information.



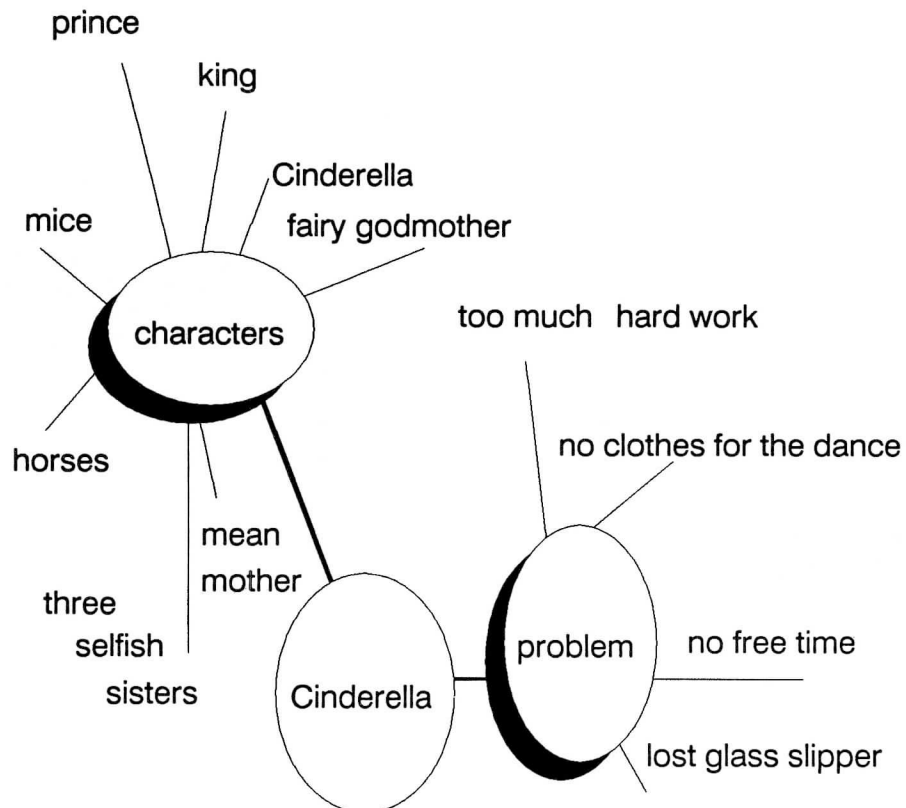


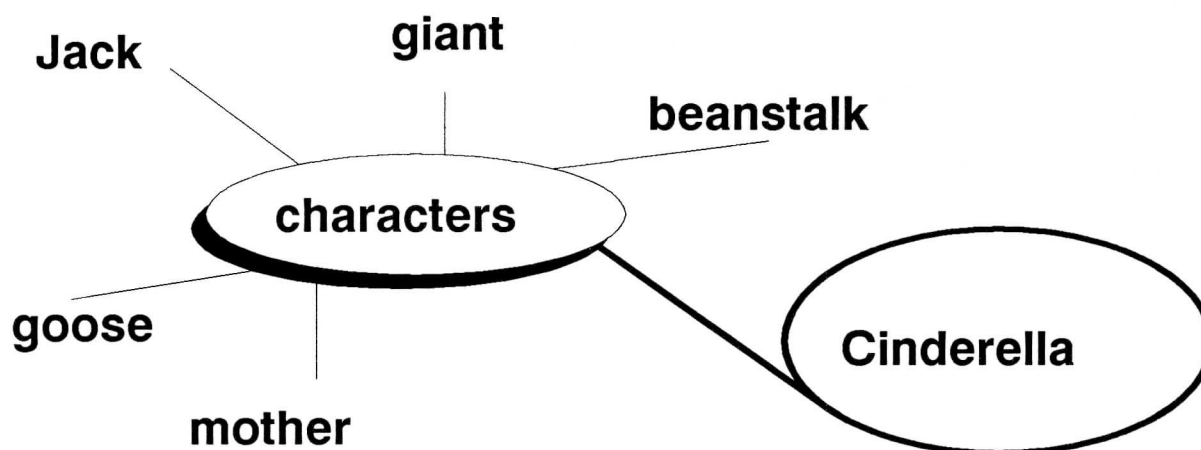
# Retold Fairy Tales

Have each student choose a fairy tale for a **focus**. **Links** will be characters, setting, time frame, and problem.



Students will **elaborate** about each **link**. For example:





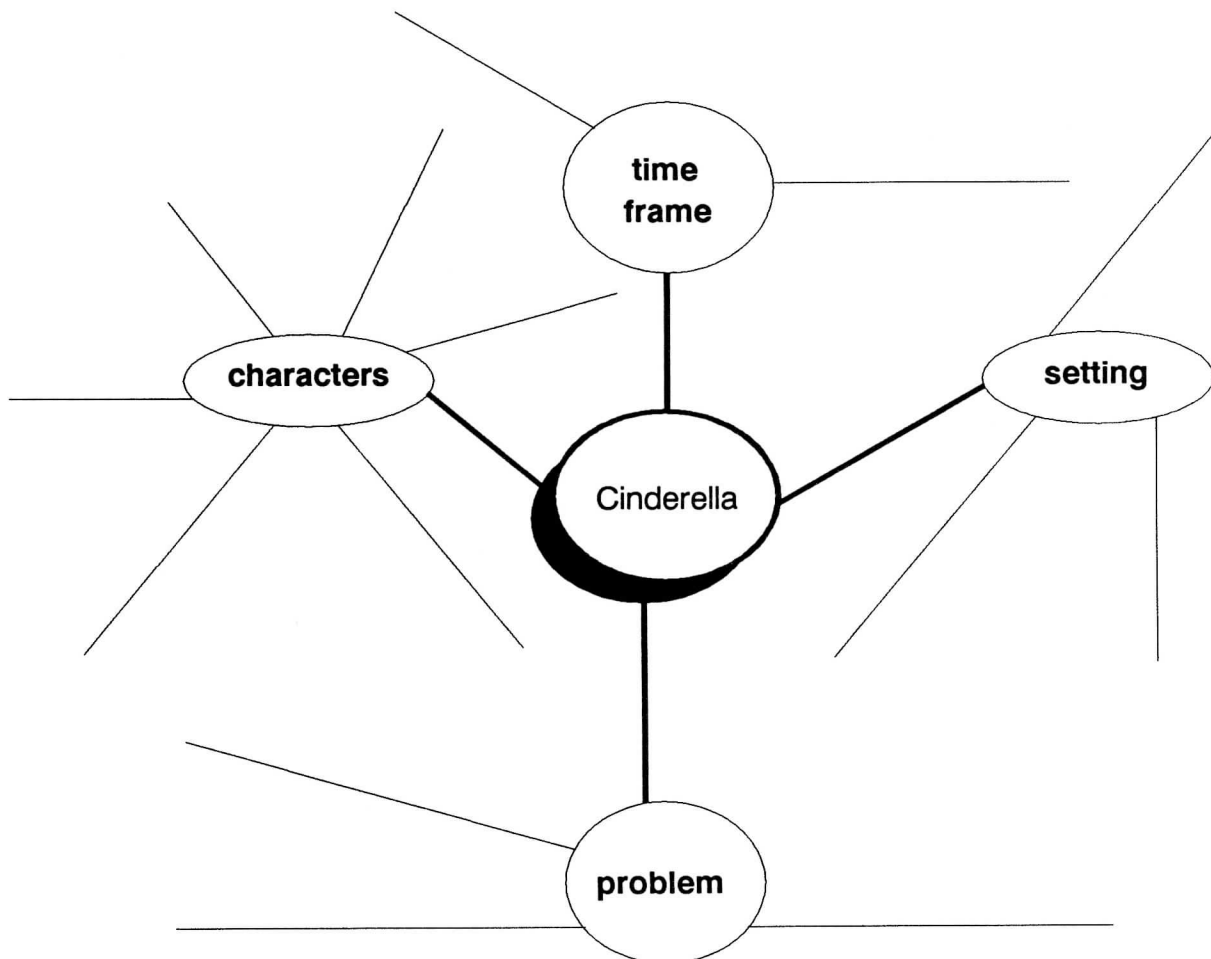
Students can then cut out a **link** from their paper, such as *characters* and trade with one another. With a new link of characters, have students write a new Fairy Tale with a new original title, but original time frame, setting, and problems.

- ☐ Choose a place you are studying in social studies for a new setting. It may be the farm, a particular state, the southwestern United States, desert regions, or Honduras. Use the new setting in the story or add that place to the story.
- ☐ Use the science unit the students are studying. State a science concept as a problem for the plot. For instance, if you are studying space science, consider some of the problems scientists have before a rocket is launched. Use that problem in a creative writing assignment with the characters, time frame, and setting from a fairy tale.



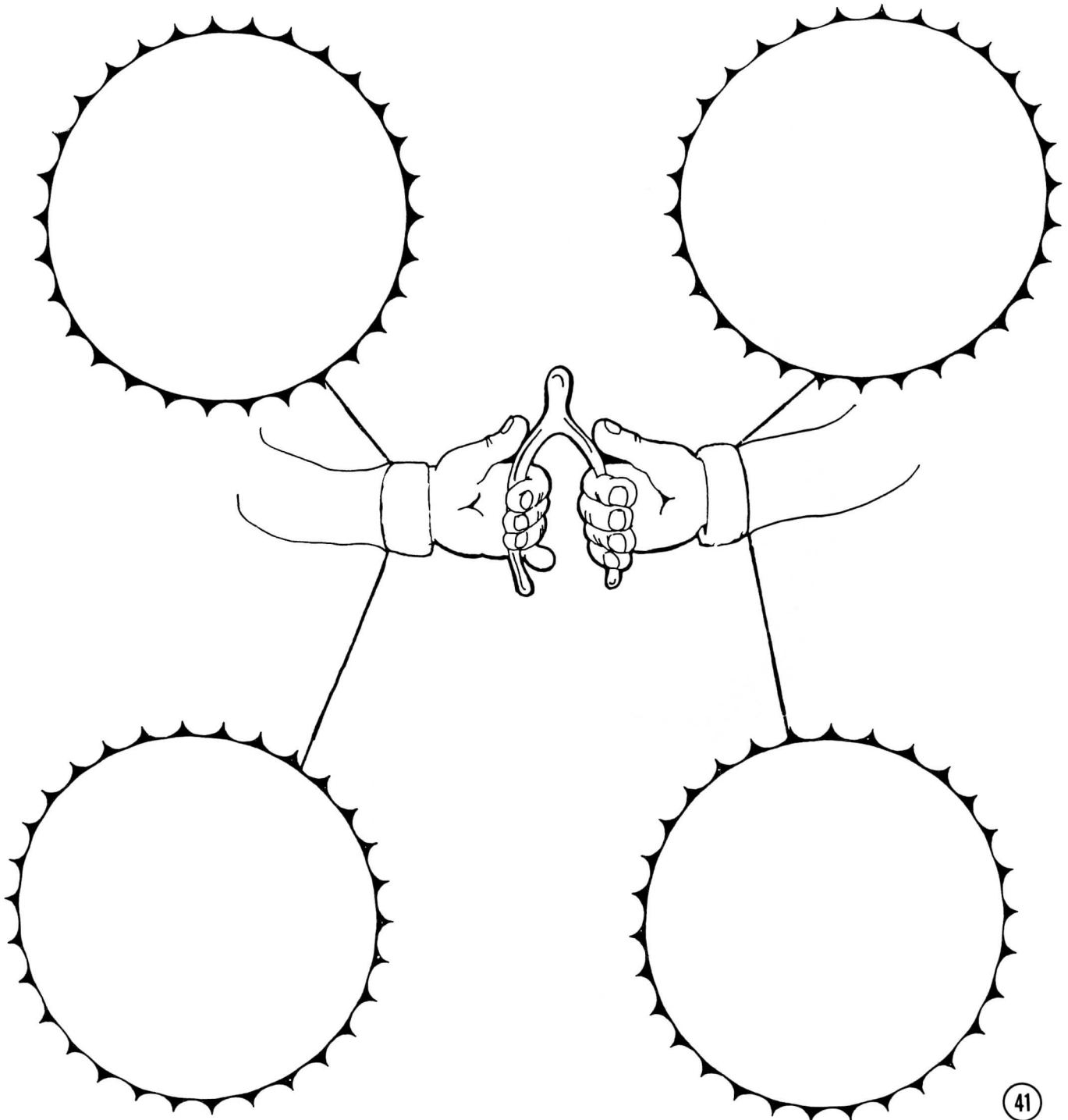
# Retell A Tale

Fill in the focus with your favorite fairy tale. Pass it to a friend. Have the friend fill in the characters of another fairy tale. Pass it again. A next friend will fill in the time frame of another fairy tale. Have other classmates fill in a setting and problems form different fairy tales. Write a new fairy tale using the new characters, time frame, setting, and problems. Illustrate your story.



# Web A Wish

What do you think of when you think about making a wish? Do you wish for something to play with? Or something for your family? Maybe something for your home? Or maybe you would like a pet! **DRAW** ideas in the links instead of writing words. Answer the question, "What do you think of when you think of making a wish?"





# Interviewing Techniques

Choose a famous person to interview. It may be an author, a sports star, a performing artist, or a businessman. Place the person's name in the **focus**.

In **links** write general topic areas of interest to you and the famous person. For each **link** write a question about the topic.

When you have finished your questions, **sequence** them in a logical order.

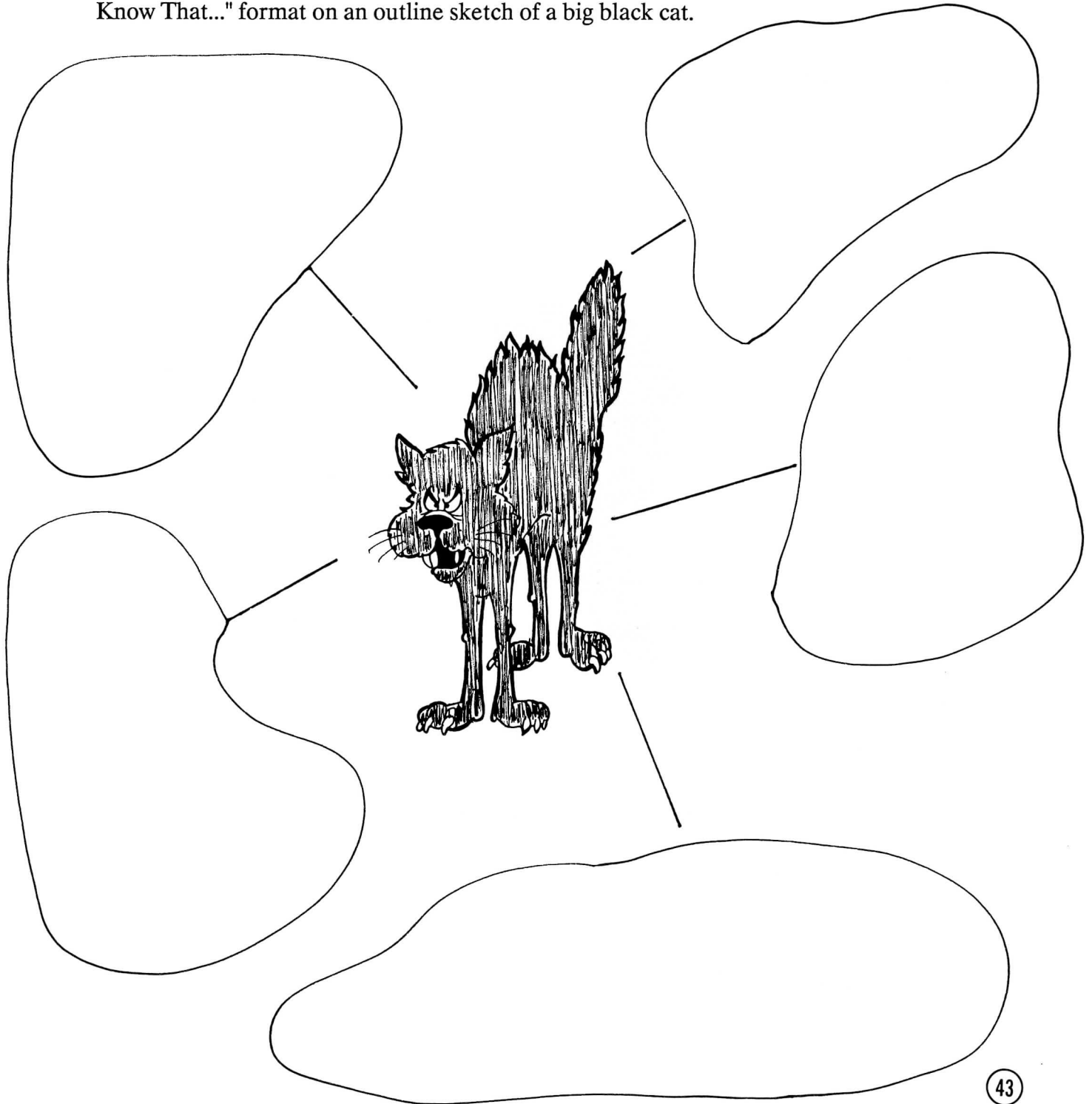
Attempt to call the famous person and interview that person in person or on the phone. Write to the person and ask him to answer your questions.



Have another student study the person you have chosen. Then role play the interview unrehearsed (that is, the other student will not know the questions, but will provide answers based upon what he knows about the person!)

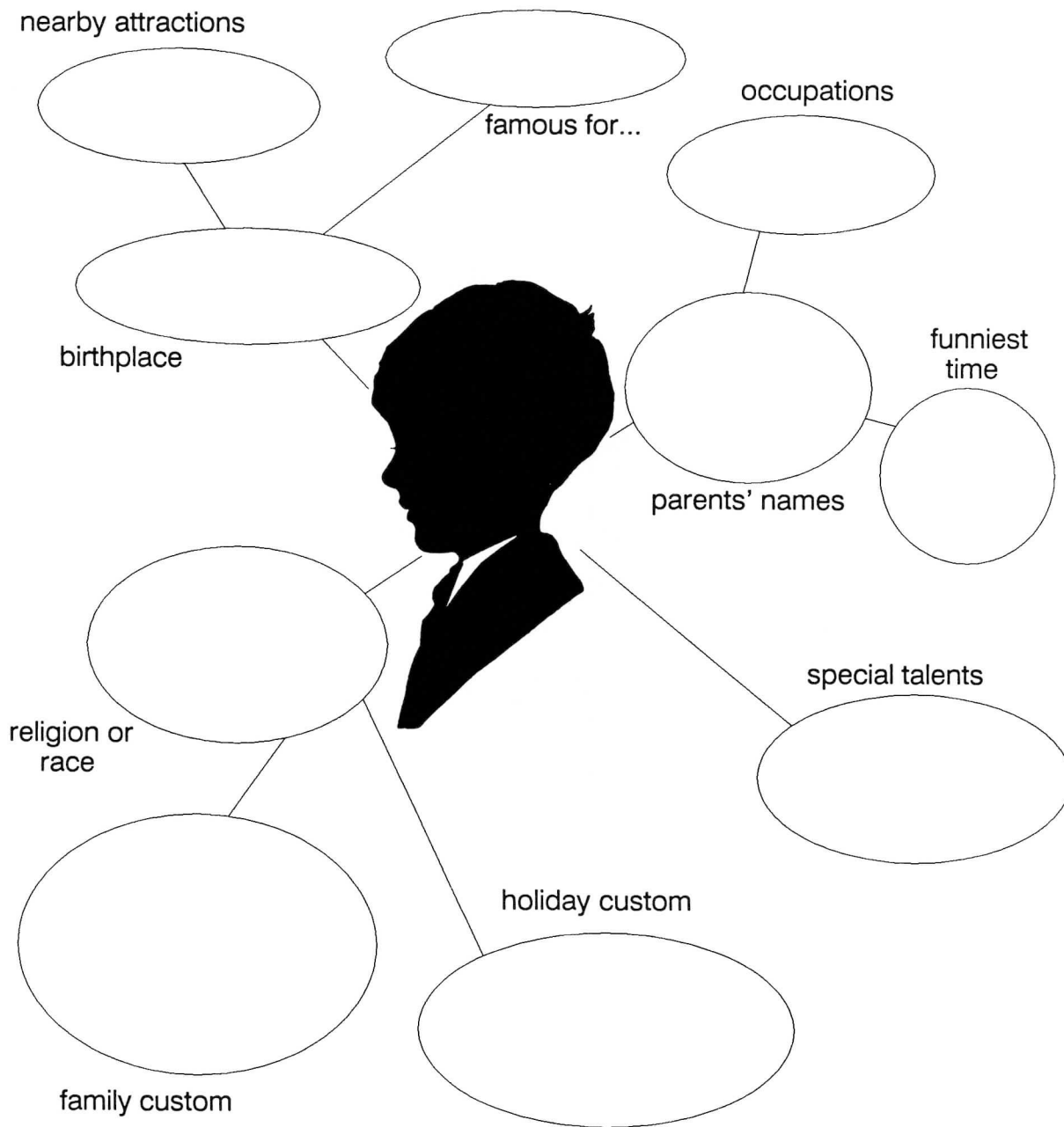
# Learning to Interview

Interview a black cat. Your links should be ideas about cats. For example, "feet" might be a link. A question might be, "Why don't you need boots in the winter when you run in the snow?" Once you have created answers to your questions, present your results in "Did You Know That..." format on an outline sketch of a big black cat.



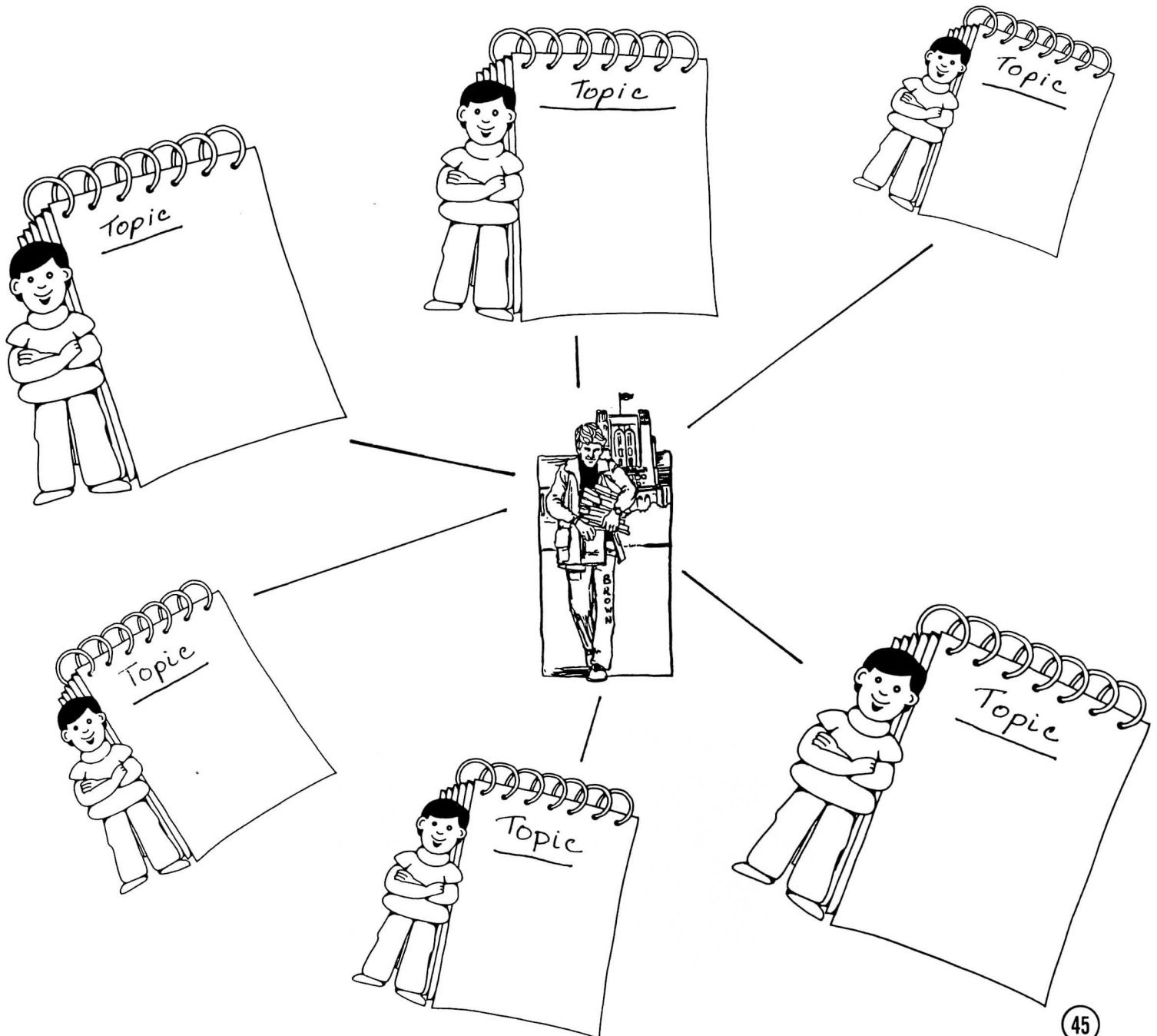
# Interviewing the Past

Use this mindMap to find out about your heritage or about someone you are studying in social studies or science. Fill in the links with information you find. Then write a four paragraph story about this famous person.



# A Feature Story

Interview the scientist who has just found a cure for lung cancer. Your focus is Donald Brown. Your links will be general topics you would like to ask him about. Create questions from the links. Remember Donald is only fifteen years old when you formulate your questions on your mindMap. Do not ask him HOW he found the cure because that, of course, is far too technical. When you have finished your questions, role play the interview with another student. From his answers, write a feature story about the young scientist for a newspaper. Or write a full-length feature for a magazine. Illustrate the story.





# Social Awareness

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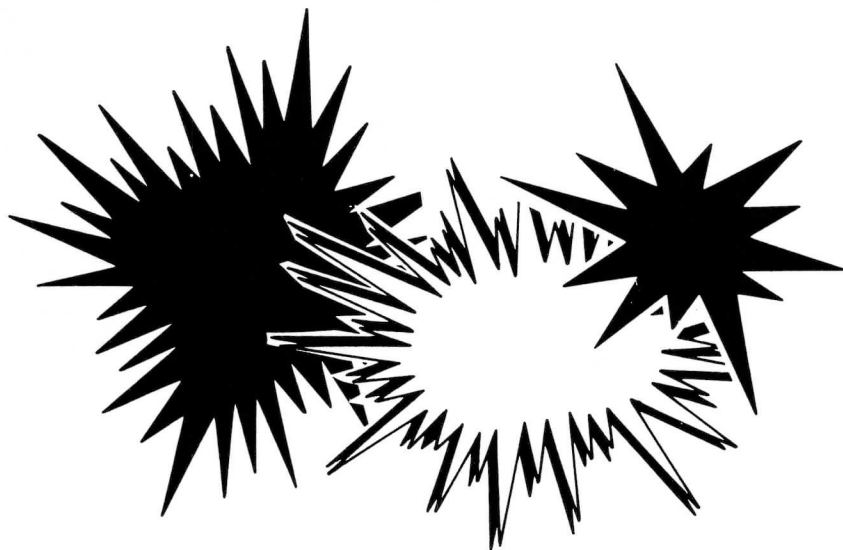
Students are aware of global issues, but often unaware of issues within the community that directly affect them. By studying a local newspaper for a week, the class can pick an issue that may have an effect upon their school, their family, or them as individuals. That issue becomes the **focus** of the mindMap.

By analyzing the issue, parts become the **links**. There may be a need to clarify the parts by **elaborations** of the **links**. There may be connections (**bridges**) between the parts.

The class might want to discuss which parts they are able, at their age and position of influence, to address—in a letter to the editor of the newspaper, a letter to a community committee dealing with the issue, or to a political representative.

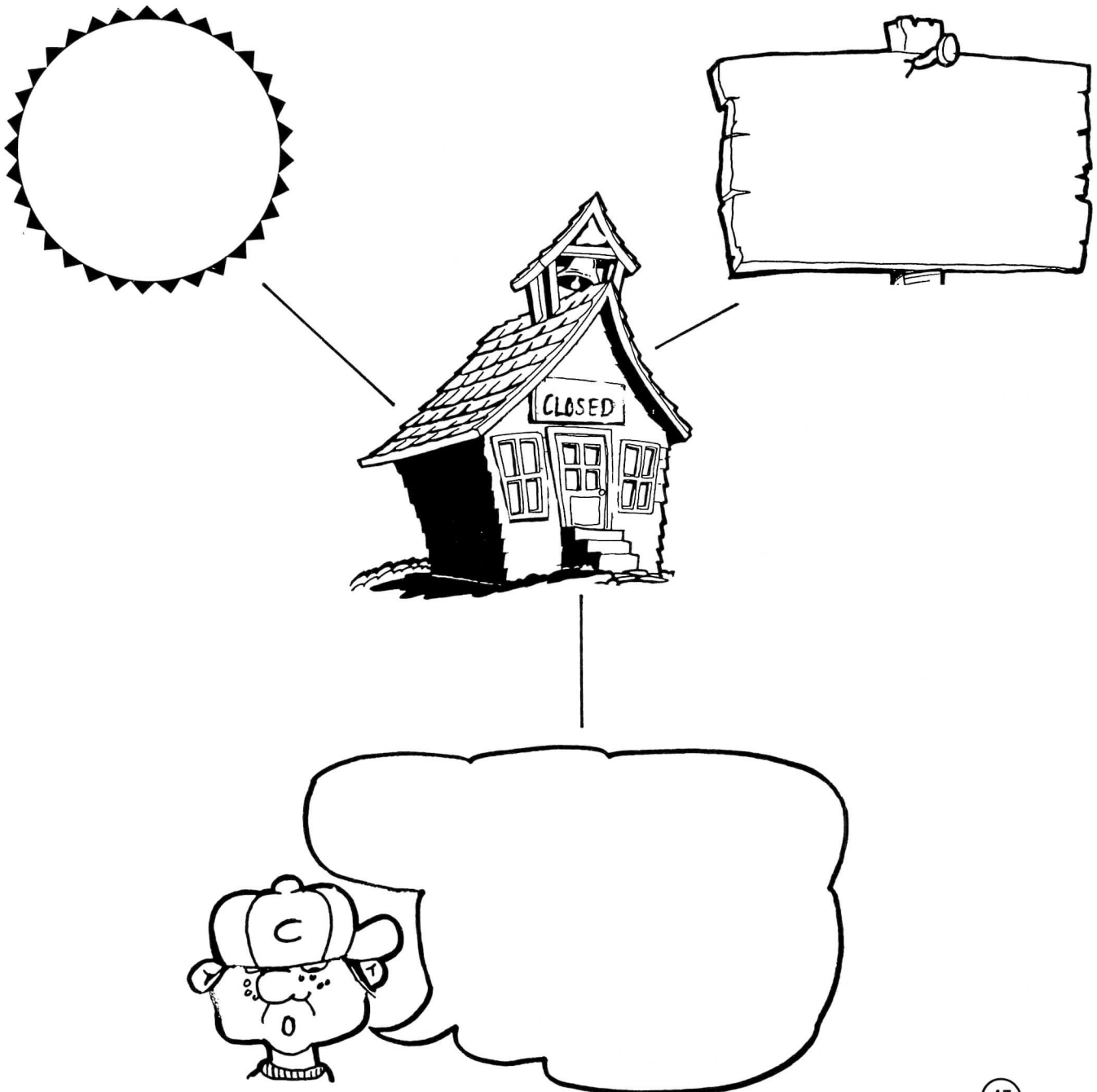
The part or parts of the issue they want to address then become the **focus** of new mindMaps. **Links** are explanations, clarifications, questions, or alternative solutions relative to the **focus**. Students may want to develop problem solving mindMaps before they write letters. (see page 56)

Choose other current issues to mindMap. These may turn into essays or debates using the information in the mindMap.



# Closing Our School In Our Community

Fill in the links with reasons NOT to close your school and force students to go to other schools in your school district or to neighboring communities. Then write a letter to the newspaper editor, "Dear Editor: We do not want to be forced to another school because..." Use your links to explain why you do not think your school should be closed.







# ANGER

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How do different people display anger? Have students **survey** friends and relatives to find how they react when they are angry.

Fill in the "*ANGER*" mindMap with **adjectives and verbs** that describe how different types of people act. **New links** might include reasons *why* those people get mad.

In a large group **discuss** and **compare** anger mindMaps.

Discuss positive ways of dealing with anger. Have students brainstorm alternatives to deal with anger. The teacher can write a new mindMap "*DEALING WITH ANGER*" on the board. Students can **write an essay** about feelings and actions related to people's anger.

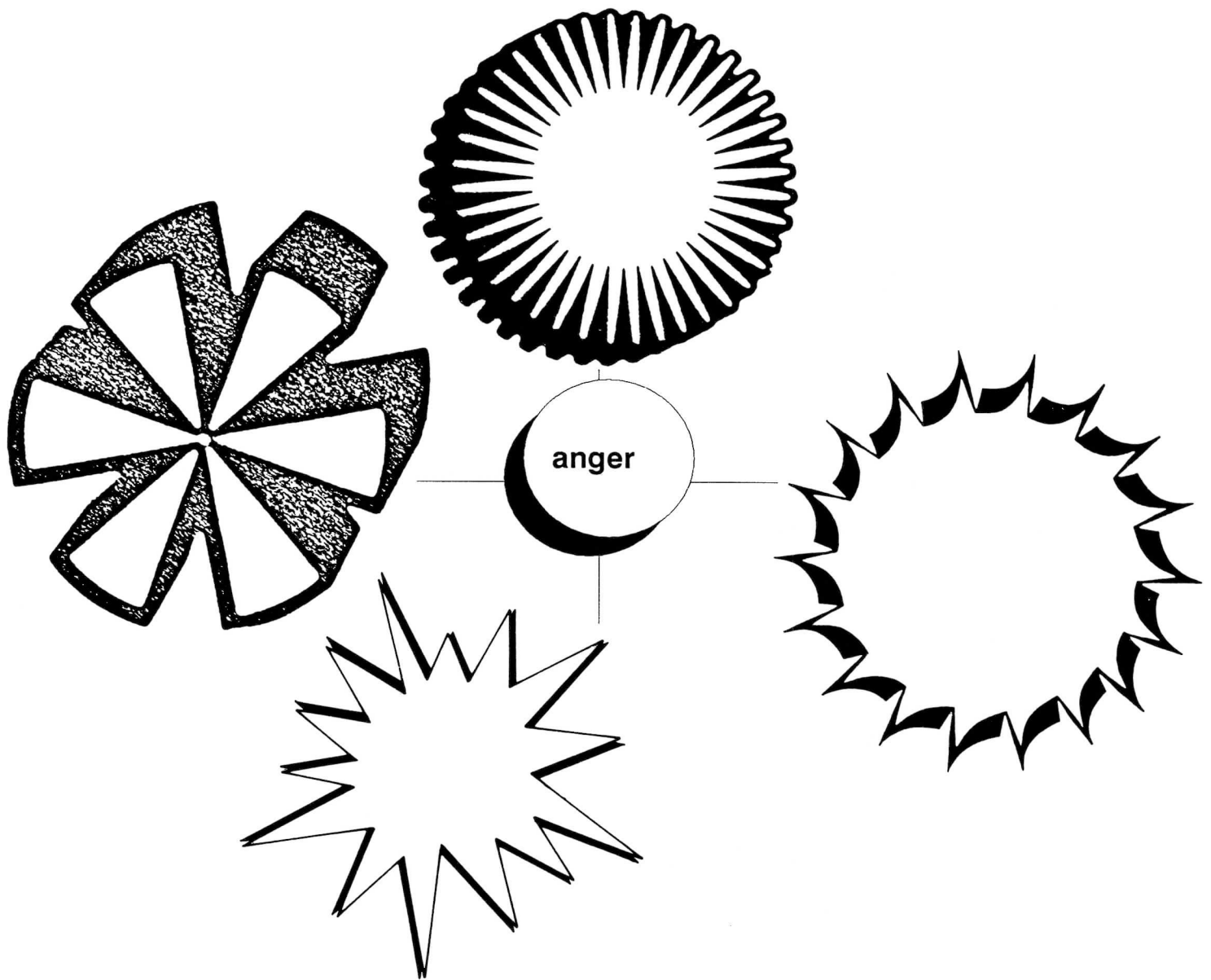
**Make a card** to give to one of the persons on the mindMap when he or she is angry. The card may be humorous.

Create a **poem** entitled "Anger".

People often stereotype people from different countries. It is said those from Ireland or Italy have hot tempers as do those people with red hair. Investigate the generalization. Present findings in the format of a mindMap.

**Role play** "angry" situations.

Make an "**Angry Box**". Just as Grumpy, the Care Bear, takes the grumps away from small children, fill a shoebox with things that would take the "angries" away. Decorate the outside. Next time a special friend is angry, give him or her the box.



adjective

adjective

verb

verb

verb

synonym



## Using Brand Name Products

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Begin a list of brand names of products. Categorize them according to rooms of the house, basement, and garage to keep the list a bit orderly. When the students have exhausted their minds, use magazines to prompt more names.

The **focus** is Brand Names. Students choose their favorite brand names (excluding proper nouns such as Kelloggs unless it is a homonym) and place them in **links**. Because this is a writing activity encourage them to include "people" such as Mr. Clean or Elsie the Cow.

For the "people", elaborate upon each **link** with verbs and verb phrases, situations that that particular person could be involved in. For instance, Mr. Clean surely washes the floor, and Elsie the Cow walks to the pasture.

For other brand names, write them in lower case (coast, aim, post) and **elaborate** by using adjectives or writing synonyms or definitions.

Make **bridges** between **links**. How does one **link** relate to another? When you come to an "aha" begin a story. It may involve one or more of your **links**.

Time...Life...Look...Us...People...Betty Crocker...Sara Lee...Duncan Hines...Kraft  
Minute Maid...El Paso...McCormick...Maybelline...Mountain Dew...Tab...Sprite  
Charlie...Heaven Scent...Crystal...Scope...Crest...Dial...Shield...Caress...Dove...  
General Electric...Realistic...Apple...Commodore...Tandem...Mrs. Grass...Royal.....  
Welch...Jonathan...Delicious...Bluebell...Sprint...Ford...Dodge...Thunderbird...Huffy..

# A Brand New Story

Fill in the links with products that use a person in the title or in the advertising. Then elaborate on the links by supplying verb phrases (washes the floor, jogs to school) that those people might do. Fill in the rest of the links. When you finish use your ideas to write ad copy, radio advertising, a TV commercial, or short story about how the product got its name.

Product

Verb Phrases / Adjectives

Brand Name

Product

Verb Phrases / Adjectives

Product

Verb Phrases / Adjectives

Product



## Career Search

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It is hopeful that by the end of your association with your students a significant relationship has been established and reinforced through mindMapping and that you have allowed your students to experience Success in Writing.

For those who have always found it easy to "just write" and for those who have a new found love, mindMapping a career in writing is natural.

On the following page is a mindMap of "Authoring" as found in *Exploring the Lives of the Gifted: The Arts*. Make an overhead transparency of the mindMap. Discuss/mindMap with the students before they see the authoring mindMap, all links associated with authoring. Then show them the overhead and highlight those career areas associated with authoring which they mentioned.

Elaborate upon each of the careers or types of writing. Refer to those mindMaps which they have created that are related to any on this mindMap.

Many professionals from other areas become authors during their lifetimes. Investigate which careers lend themselves to writing. In educational training, what courses are helpful if you are planning a writing career?

Interview local authors. Write a letter to a famous author. Interview or write to a free lance writer.

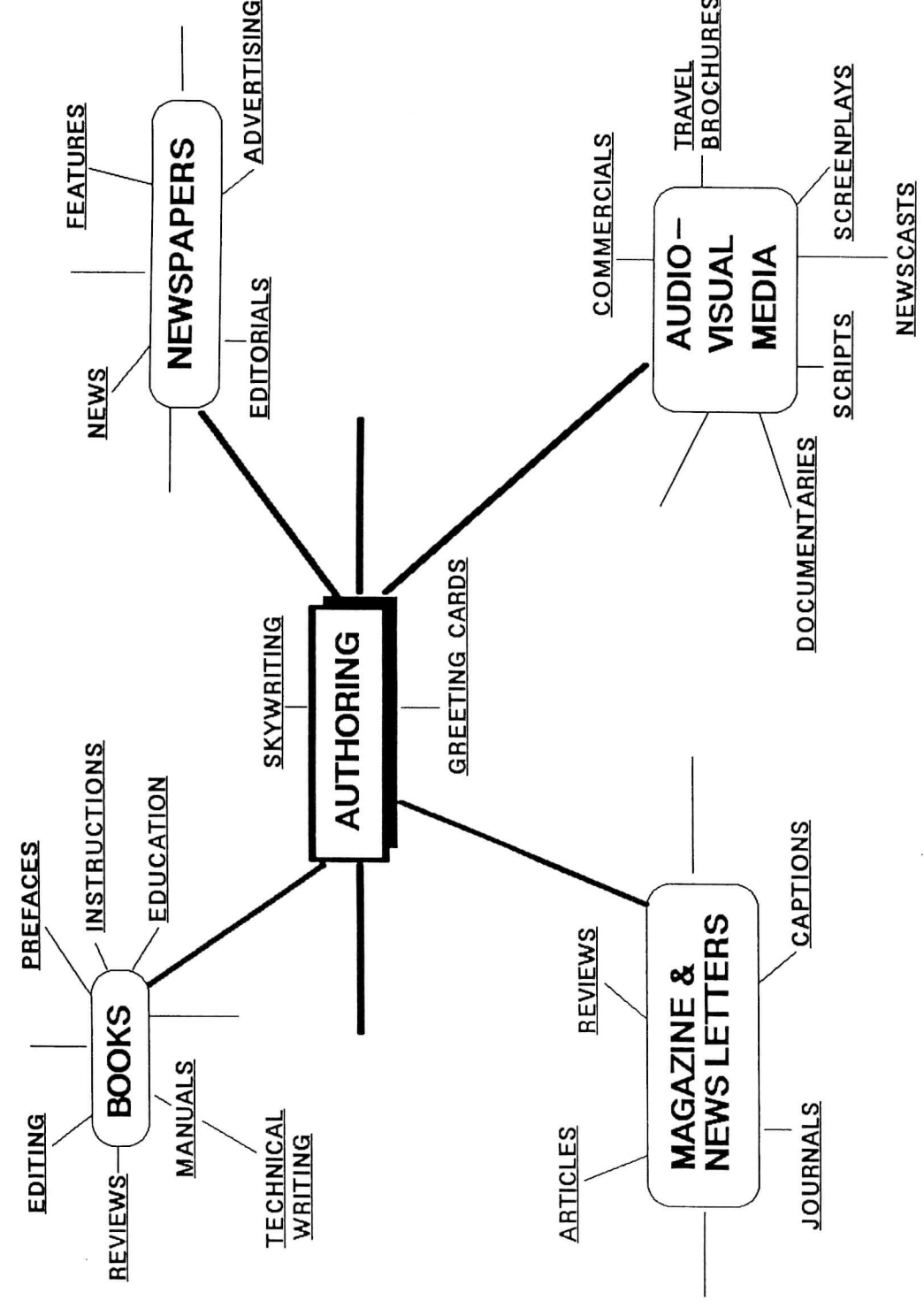
How is an editor's position similar and different to a writer's?

Enter all poetry and prose writing contests and send your efforts to magazines and newspapers.

# DESCRIPTION

*PERSUASION*

*EXPRESSION*



*CLASSIFICATION*

*NARRATION*

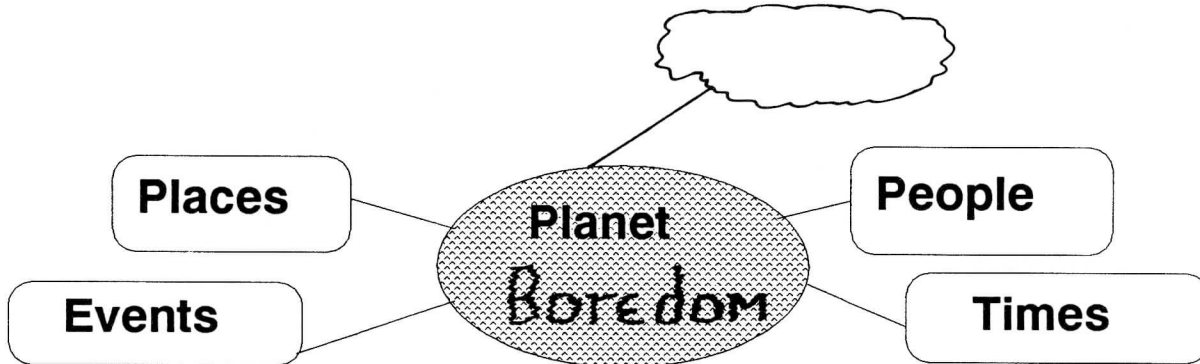
# INFORMATION



# Boredom

All kids at some point in time get bored. Even the energetic eager beavers get bored. Rather than dismiss boredom, deal with it through mindMapping.

**Focus** on Planet Boredom. **Links** are times, places, people, events, and an empty **link** for the student to fill in if he thinks of other **links**.



The student can then **elaborate** upon the particular times, places, people, and events which trigger boredom.

Have students compare their boredom mindMaps. In groups of four or five, discuss the reasons for the boredom at the particular time, place, with which people, and at what events.

Switch groups. Find common "borings". When the group has one agreed upon time, place, person, and event, use a problem solving mindMap approach to find alternative solutions to their boredom.

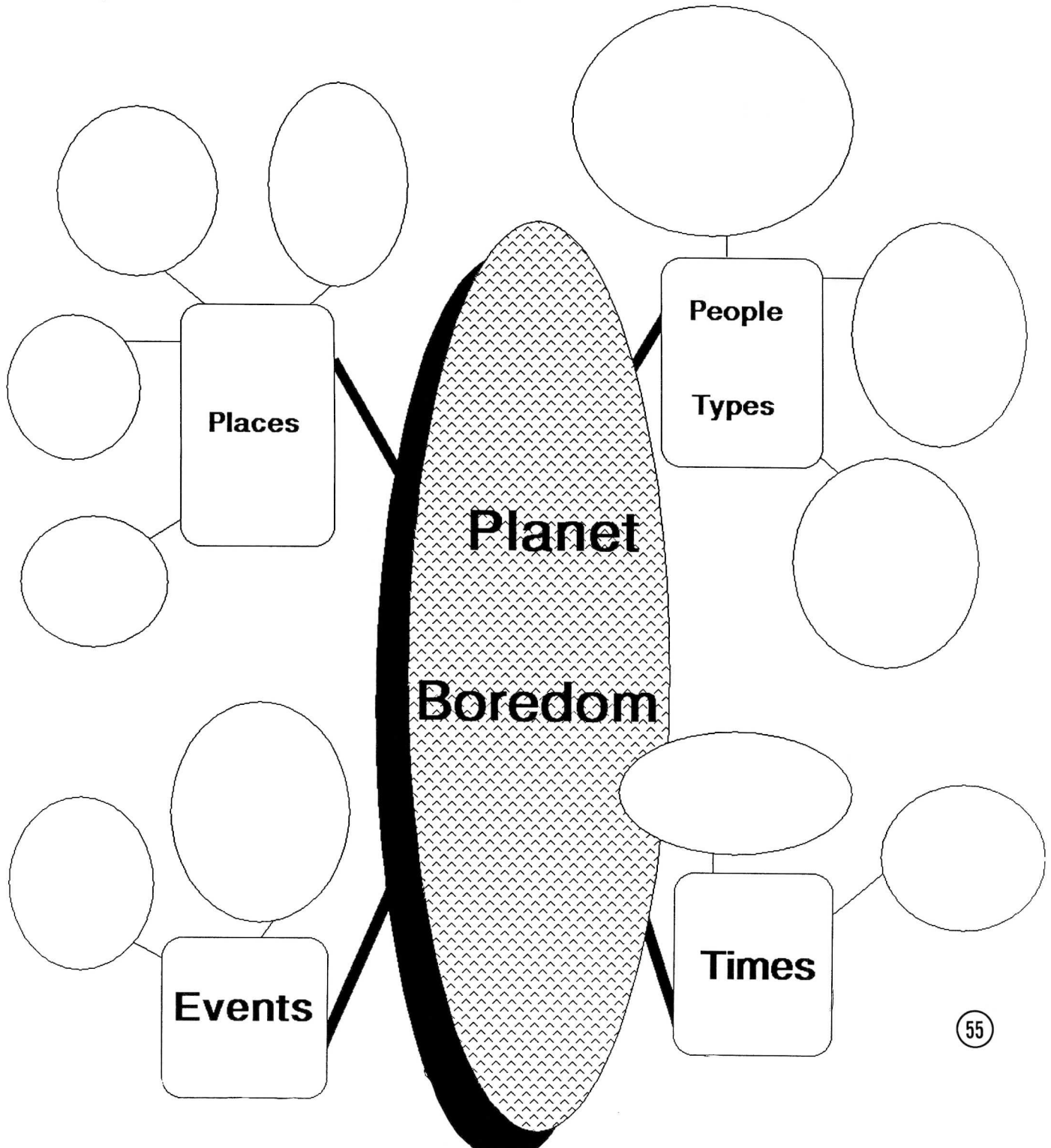
Have each student in the group pick one of the **links**. Write an essay entitled "**Escape from Boredom**".

Ask the question, "**Are you boring?**" Brainstorm characteristics that might make **any** person boring. Ask the student to look in his own "mirror" to see if he is boring.

Ask the question, "**Is my teaching boring?**" Have the students brainstorm characteristics of boring teaching and quality teaching. Now is your time to look in the mirror!

# Escape from Boredom

With a partner, list places, types of people, times of day, and events at which you often become bored. Decide which place, type of person, time of day, and event are the **most** boring. On a separate piece of paper brainstorm ideas to make the place, type of person, time of day, and event more exciting. Choose one of the places, types of persons, times of day or events. Write a "Declaration of Independence from Boredom."





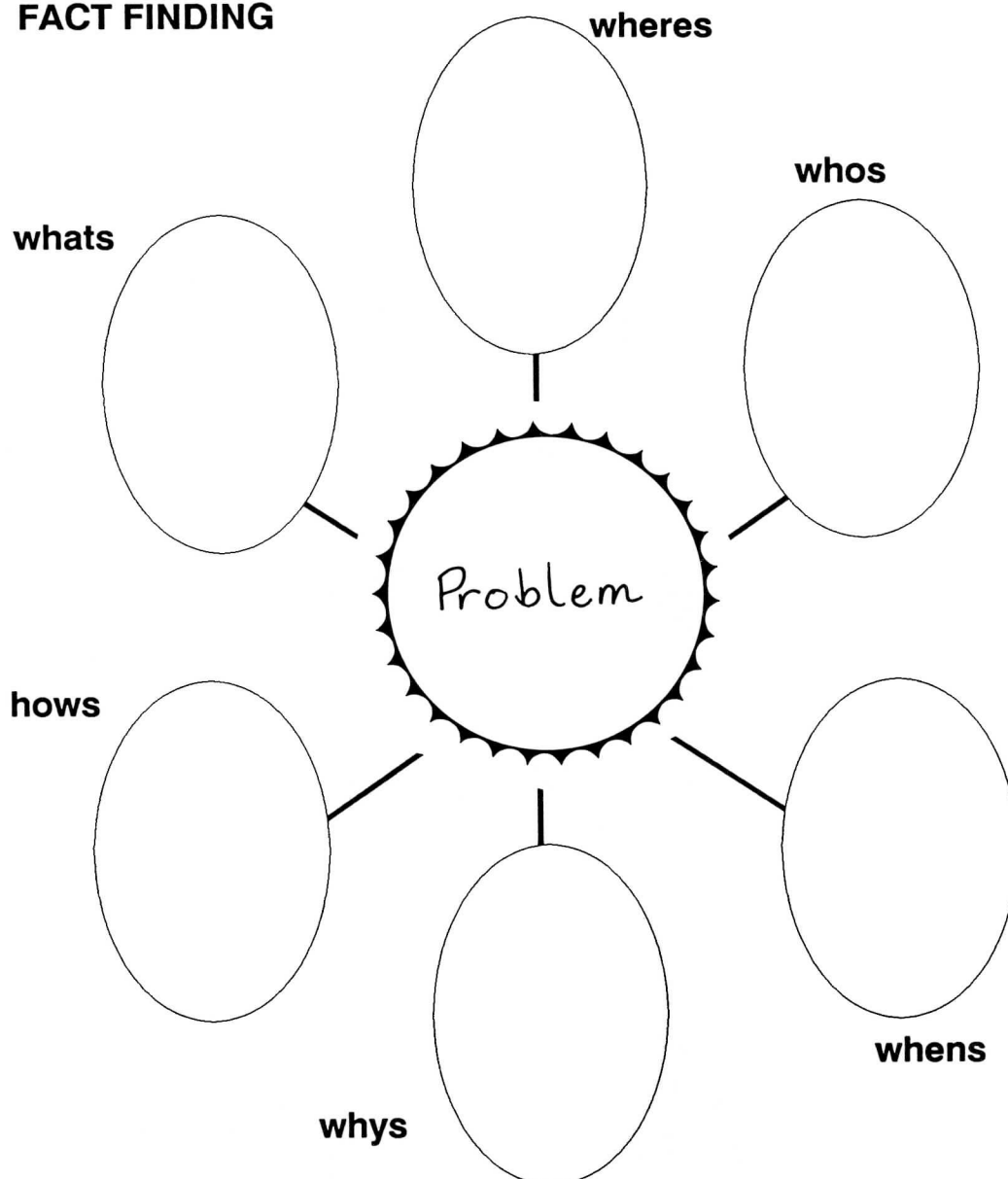


# Problem Solving

Each stage of Creative Problem Solving can be mindMapped for greater effectiveness.

In the initial *Fact Finding* stage, the **focus** may be simply stated as "Problem". In each **link** students write the "whos, whats, whys, whens, hows and wheres" associated with the problem. These facts will help to define the problem.

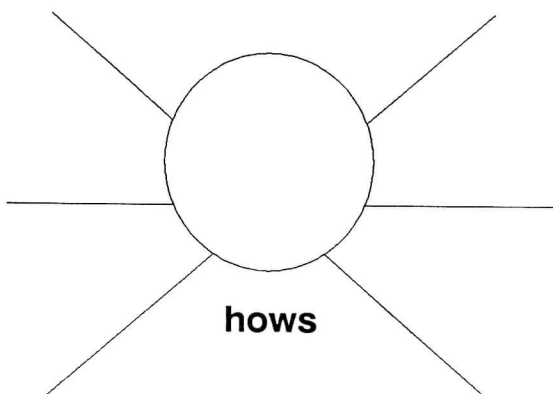
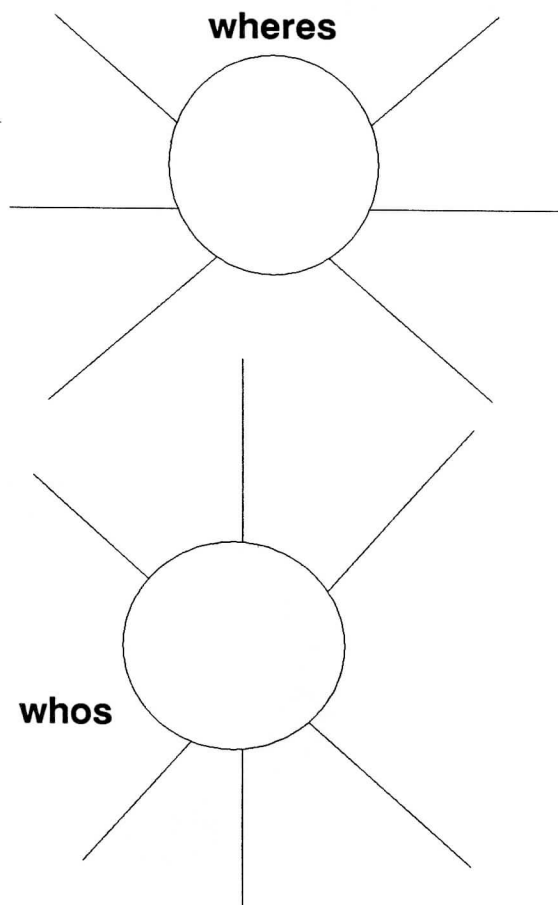
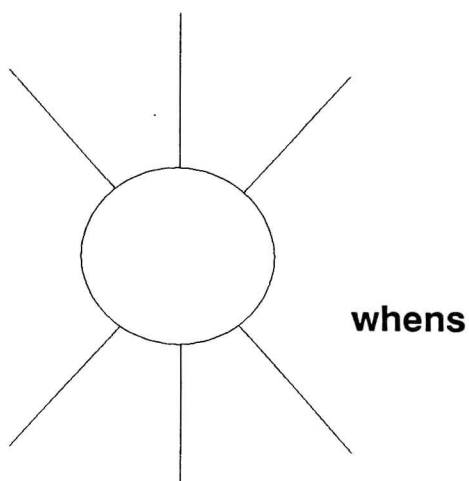
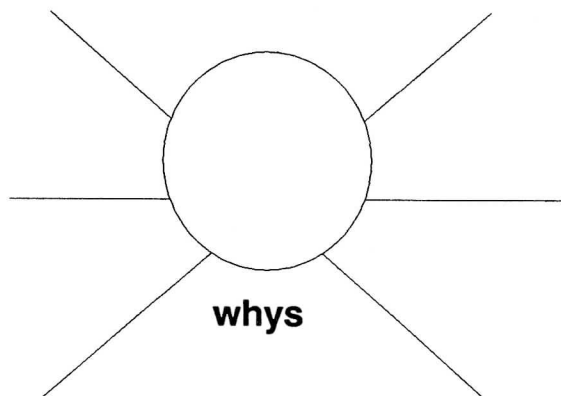
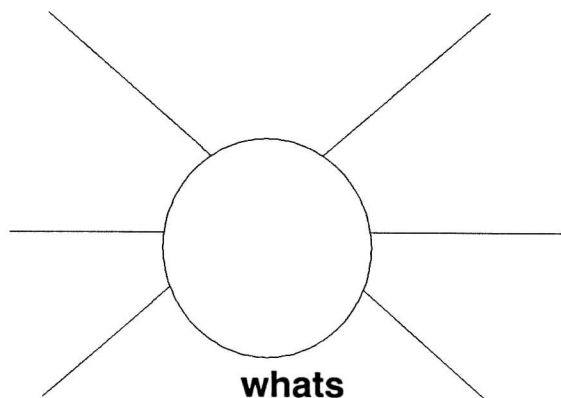
## FACT FINDING





In the second phase, *Problem Finding*, students need to discuss the relationships among the Fact **links**. "How is what related to where? How is where related to who? How is who related to when? What problems are involved with each of the Facts? Brainstorming problems associated with the Fact **links** will help to clarify the **real problem**. This real problem should then be defined in a statement.

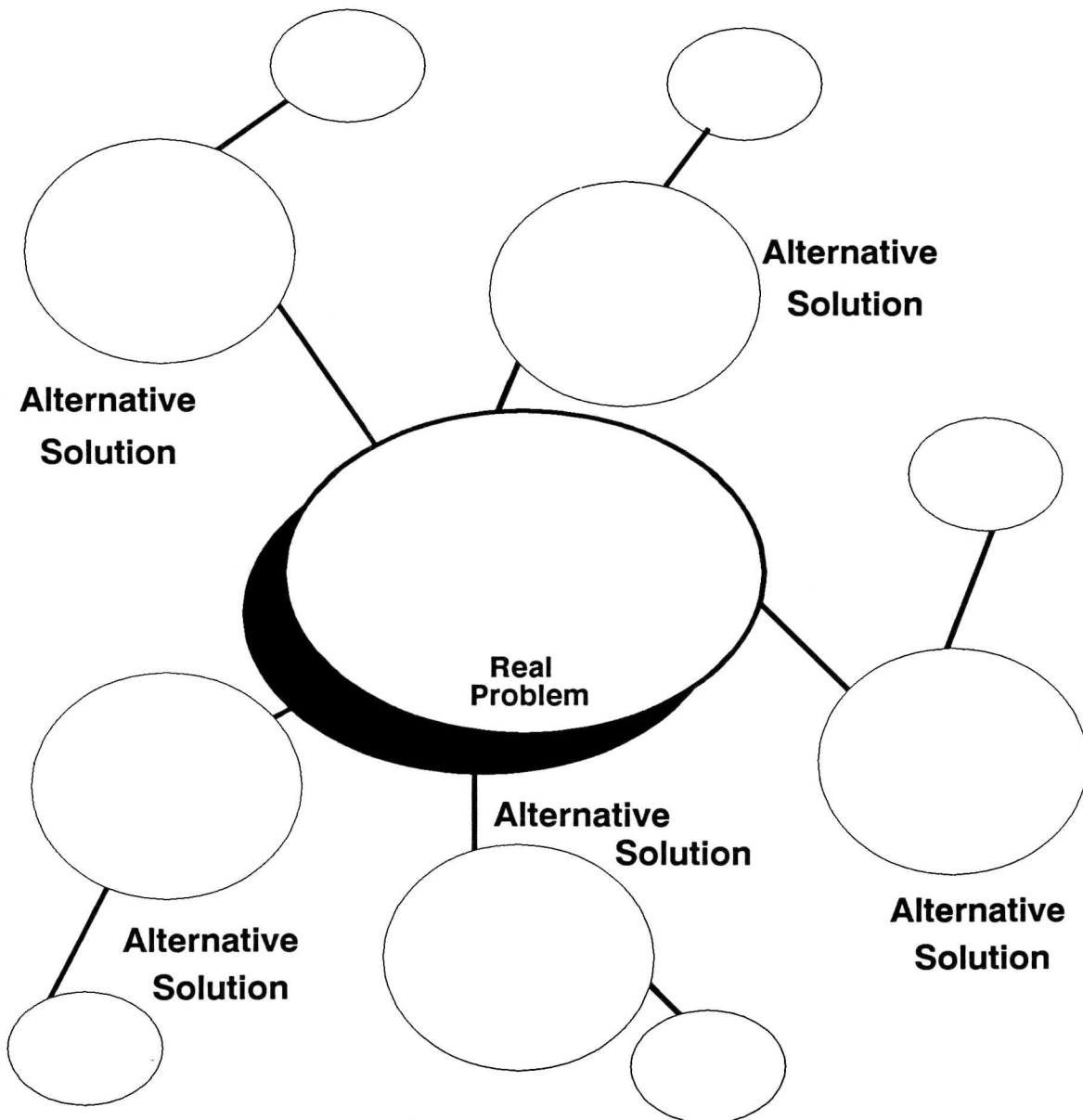
### PROBLEM FINDING





Once the Problem has been defined, a new mindMap will emerge for brainstorming the *Idea Finding* stage. The mindMap will begin a framework for alternative solutions to the Problem. Each link may stimulate **elaborations** or a **new focus** which may in turn become an alternative solution.

## IDEA FINDING





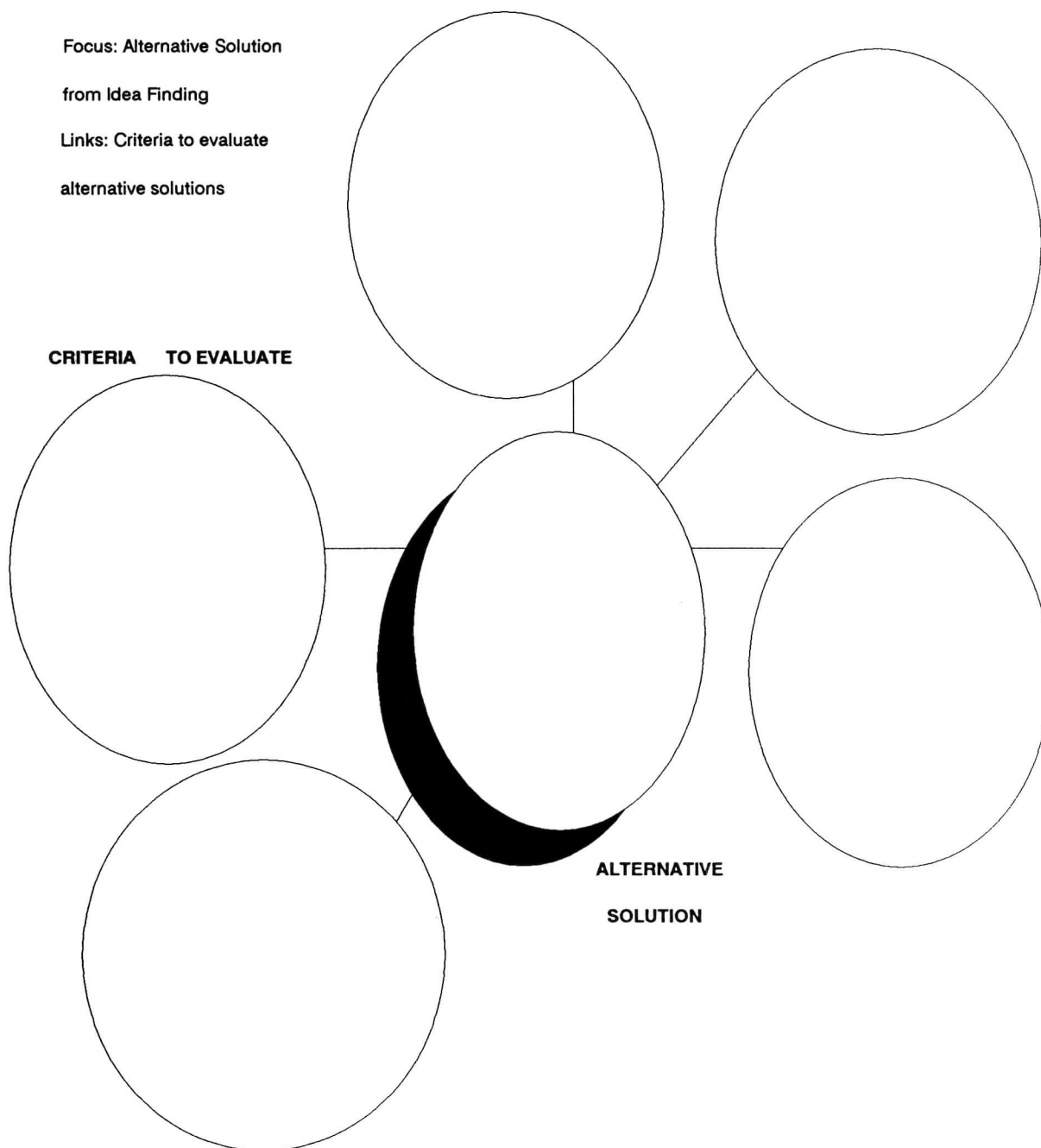
Students then move into the *Solution Finding* stage. Each solution becomes a **focus**. Each **link** will describe criteria that can be used to evaluate the particular **focus**. Students can work in partners or small groups to brainstorm evaluative criteria.

## SOLUTION FINDING

Focus: Alternative Solution

from Idea Finding

Links: Criteria to evaluate  
alternative solutions

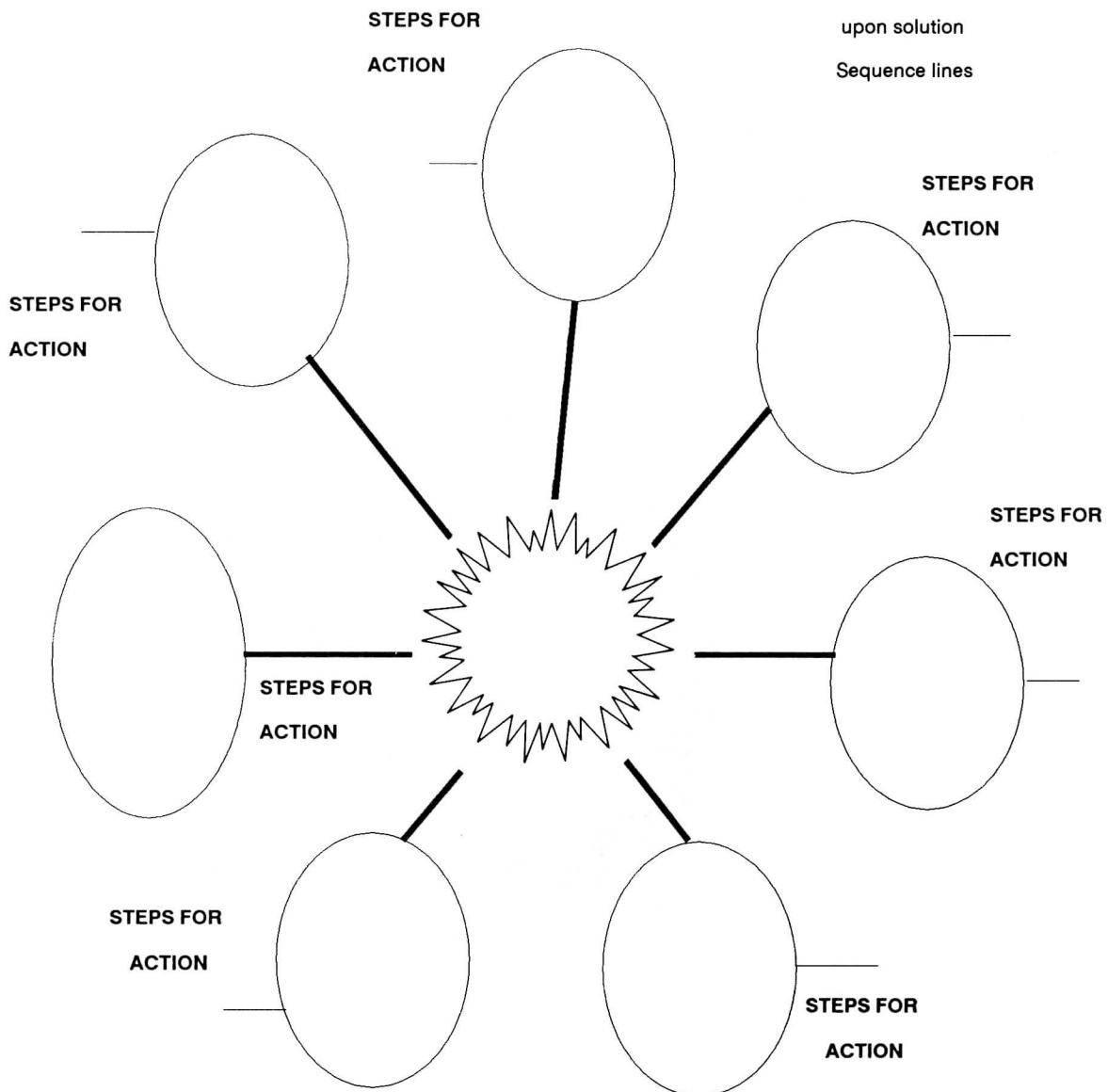




Once a solution has been chosen, it becomes the **focus** in *Acceptance Finding*. Students then brainstorm in the **links** ways in which to implement the solution. Students then sequence the plan of action in the line provided.

## ACCEPTANCE FINDING

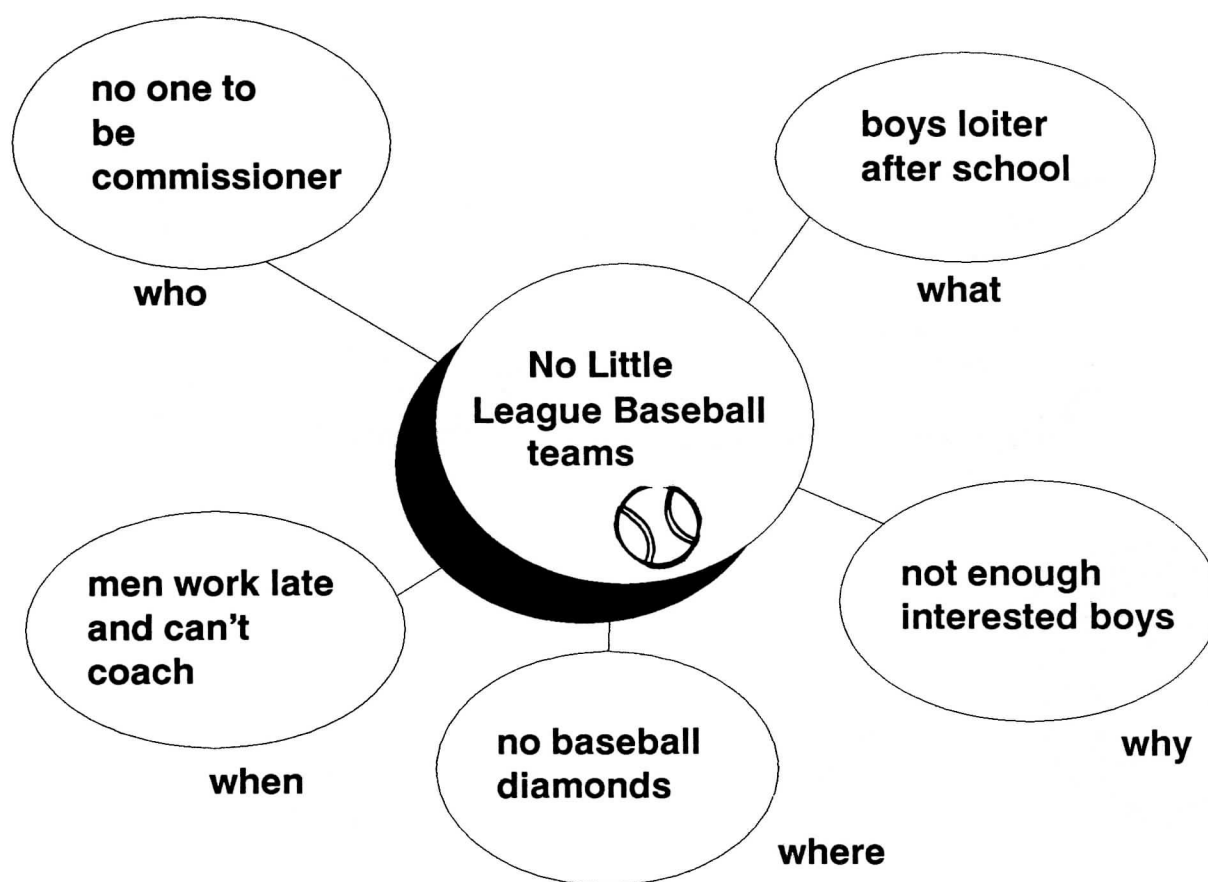
Focus: Chosen solution  
from SOLUTION FINDING  
Links: Steps to take to act  
upon solution  
Sequence lines





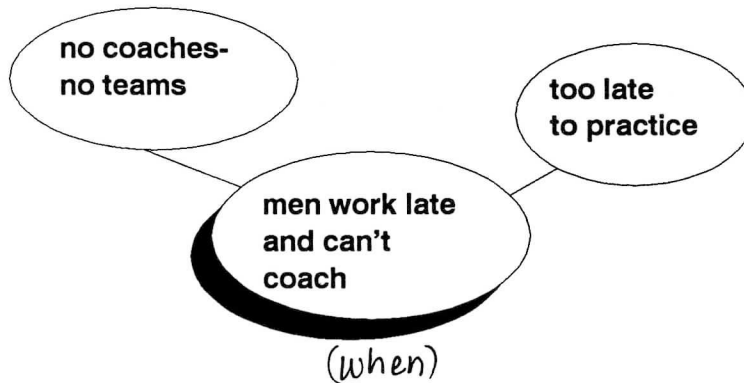
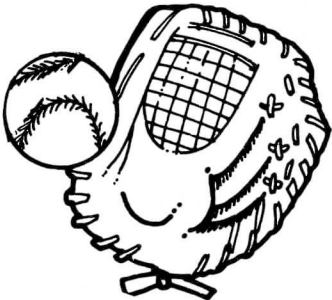
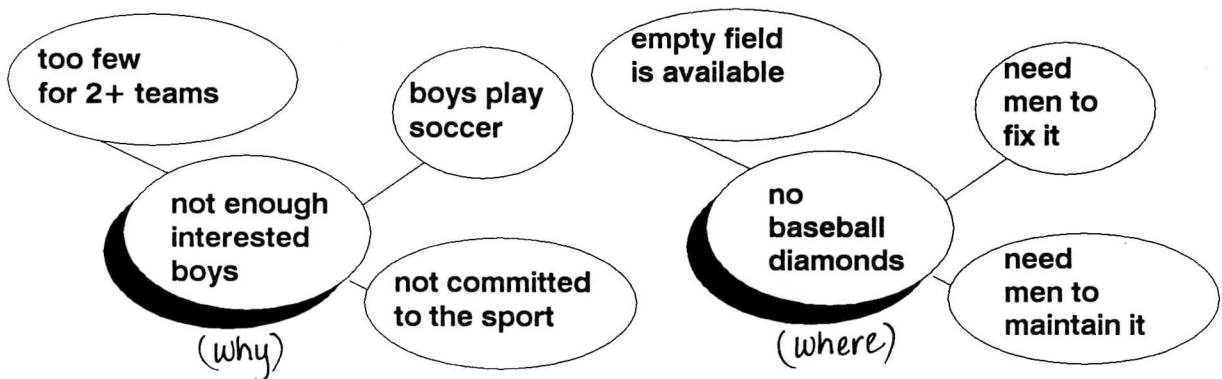
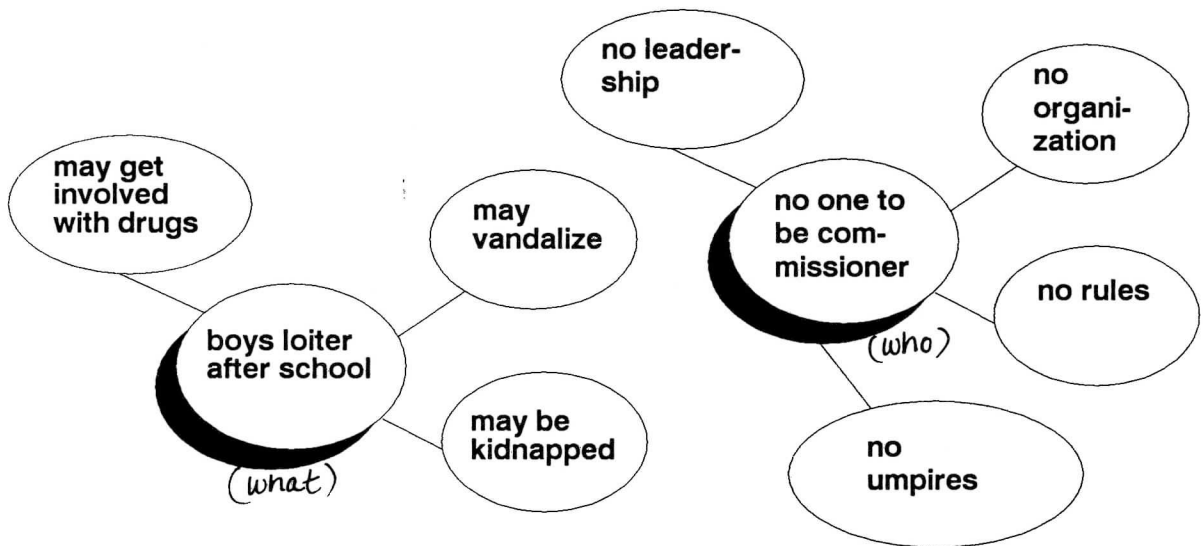
An example of creative problem solving using mindMapping follows. You may want to show these mindMaps on the overhead as you explain the scenario to your class. Another idea is to distribute copies of the previous blank maps so that students can do their own brainstorming and mindMapping of the scenario. The situation facing boys in Hometown, USA, is that there is no organized baseball. Previous to 1990 no one, including the boys seemed to care. But in 1990, several new families moved into Hometown and each new family had an experienced ball-playing aged boy. The mindMaps that follow help the boys and their families solve this problem. You might ask your students to help solve this problem as practice. Then put forth school and community problems for them to solve.

The first mindMap shows the *Fact Finding* that the boys have done.



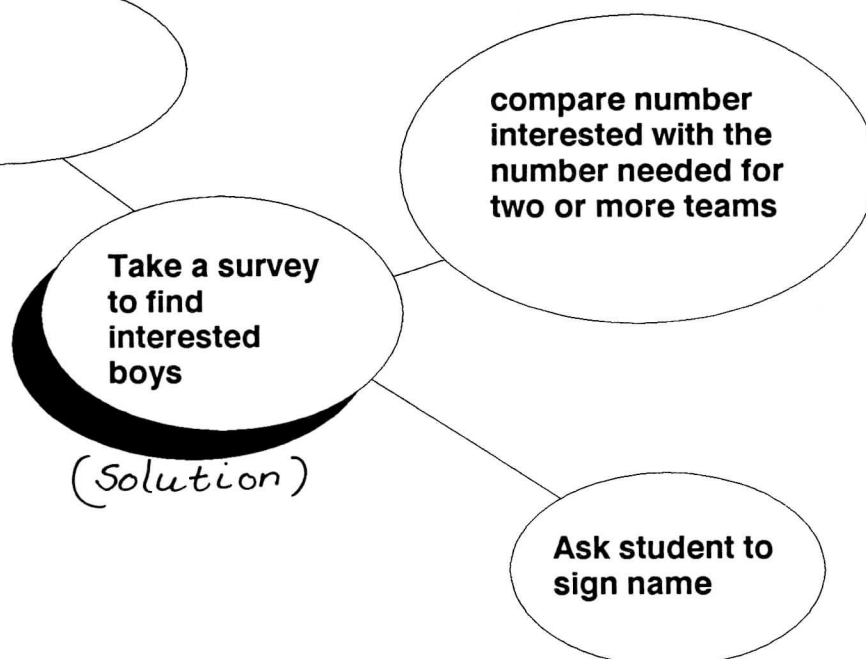
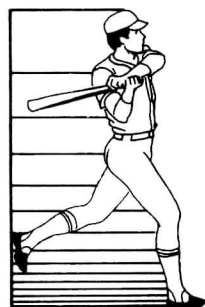


The focus of these mindMaps looks at the facts and states possible problems in the *Problem Finding* stage of problem solving.





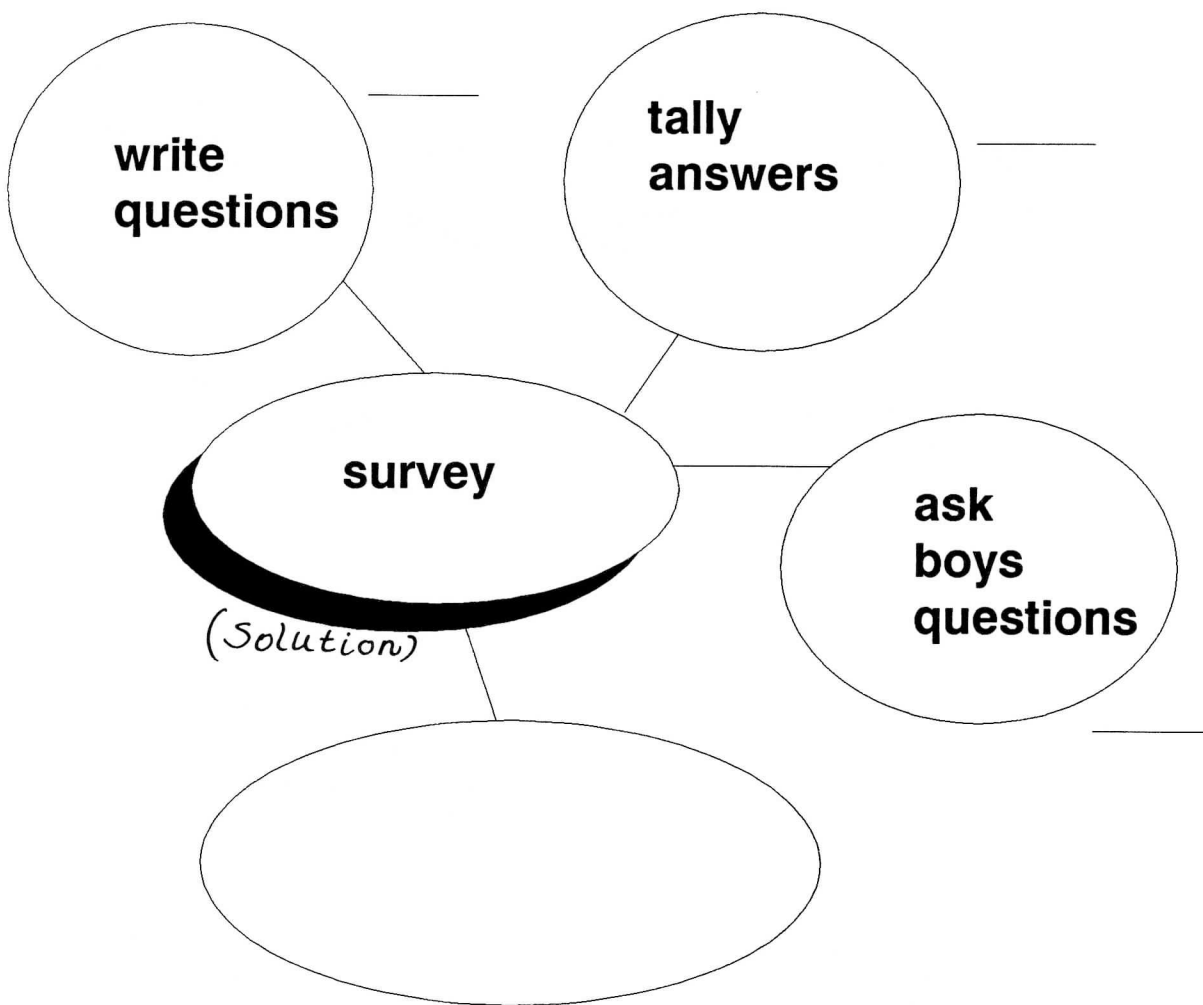
In the next stage, *Idea Finding*, the boys decide to focus on "not enough interested boys" as their problem—one they are able to do something about. The boys already living in Hometown USA just don't seem interested in organized baseball. The new boys brainstorm ideas to generate interest and decide upon a *Solution* that they can carry out — take a survey.







The *Acceptance Finding* mindMap shows the steps the boys will take in conducting the survey and the sequence for accomplishing those steps. When the answers are tallied, the boys will begin again, looking for solutions based on the answers to the questions they have written.





## Drugs — See Why to Say No

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No amount of drug education will work if students do not have a positive self concept, feeling of self worth, courage and strength to say **NO** to drug enticements.

"A picture is worth a thousand words."

*Drug education can be reinforced in the regular classroom through MindMapping and use of left/right brain theory.*

Research has shown that when the mind hears or reads "**Don't** ...." the mind filters the negative and retains the positive command. So saying "Don't run in the hall" leaves the brain with the instruction "...run in the hall". Schools with positive rules (Walk in the hall) tend to have better discipline results.

The MindMap **Focus**, therefore, is not "Don't take drugs". Rather it is as the campaign has justifiably bombarded our youth - "**Say NO**".

Get students ready to think about situations concerning drugs by distributing "*Just Say No...to Sweets!*" This familiar focus easily elicits responses. The sheet can be done individually and then discussed in a group.

Increase the level of risk by distributing "*Just Say No to Strangers.*" The same visual format is used, but this time the subject is more serious and needs teacher guidance and class discussion.

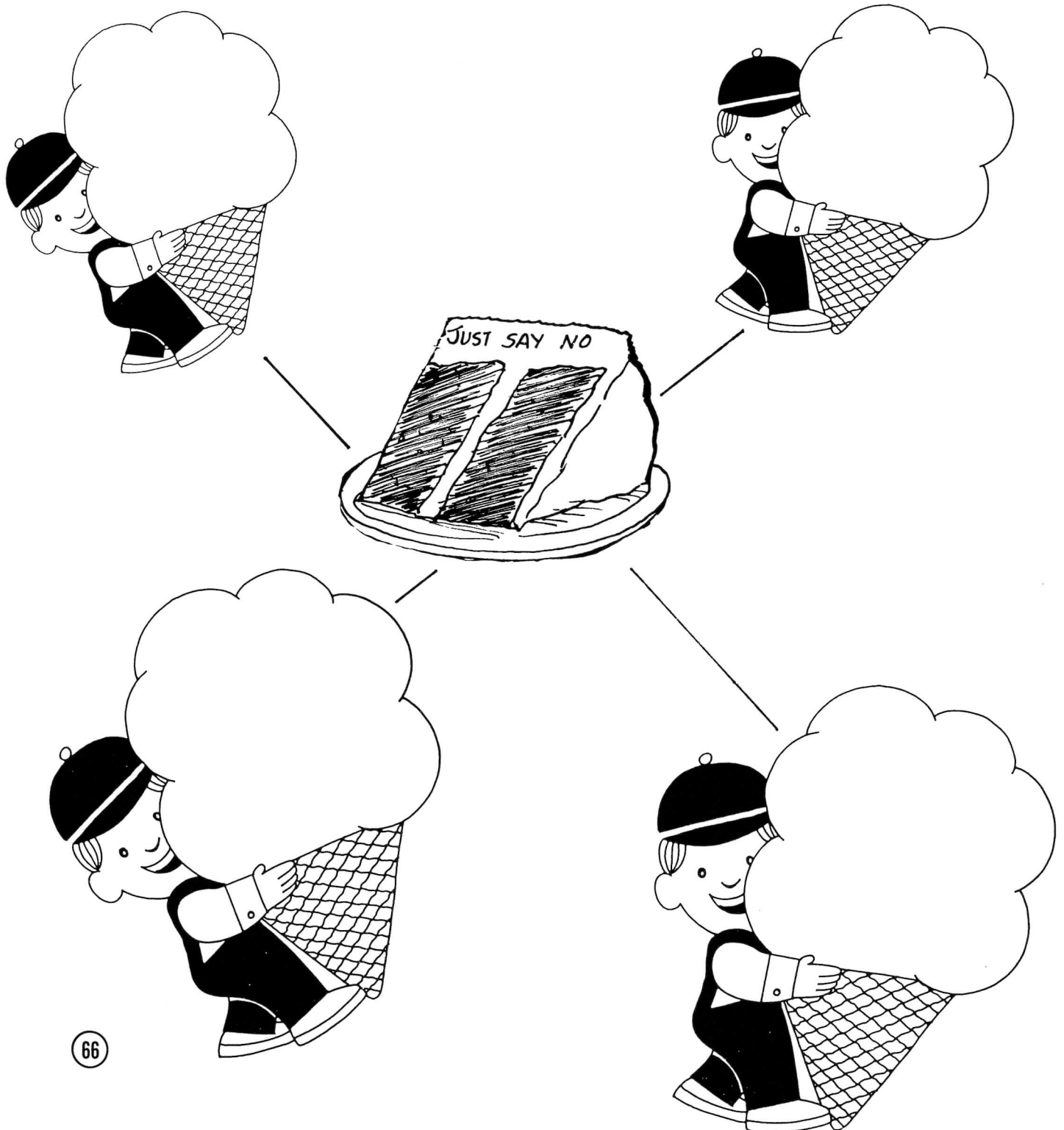
Finally, distribute "*See Why to Say No.*" Help students make the connection of reasons to say no to cigarettes and alcohol — the Why. Use the opportunity to point out that cigarettes and alcohol are drugs.

Because students know why to say no, does not mean they know **HOW** to say no. Distribute the page "*See How to Say No.*" Have students suggest other ways of saying no and add them to the mindMap.

Encourage the students to state reasons positively. Instead of saying it is unwise to take drugs, restate it as it is wise to avoid drugs. Have students take the mindMaps home and discuss them with parents.

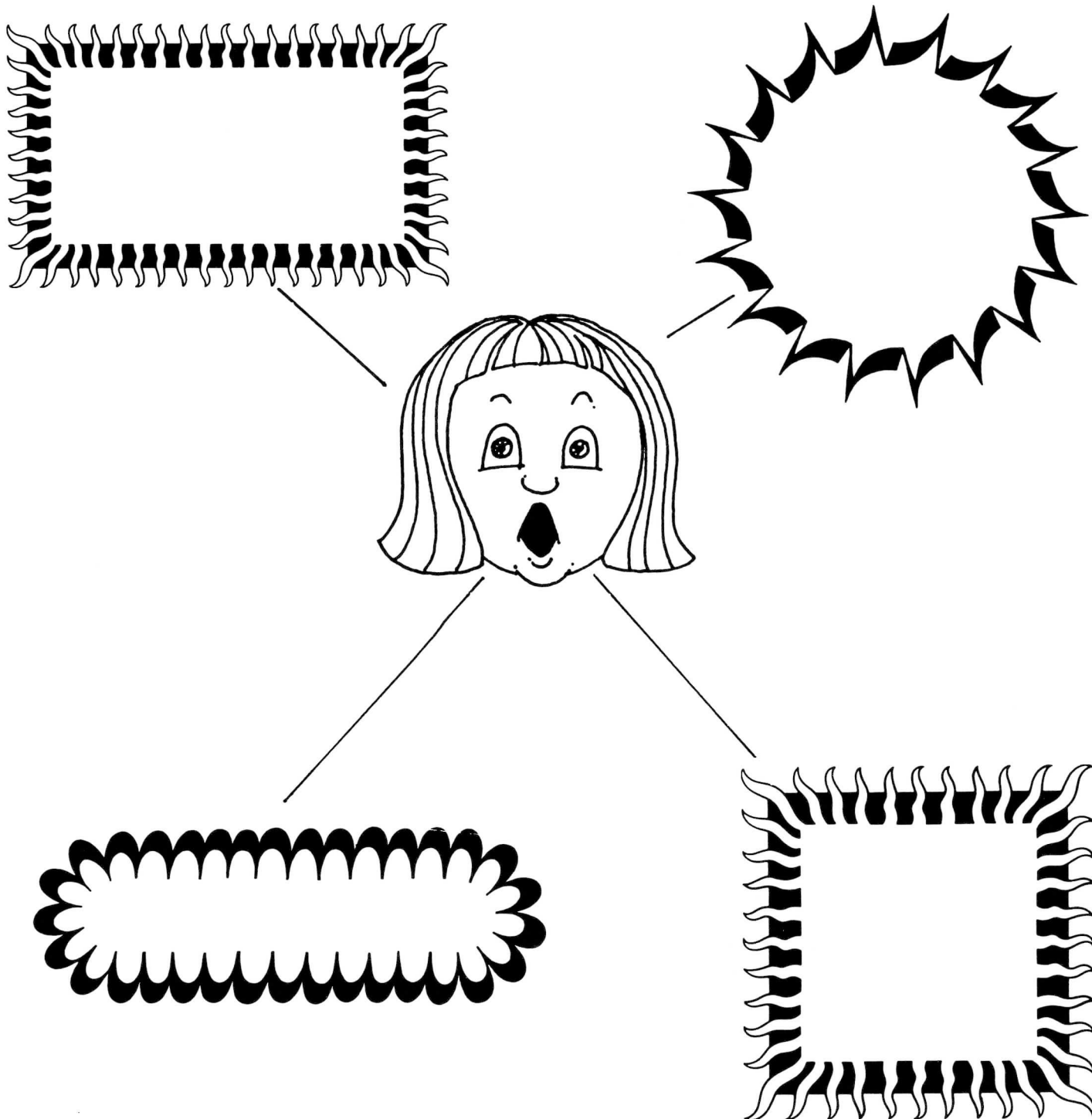
# Just Say No . . . to Sweets

It's fun to have a piece of cake, bubble gum, or a piece of candy. But what if you ate sweets all the time! In the links, list reasons you should "Just say no" to sweets some of the time.

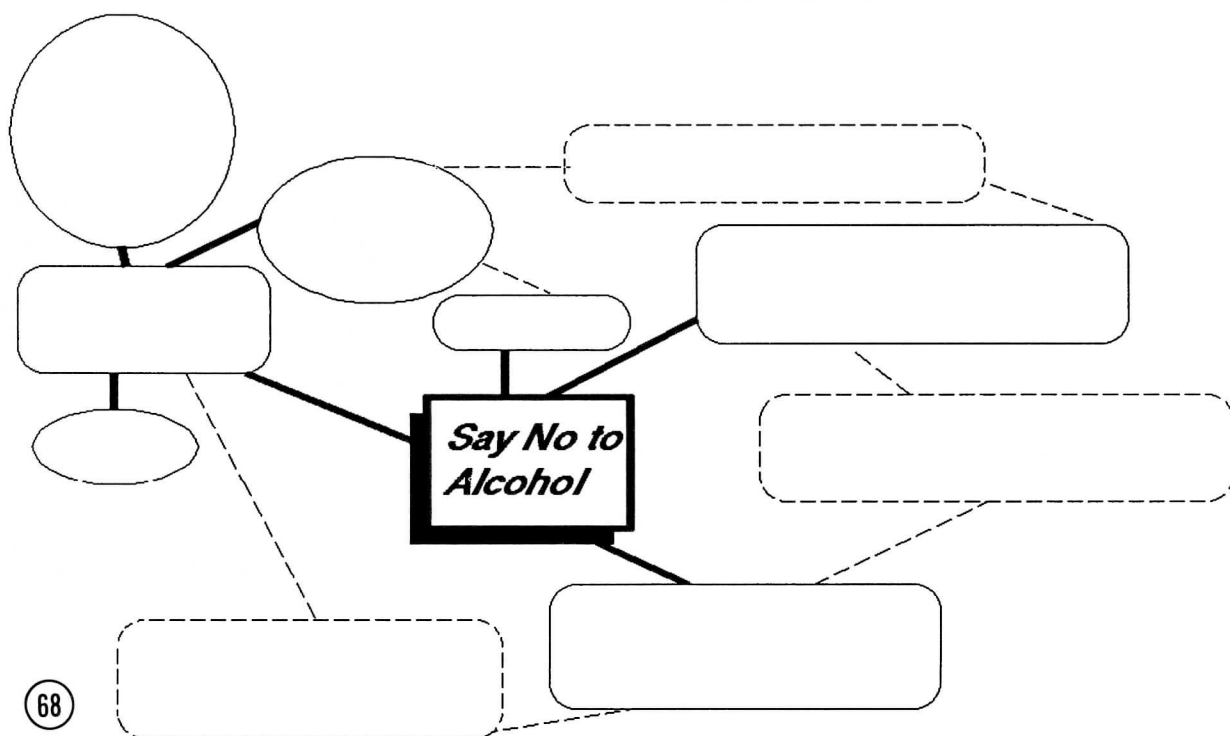
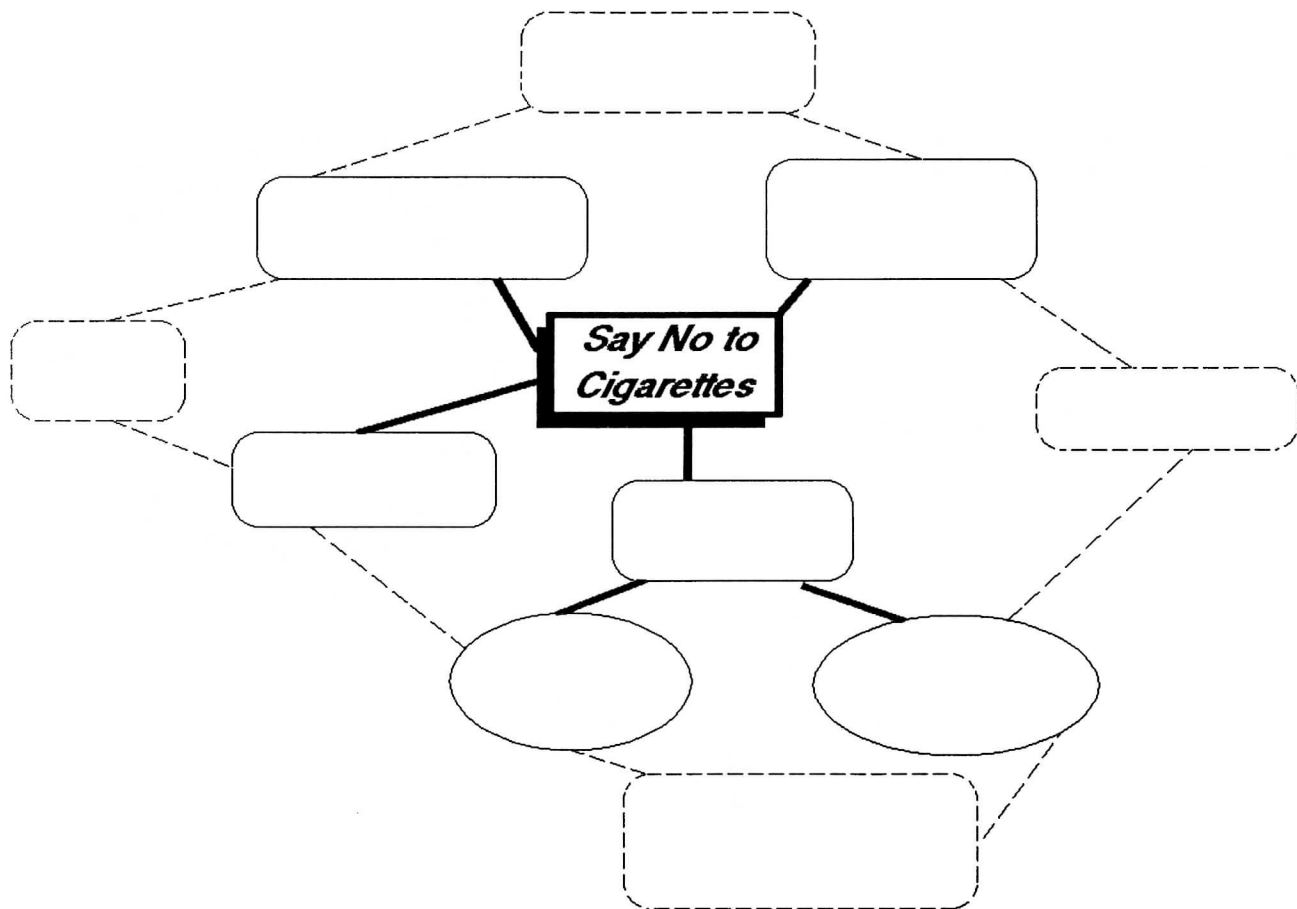


# Just Say No . . . to Strangers

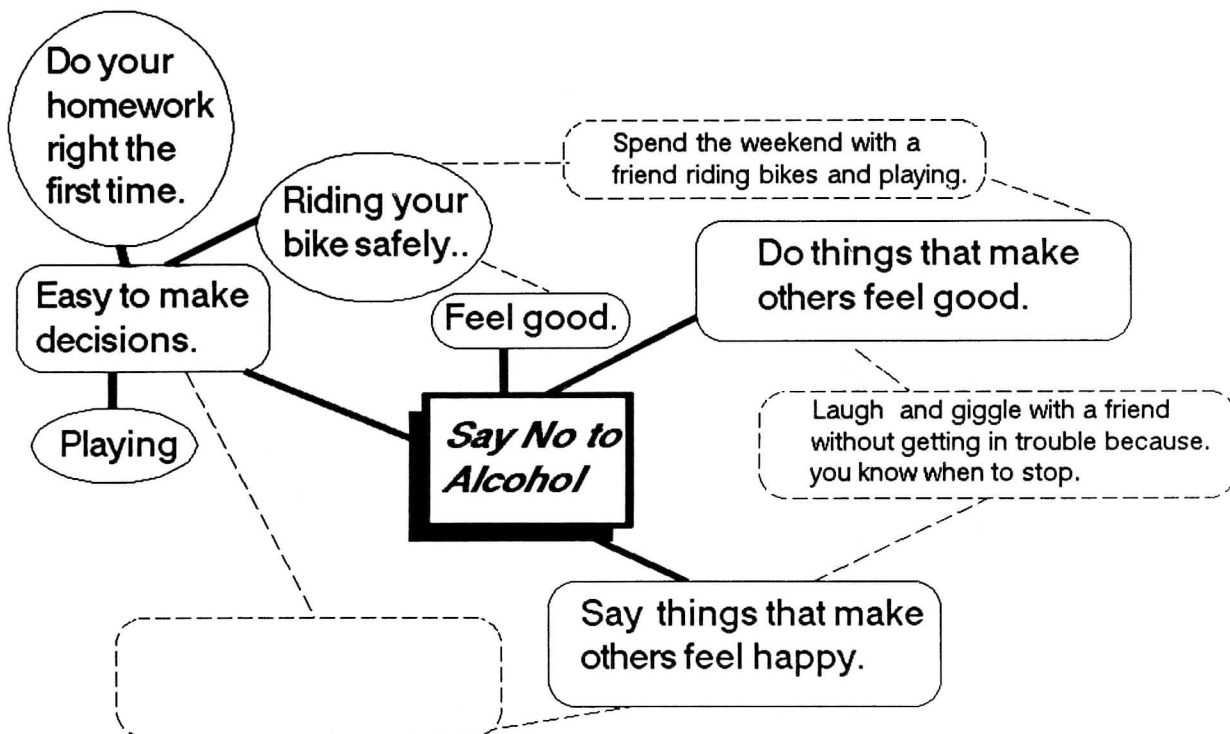
Fill in the links with reasons to "Just say no" to strangers.



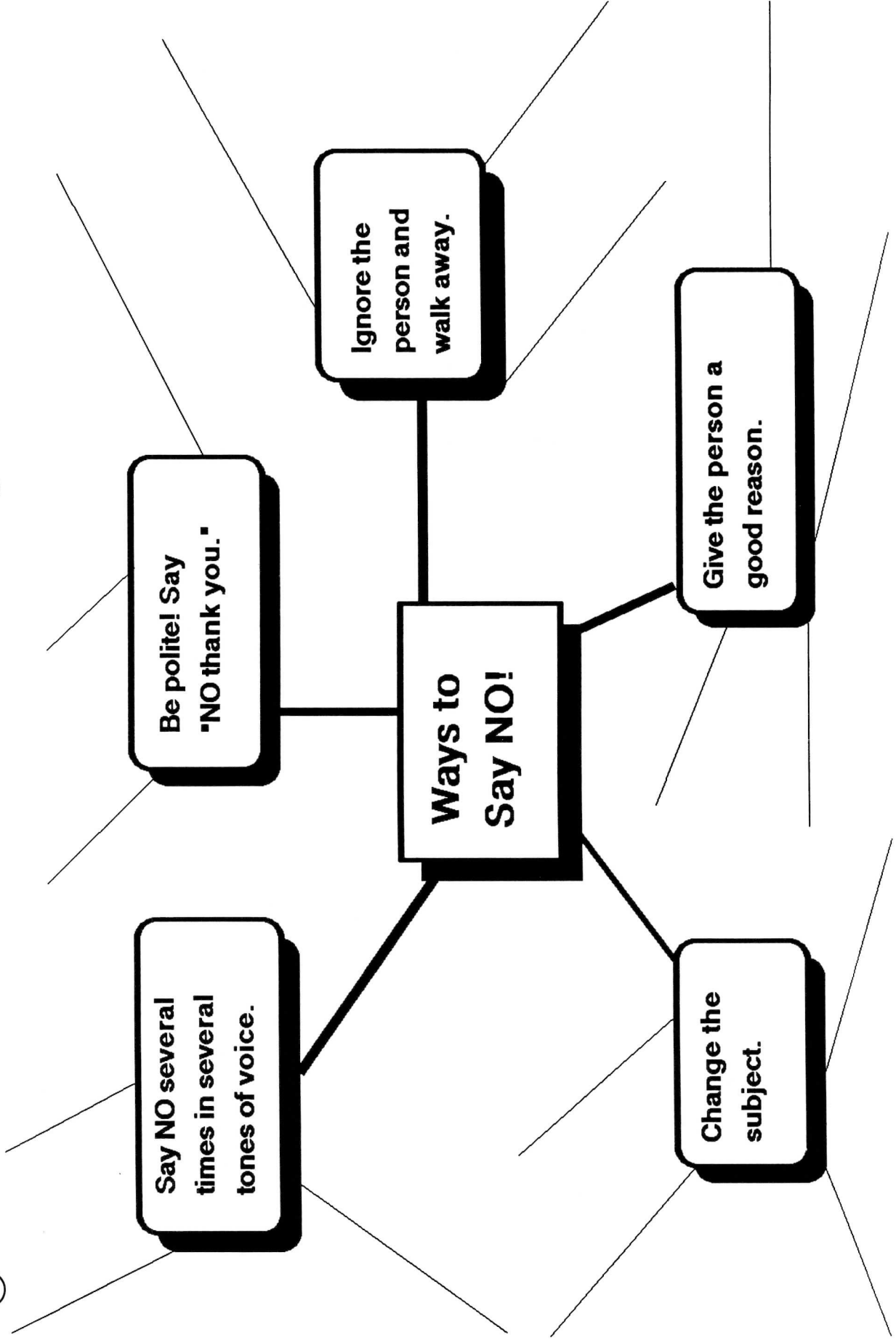
# See Why to Say No



# See Why to Say No



# See How to Say NO





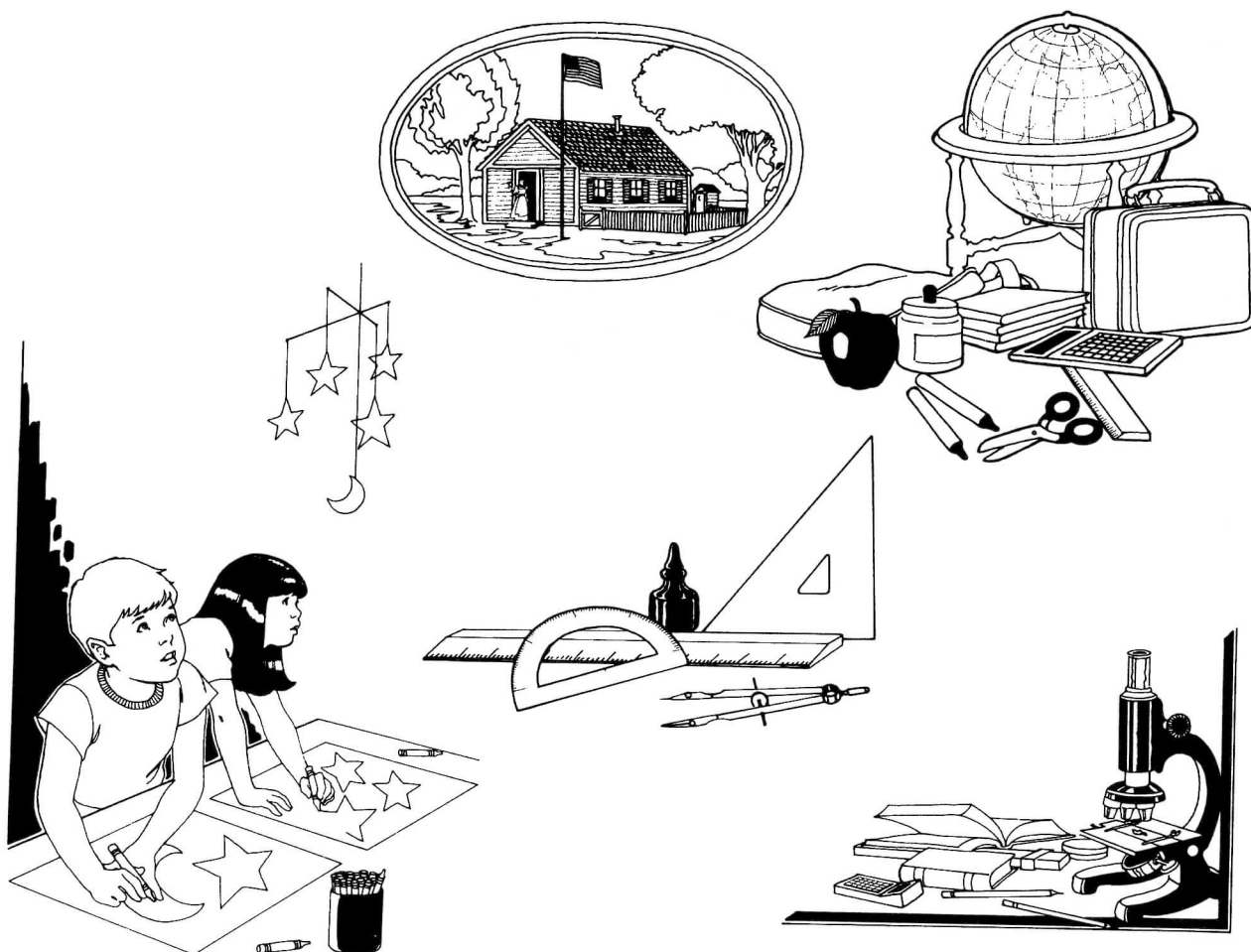
# Drawing Thoughts

Distribute "Drawing Thoughts". Have students draw a link. Pass the paper to another person who will draw another link. Tell students not to explain the drawings to one another. Continue to pass the original focus, each student drawing a new link.

When the mindMap is returned to the originator, it will be up to him to interpret the other students' links. Have the students develop a plot, list of characters, time, and setting from what they see. Then have them tell a story to the class and share the drawing mindMap.

The drawings are a good stimulus for character and plot development. The next step is to elaborate on the drawings using words; create sentences; and sequence thoughts into a paragraph. Have students write stories based on the drawing mindMaps.

Use science, math, social studies, art, and music pictures to stimulate ideas.





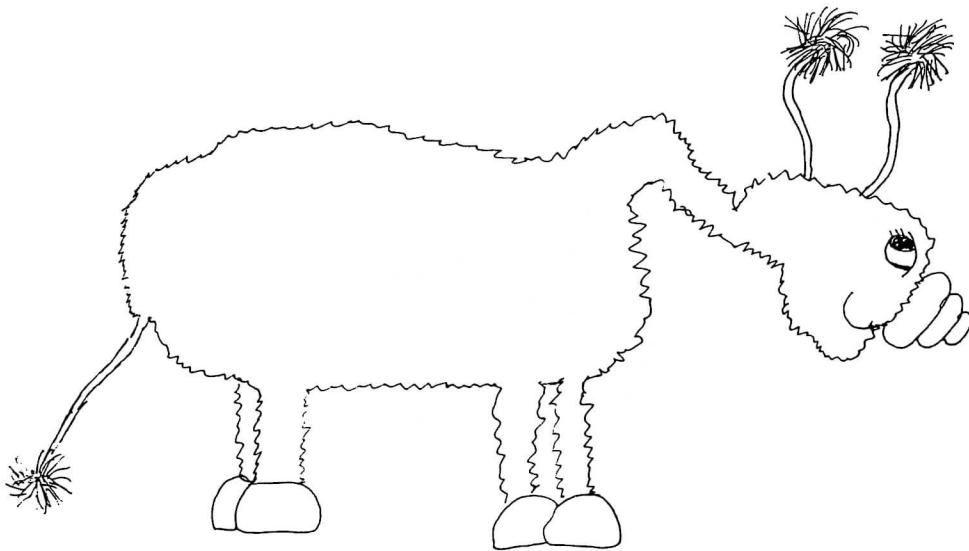
# Drawing Thoughts

What do you think of when you think of...?



# Drawing Thoughts

What would happen if this animal ran into your house?



# Drawing Thoughts

What are all the things this could be used for?

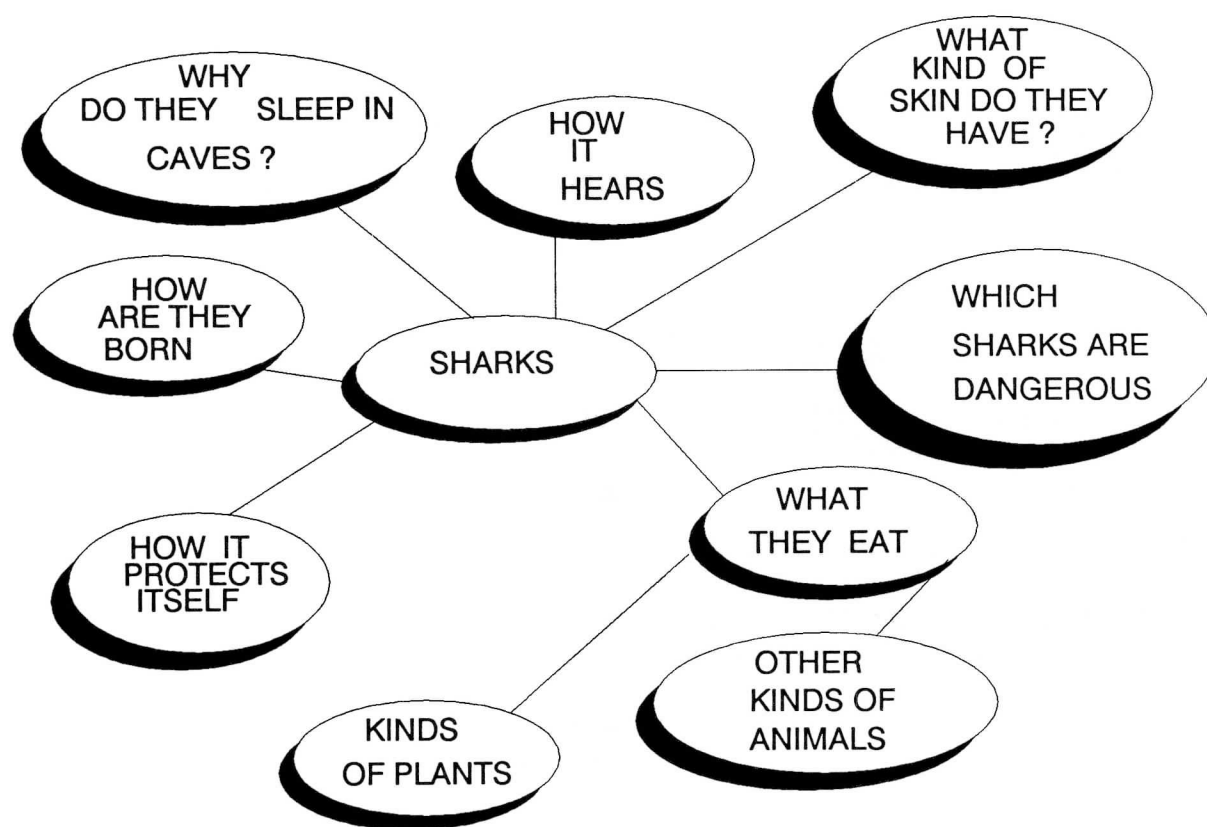




# Model for Report Writing

We often assign a particular report topic. Or students choose one because it "sounds" interesting. In a short time, they follow-up with, "I don't know what to write about." A brainstorming session and a mindMap helps their process and product.

Begin with the report topic as a focus. In this example, ask, "What do you think of when you think of a shark?" Categorize ideas. Give the categories a label. These categories

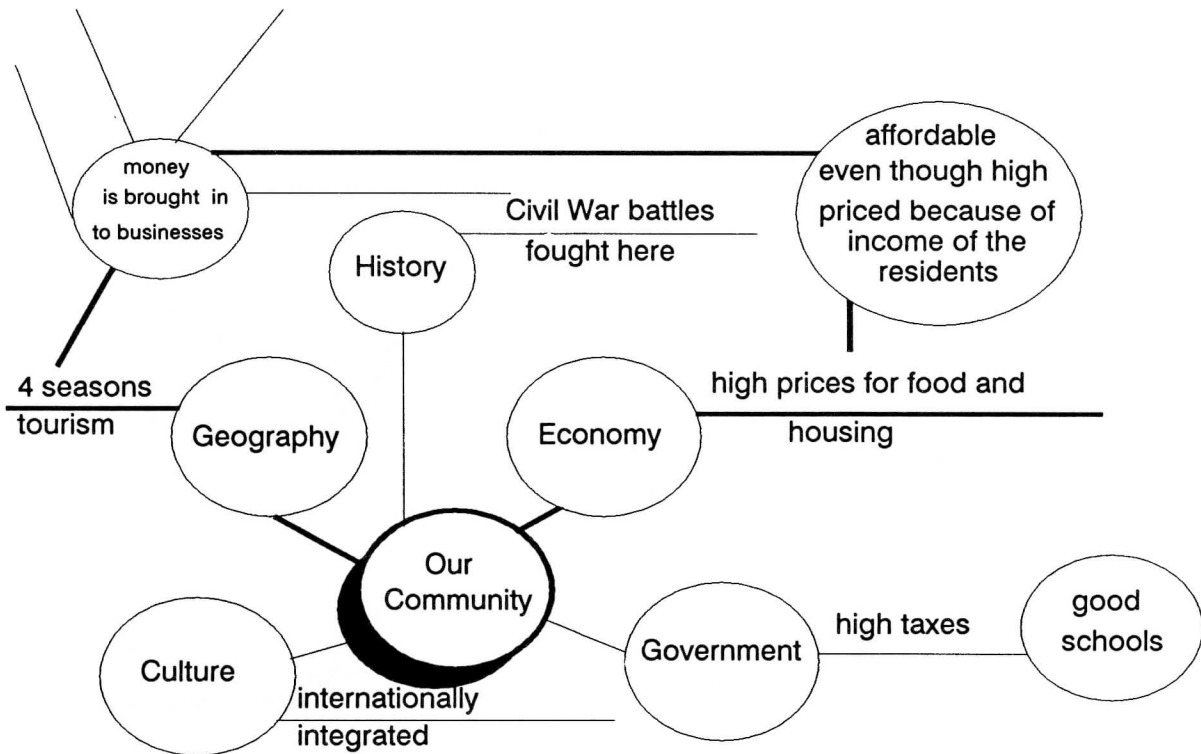


become the links. Create questions to investigate. Put information about each link on different colored poster board or for older students on index cards. As information is gathered, it can be written on the appropriate color.

Elaborate the links with words and sentences about the category. Categories can then be sequenced; sentences within categories can be sequenced. And finally a report can be written.



For older students, the following mindMap may be used. Each link is a different type of general social studies topic. The mindMap offers ideas for questions for brainstorming. How is our community important in history? What is the geography of our community?



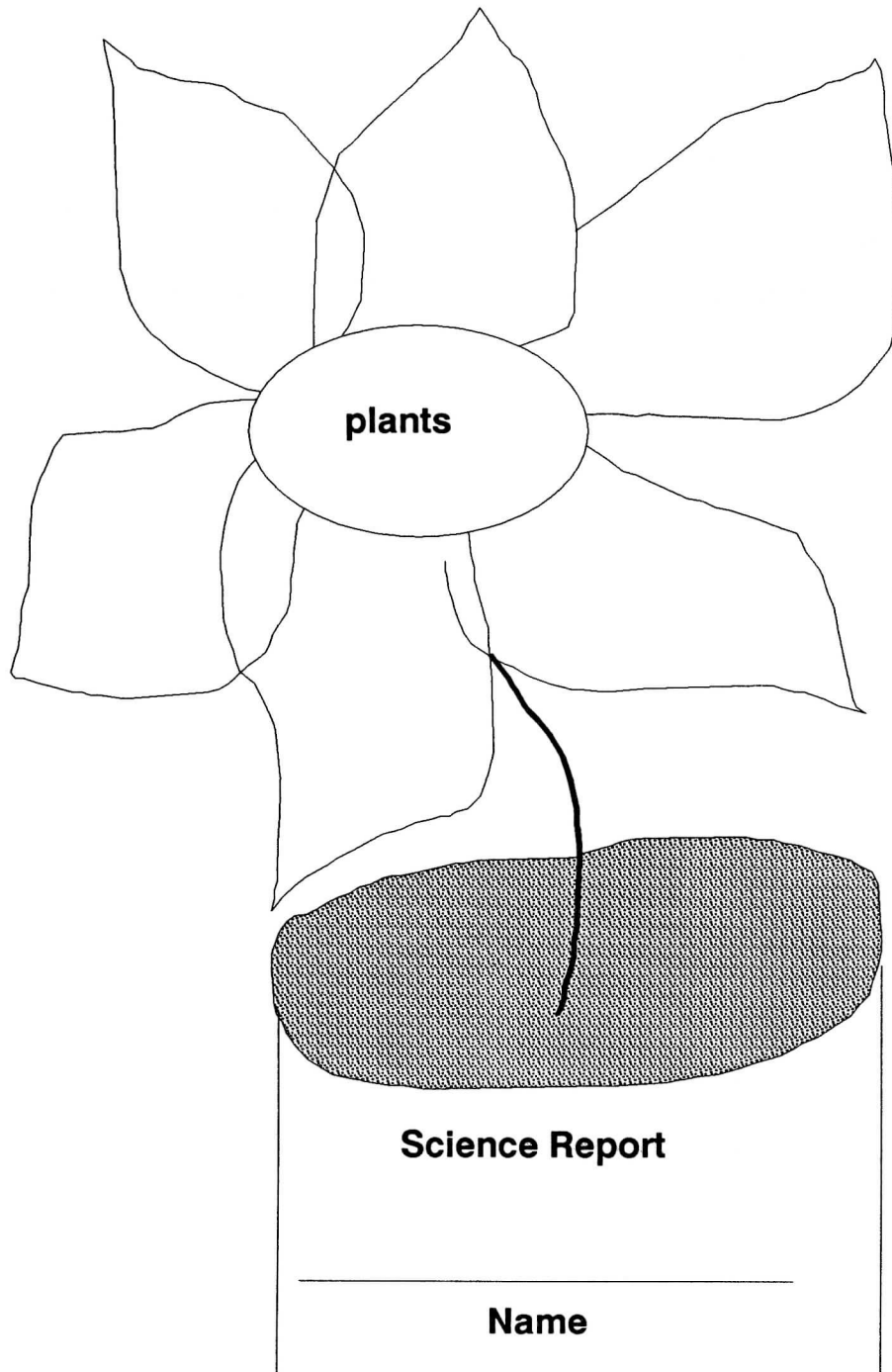
Of what significance is geography to our community?  
How is our community related to its geography?  
Because of our government, what benefits do we have?  
*From this mindMap might grow the report "How to Afford to Live in Our Community".*

On the next page is a model for a plant report. Duplicate the potted plant on white paper. Have students brainstorm topics that can be investigated. Refer to them as categories.

Duplicate the leaves on different colors. Each color represents a different category from the potted plant mindMap. Ask students to write questions about that category on the leaf. As they research they can write answers and information on the back of the leaf. Then they can manipulate the leaves—sequence the leaves (the information on the leaves) in the order they want the information to appear in the report. Have students write complete sentences from the phrases. Combine into paragraphs for a completed report.

# My Science Report

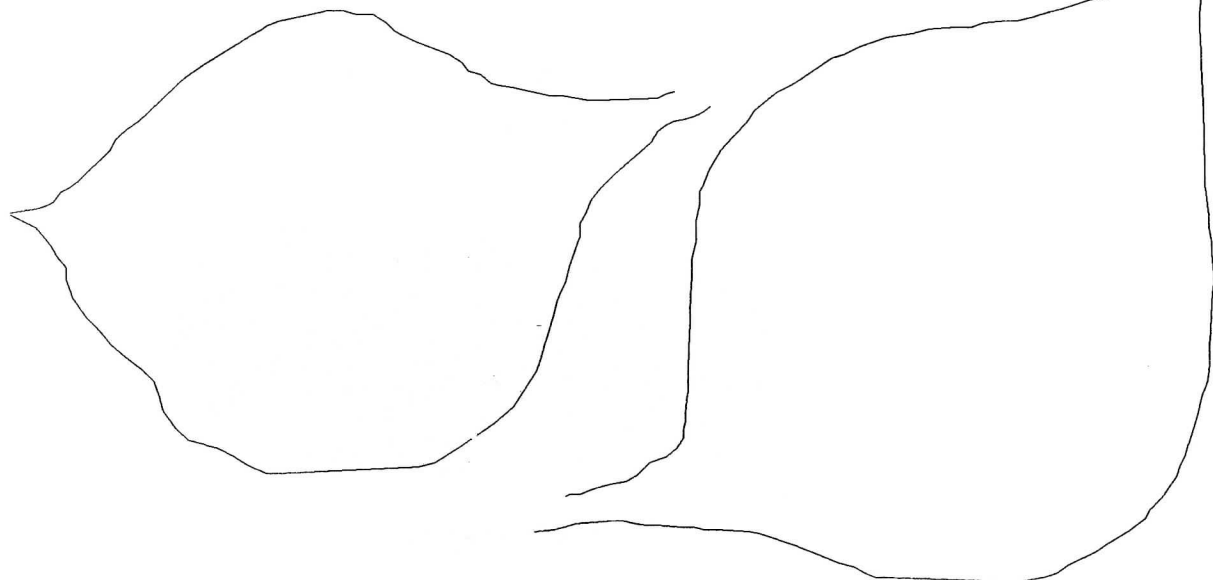
In each **petal link** list topics about plants. On each **leaf** write questions you need to answer about each link. On the **back** of each leaf write phrases that answer or give information about each question.



Organize your information by arranging the leaves in the order you want the information to appear in your report. Make sentences from the phrases and then write your report.

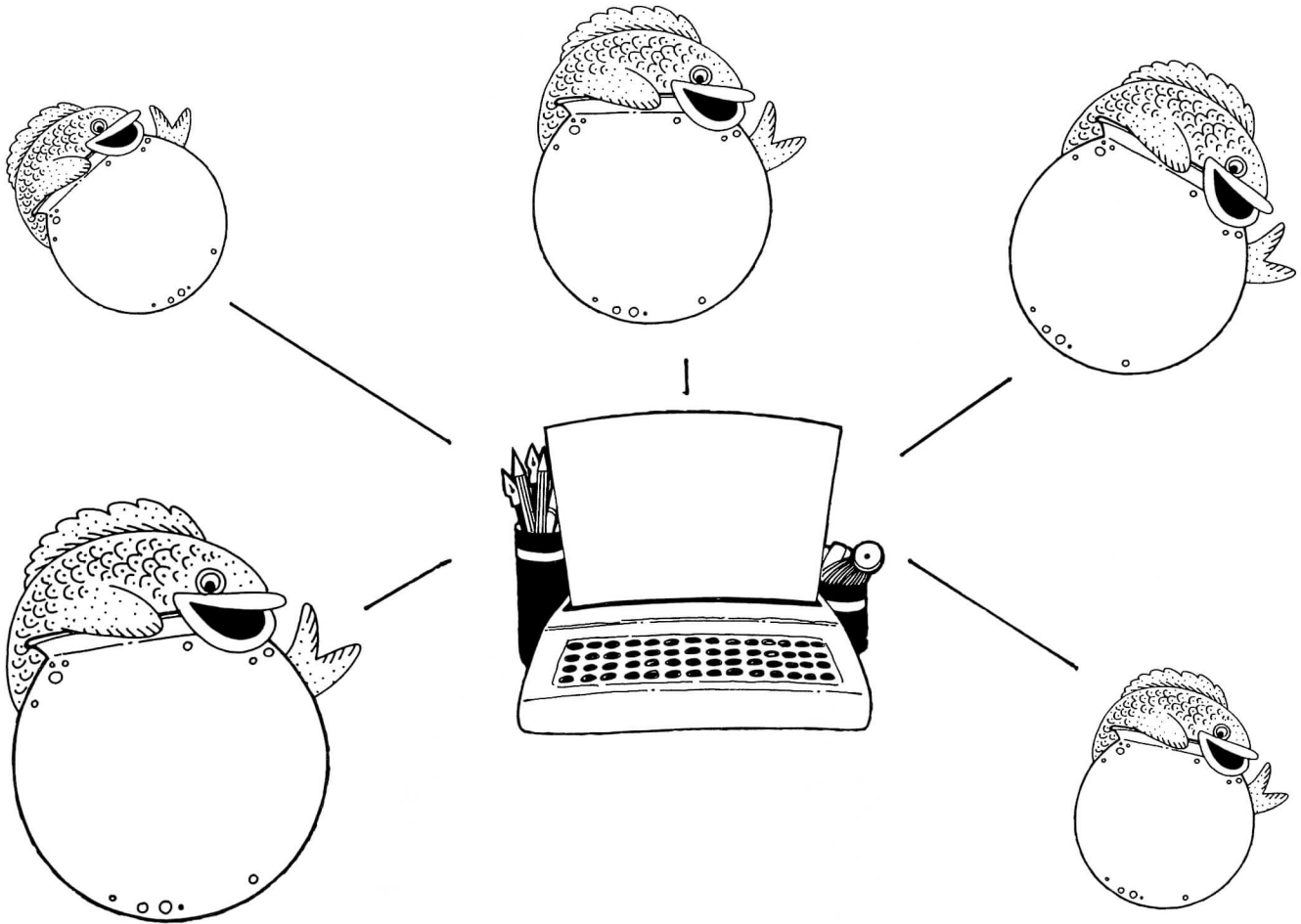
**Why do  
leaves have  
lines in them?**

**Why are some  
leaves brown,  
green, yellow,  
or red?**



# Animal Report

Fill in the links with ideas you want to investigate about your topic.



Write questions you want to answer about each link on the lines.

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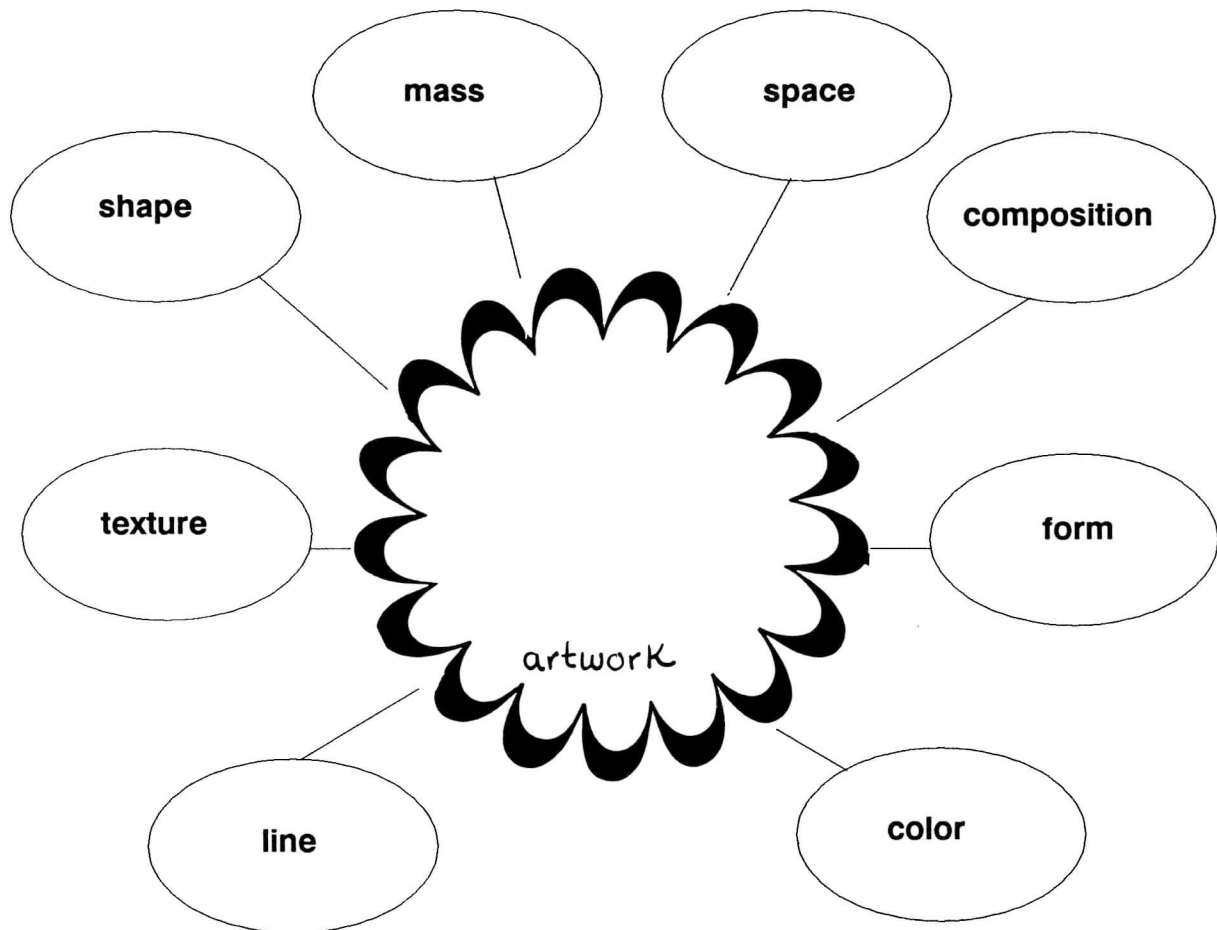


## Bridging Fine Arts and Language Arts

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Use a particular piece of art as a **focus**. **Links** may be any of the following which relate to the particular piece: texture, line, color, form, shape, space, mass or composition. Brainstorm descriptions of the **links**.

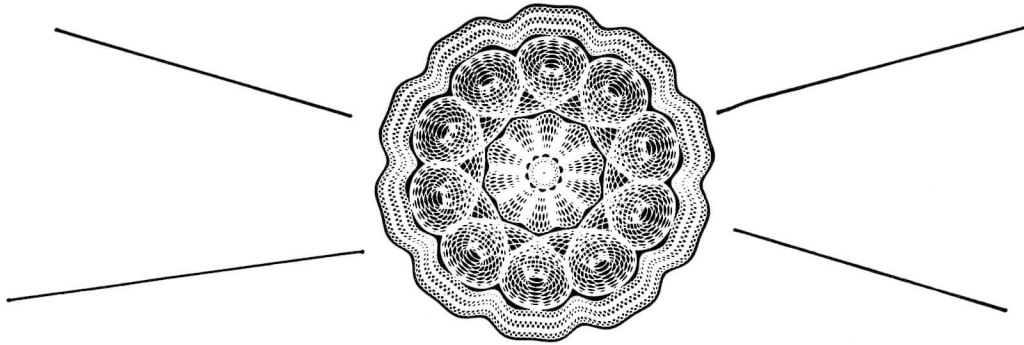
Create sentences from each link that describe the piece. Edit them into paragraphs or a short essay. Or use them as a critique of the piece of art.



# Connecting Art and Writing



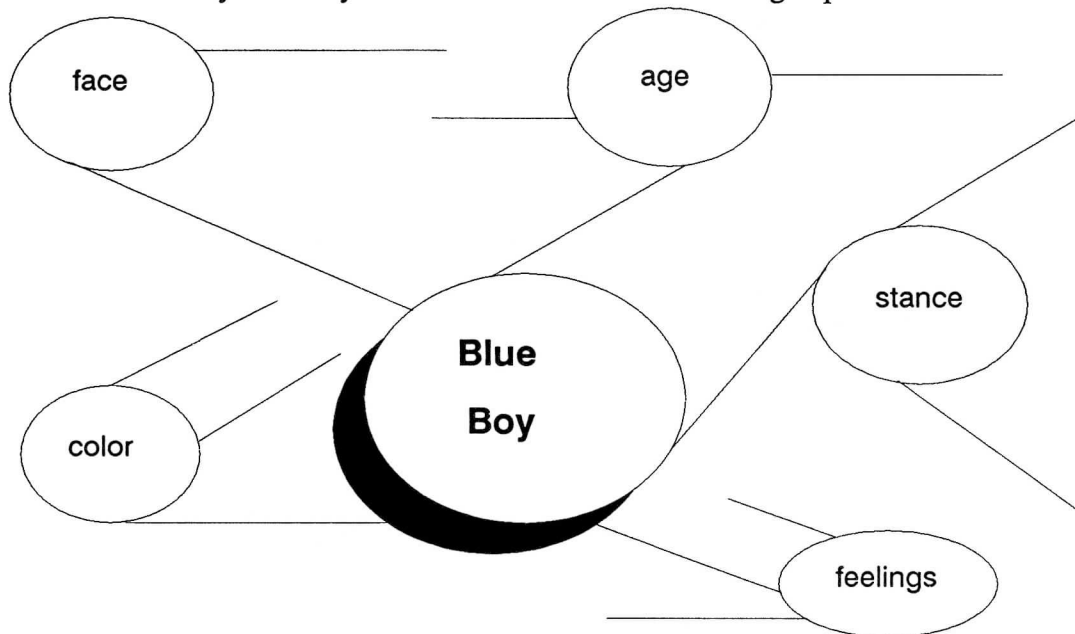
Display a sculpture, painting, collage or other piece of art. Have students mindMap emotions or ideas that come to mind when they see the work of art.



Have a class discussion about the **links** and the reasons they **bridge** to the **focus**. As they mindMap other works of art, students will become more confident in their critique of the piece and more fluent with their descriptive words in links.

## Ideas for Intermediate and Upper Students

Ask students to analyze and synthesize in these art and writing experiences:



Short essay topics that can accompany Blue Boy or student artwork may be:

"The Colors of Innocence"

"Feeling Blue, Boy"

"Youth in Old Age"

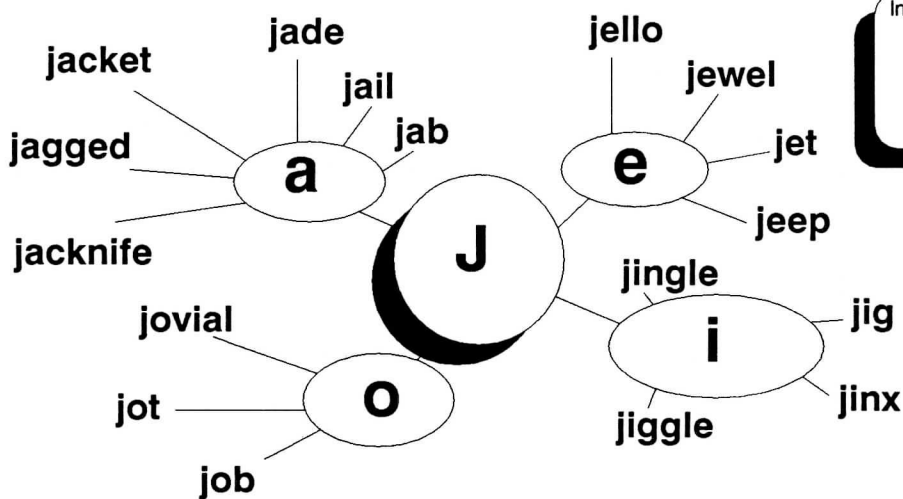
"Standing Impressions"



# MindMapping Poetry

Approach poetry with a mindMap. Let students connect ideas, rhyme words, describe nouns, and form similies, metaphors, or analogies.

Begin with alphabet poetry – begin with a task in which the student can be successful. Use the *first initial* of the student. Brainstorm words that begin with that letter. Then form poetic phrases and sentences. Aim for humorous poetry. Show students that writing poetry can be enjoyable.



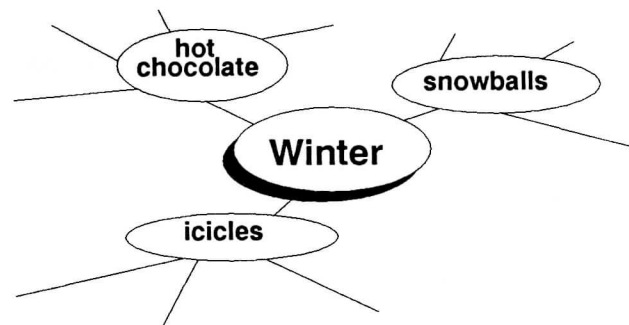
## Initial Poetry

Jovial Joey  
Jackknifes into the jello  
Jingling his jewels in his jacket.

With this confidence, approach a slightly more serious subject like *winter*. You may want to give students a grammatical form – noun, three adjectives, noun – or challenge them with a specific number of syllables in each line. Allow them to stretch their thinking and use it in their product.

Winter  
Snowball heaven  
Forts, igloos, icicles  
Freezing cold, warm hot chocolate  
Happy

(lines of 2, 4, 6, 8, and 2 syllables)





# All Kinds of Poetry

*Onomatopoeia* – words that sound like what they mean - "buzz, hiss"

*Personification* – attributing human characteristics to things which are not human - "The stars whispered the secrets of the universe."

*Hyperbole* – exaggeration used to make a point - "The child burst with joy."

*Alliteration* – words that have the same or similar beginning sounds - "Singing songbirds"

Have students brainstorm words on a mindMap to use in their poetry. By seeing all their word possibilities, they gain self confidence in their poetic abilities. Writing poetry no longer becomes a difficult assignment but a **thinking** challenge!

## Alphabet Poetry

### Cat

Anxious, baffling  
Creeping distractingly  
Elegant feline

(a great time to use the dictionary and thesaurus  
and introduce/review synonym & antonym)

## Diamante

### Pencils

Sharp, Messy  
Writing, drawing, sketching  
Instrument for describing feelings  
Adding, Subtracting, Multiplying  
Long, Never-ending  
Tool

1 noun, 2 adjectives, 3 verbs

4 word phrase, 3 verbs, 2 adjectives

1 synonym for the original noun

## Acrostics

### Song

Sing  
One and all  
Never off key  
Groaning never!

## Haiku

Birds in the tree nest  
The mother feeds her young ones  
Loving parenthood.

(unrhymed, nature is usually the topic)

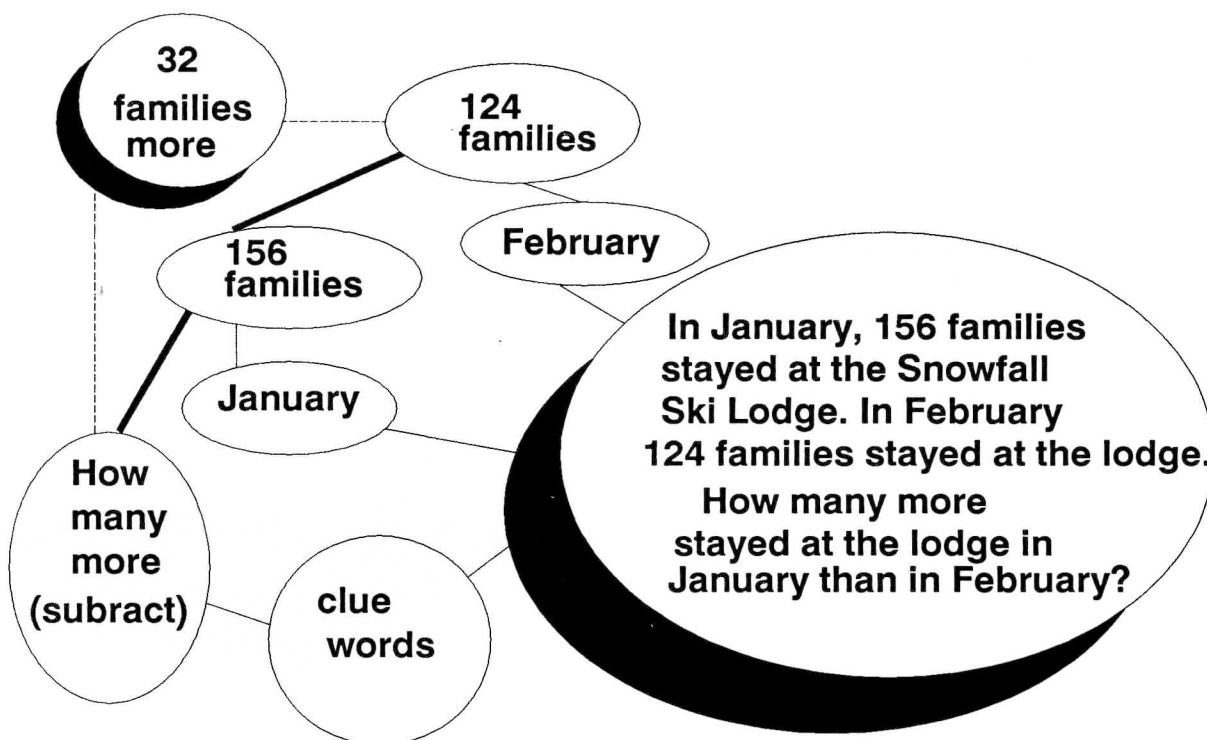
(17 syllables - 5,7,5)



# Math Sense

Use mindMapping to relieve the moans, sighs, and twisted looks of math "word problems." MindMapping helps to analyze the parts of the written problem. The students will see an understandable math problem because they will see each part that makes up the whole problem. Students can perform appropriate operations and make connections with real-life situations.

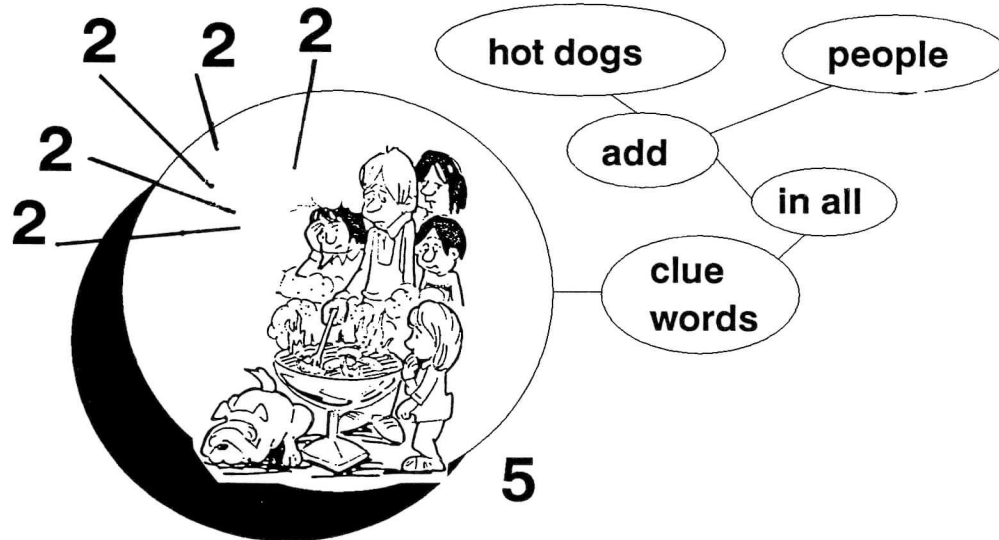
The **focus** is the entire word problem. The **links** are the text and mathematical parts of the problem. **Bridges** help clarify the problem. They show which parts of the problem are related. Students can identify *clue words* that indicate math operations. They can also cross out links that add extra or unnecessary information to the word problem. For example:



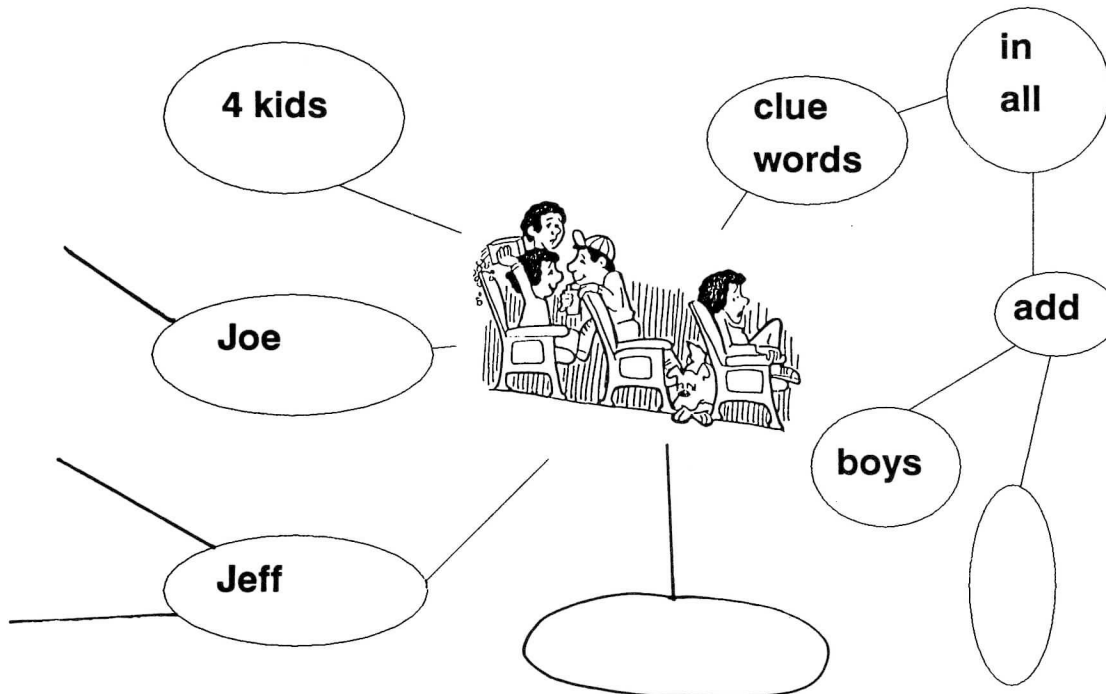
Distribute the mindMaps on the following pages or show on the overhead as you work as a class to fill in links, answer the problem, or create original problems. There may be more than one correct word problem when using completed links.

# Math Word Problems

A family of five went on a picnic. Each person wanted to eat two hot dogs. How many hot dogs in all were put on the grill?

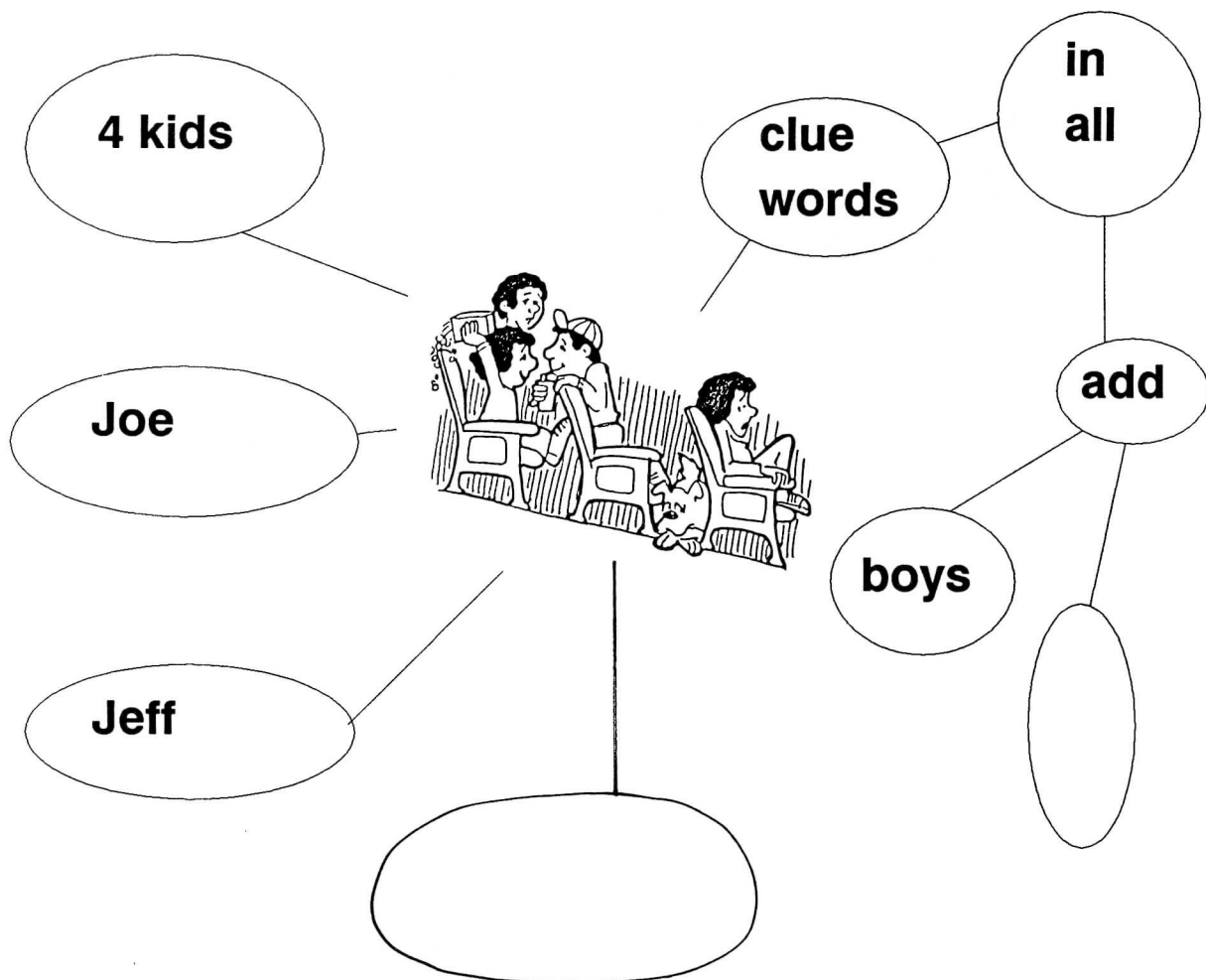


Four kids went to a movie. Joe bought popcorn for \$1.25. Jeff bought popcorn, too. He also bought a cola for \$1.00. Jim bought a candy bar for \$.75 and Randy and his dog just watched the movie. How much money did the boys spend in all? Fill in the links with the correct information.



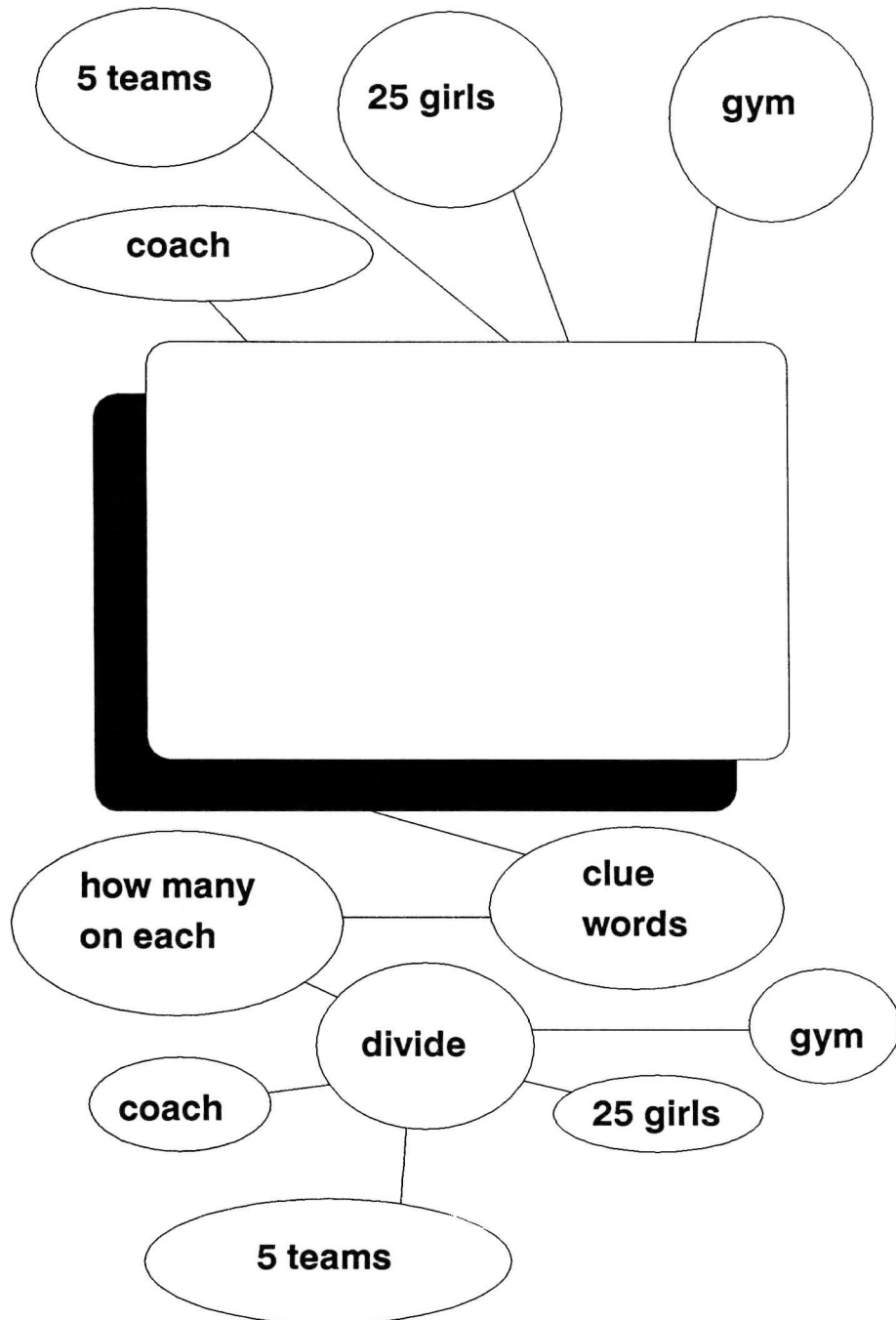
OR a more complicated version...

Movie tickets are \$3.50 for students. Four brothers went to a movie. Joe bought popcorn for \$1.25. Jeff bought popcorn, too. He also bought a cola for \$1.00. Jim bought a candy bar for \$.75 and Randy and his dog just watched the movie. In all, how much money did the boys' mom have to give the brothers?



# Thinking Differently about Math

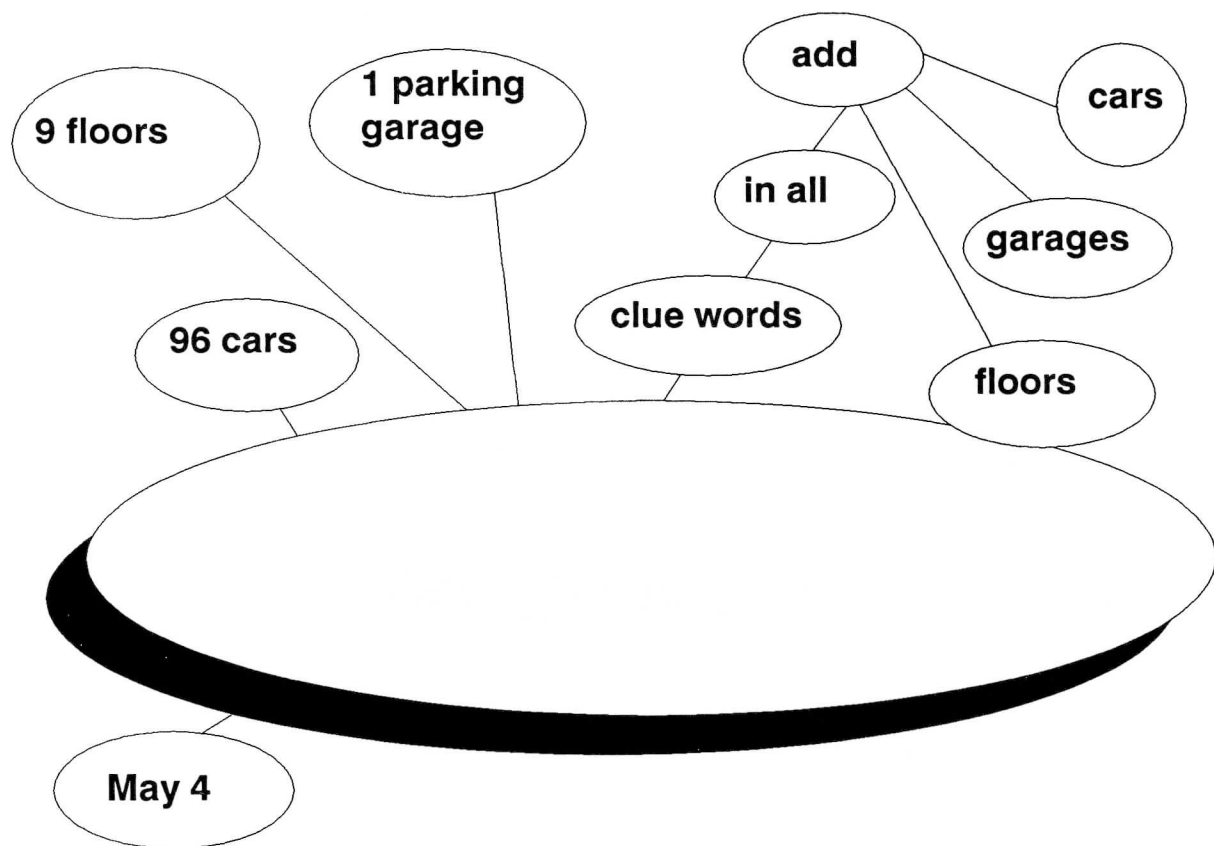
Do some different kind of thinking. Write a word problem that goes with this mindMap.





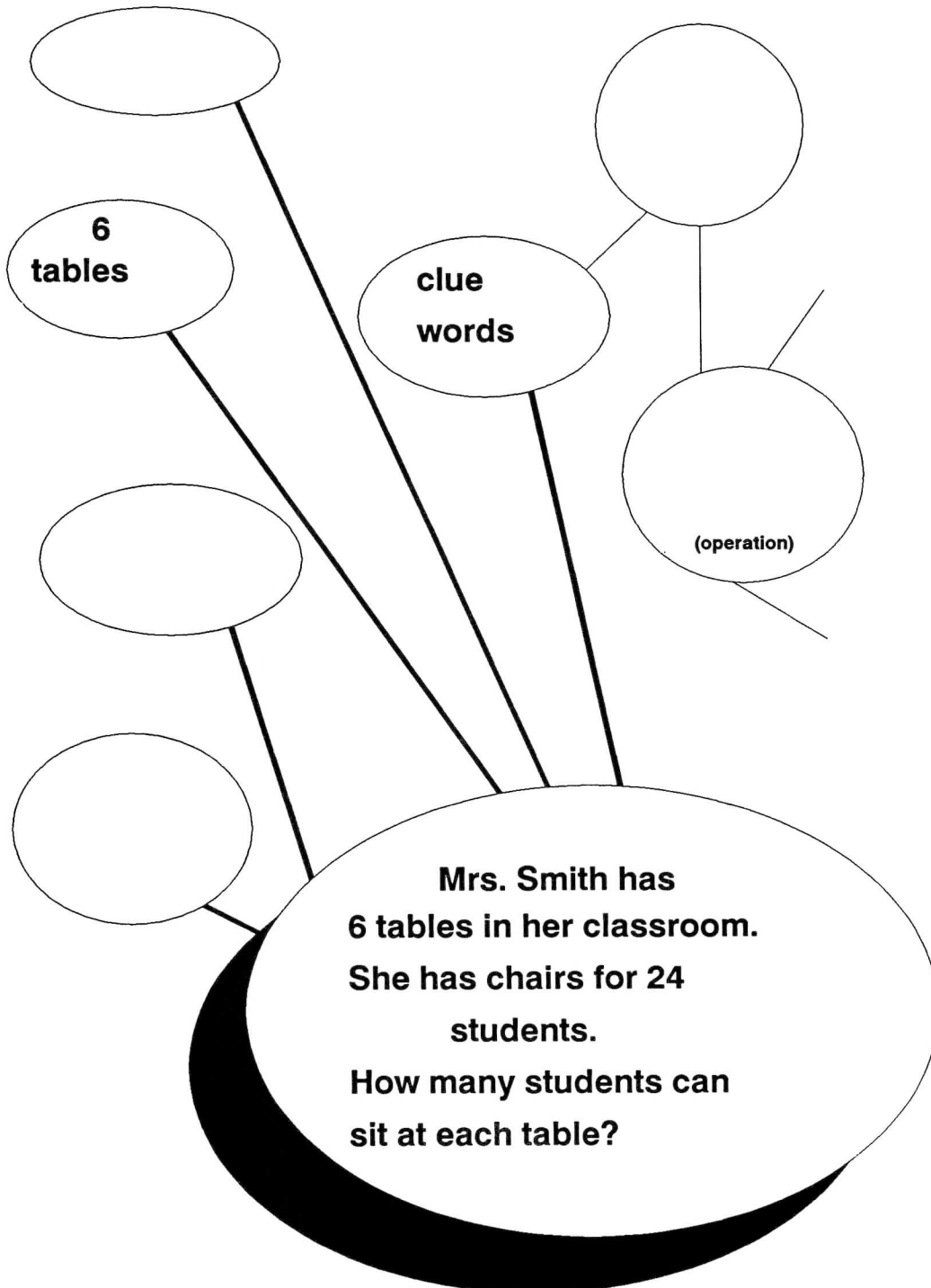
# MindMapping Math

Write a word problem for the following mindMap in the focus. Use information in the links to help you determine a problem.



# Word Problems

Write information in the links that might go with the word problem in the focus.



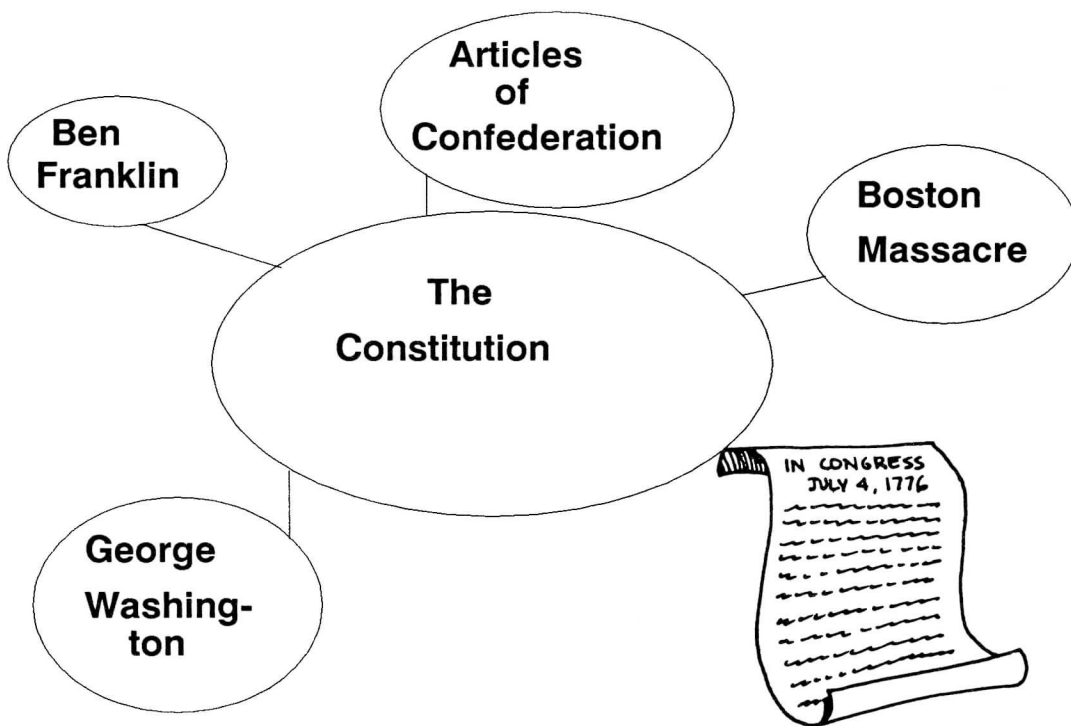


# Converging

MindMapping can be a game — a mind exercise in convergent thinking as well as divergent thinking.

The framework can be a review or evaluation tool in language arts, social studies, math, science, music, or art. It can be a simple, short experience.

In this framework, the **links** suggest a social studies topic, the **focus** is the Constitution.



Several types of "game" rules apply to a converging mindMap. Each student may be secretly given the same **focus** and is to supply **links**.

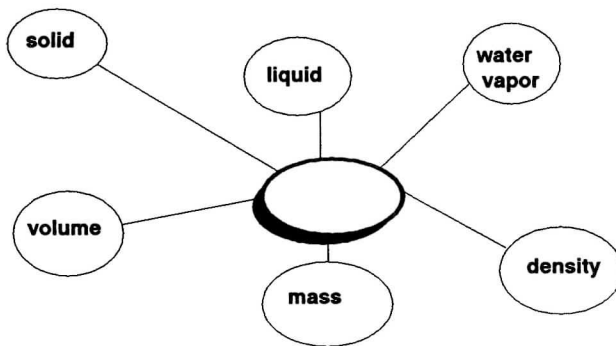
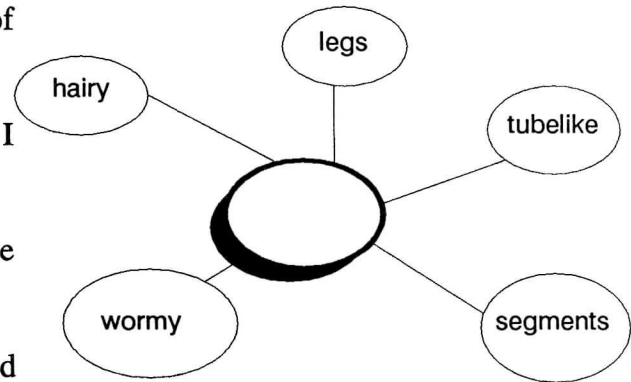
Or each student can be given the links and must supply the **focus**.

For evaluation purposes, the **focus** can be given and points can be given for each **link** and **bridge**.

# FINDING THE FOCUS

Look at the links in each mindMap. Complete the statements to determine the focus.

1. I think of hairy when I think of . . .
2. I think of hairy and wormy when I think of . . .
3. I think of hairy, wormy, and legs when I think of . . .
4. I think of hairy, wormy, legs, and tubelike when I think of . . .
5. I think of hairy, wormy, legs, tubelike, and segments when I think of . . .



1. I think of solid when I think of . . .
2. I think of solid and volume when I think of . . .
3. I think of solid, volume, and liquid when I think of . . .
4. I think of solid, volume, liquid, and mass when I think of . . .
5. I think of solid, volume, liquid, mass, and water vapor when I think of . . .

Make your own mindMap game.



# MindMaps for Administrative Planning

MindMapping can be used by students, teachers, and administrators.

In addition to writing, students can utilize a mindMap to study for a test, make plans, and solve problems.

It can be used for **teacher organization** in many ways. To provide for different learning styles and theories, a curriculum topic may be the focus with styles and theories elaborated upon. By using this written framework, the teacher is able to see which styles and theories are being emphasized, over-emphasized, or neglected. On the next pages are examples of the **Learning Model MindMap** with the *Civil War* and *Community Workers* being the topic focus. The mindMaps are first skeletal and then a completed mindMap is shown. It is evident due to the physical boundaries of this text that large poster size paper is suitable and suggested for mindMapping.

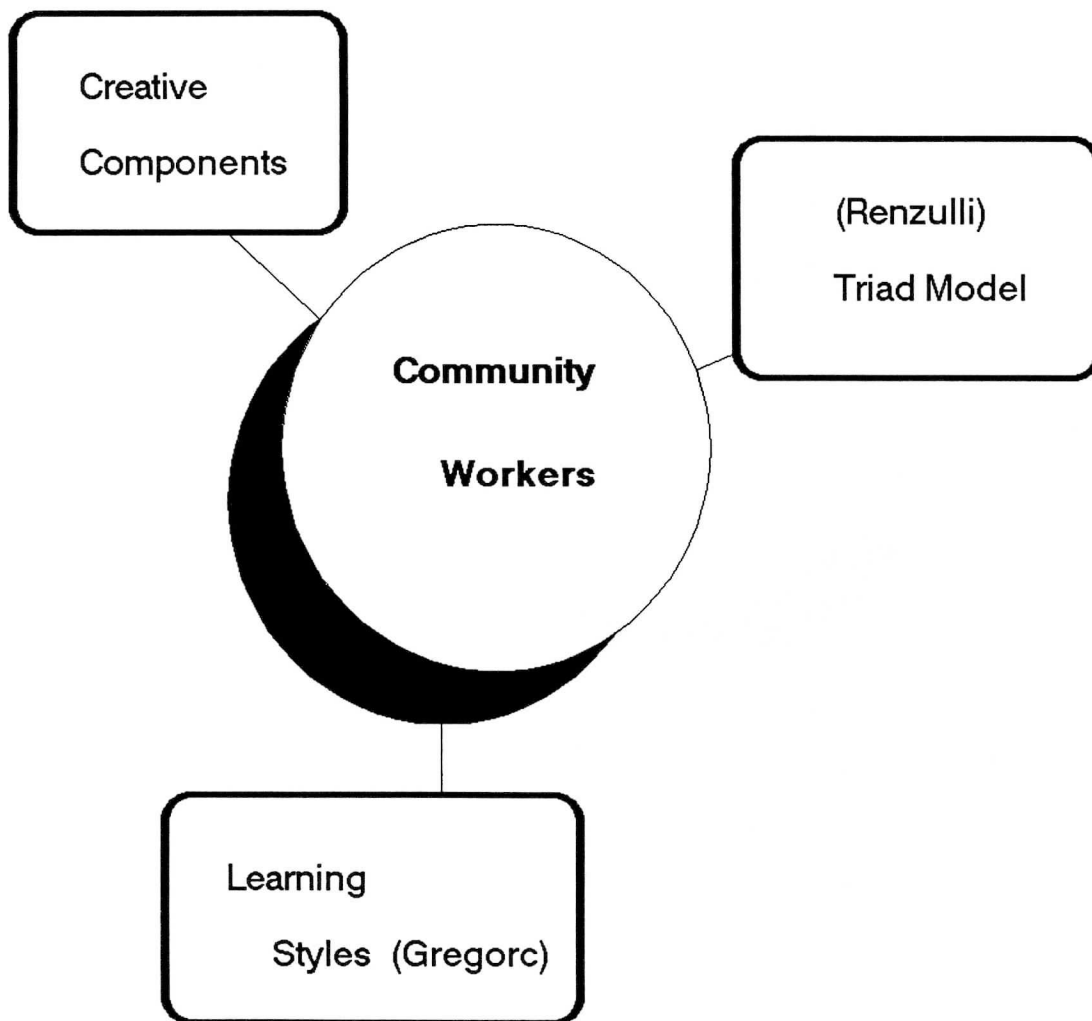
A focus may be a **teaching unit** and the links may be objectives of that unit. Elaborated links might include student activities to meet the objectives and evaluation experiences to test those objectives. On the next pages are examples of the **Teaching Unit MindMap** with *The Solar System* being the focus.

When preparing **cross curriculum activities** the topic may be the focus, the links the subject areas. The teacher may then elaborate activities for each subject area. Again, by using this written framework, the teacher is able to see which subject areas are being emphasized, over-emphasized, or neglected.

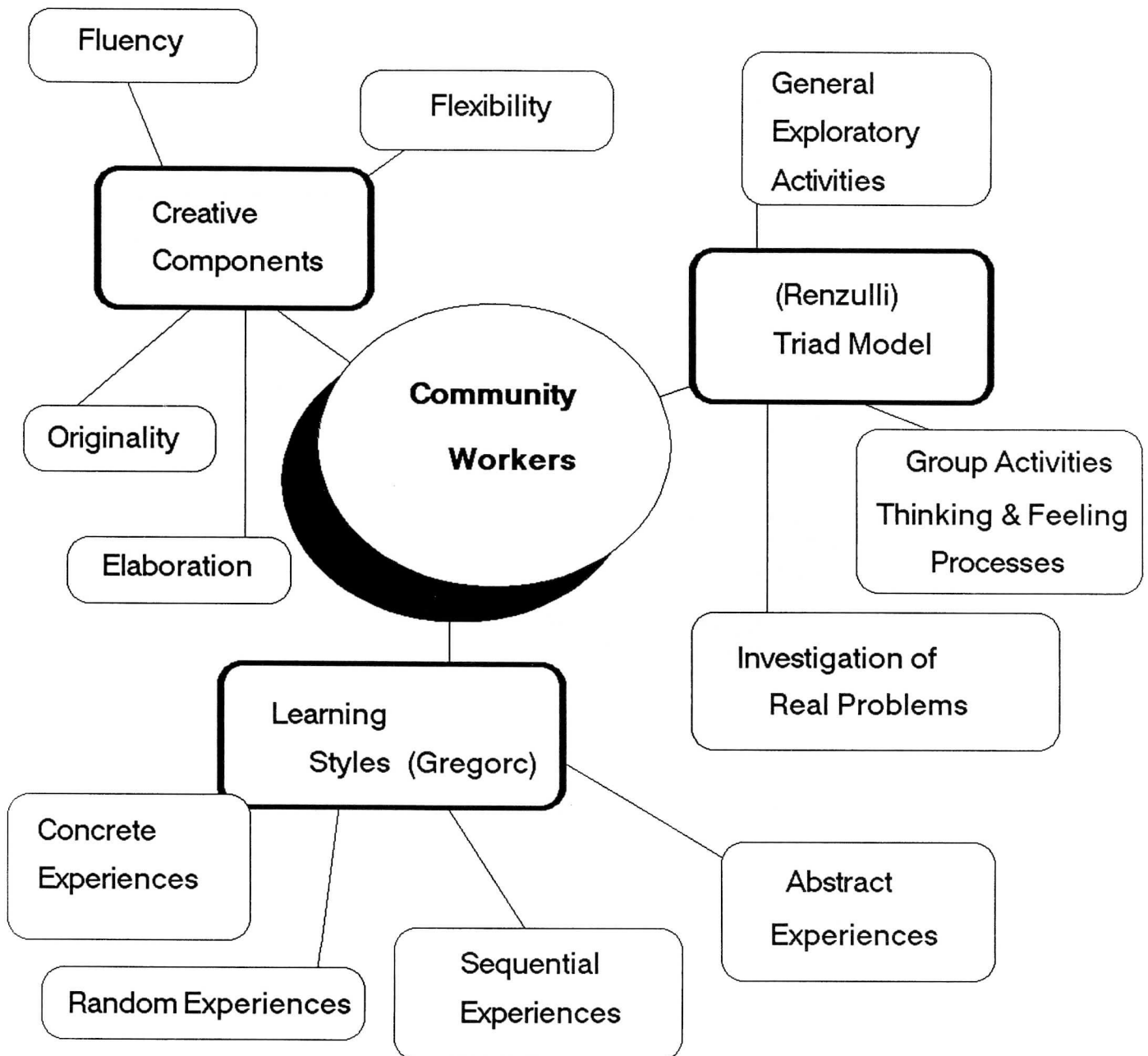
For administrative program planning mindMaps can be utilized as it relates to teachers, subject areas, curriculum dictates, materials, and equipment. Their use is unlimited.

By using this seemingly random written framework (often on poster size paper) the educator is able to use precious time very effectively and efficiently. Links can be elaborated upon (activities, strategies, products, evaluation techniques) for any focus (academic area, topic) and sequenced into lesson plans.

# Learning Model MindMap

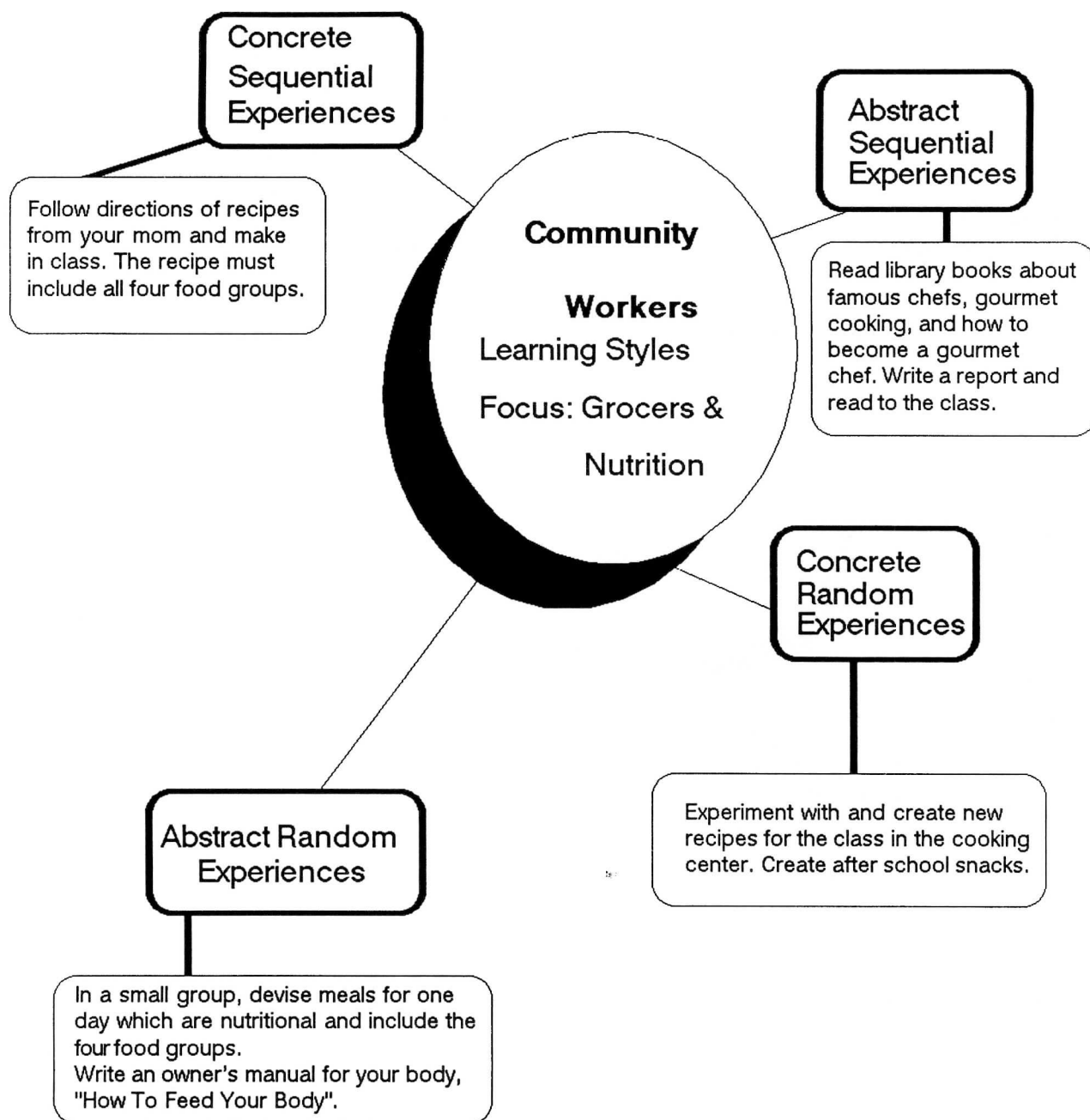


# Learning Model MindMap



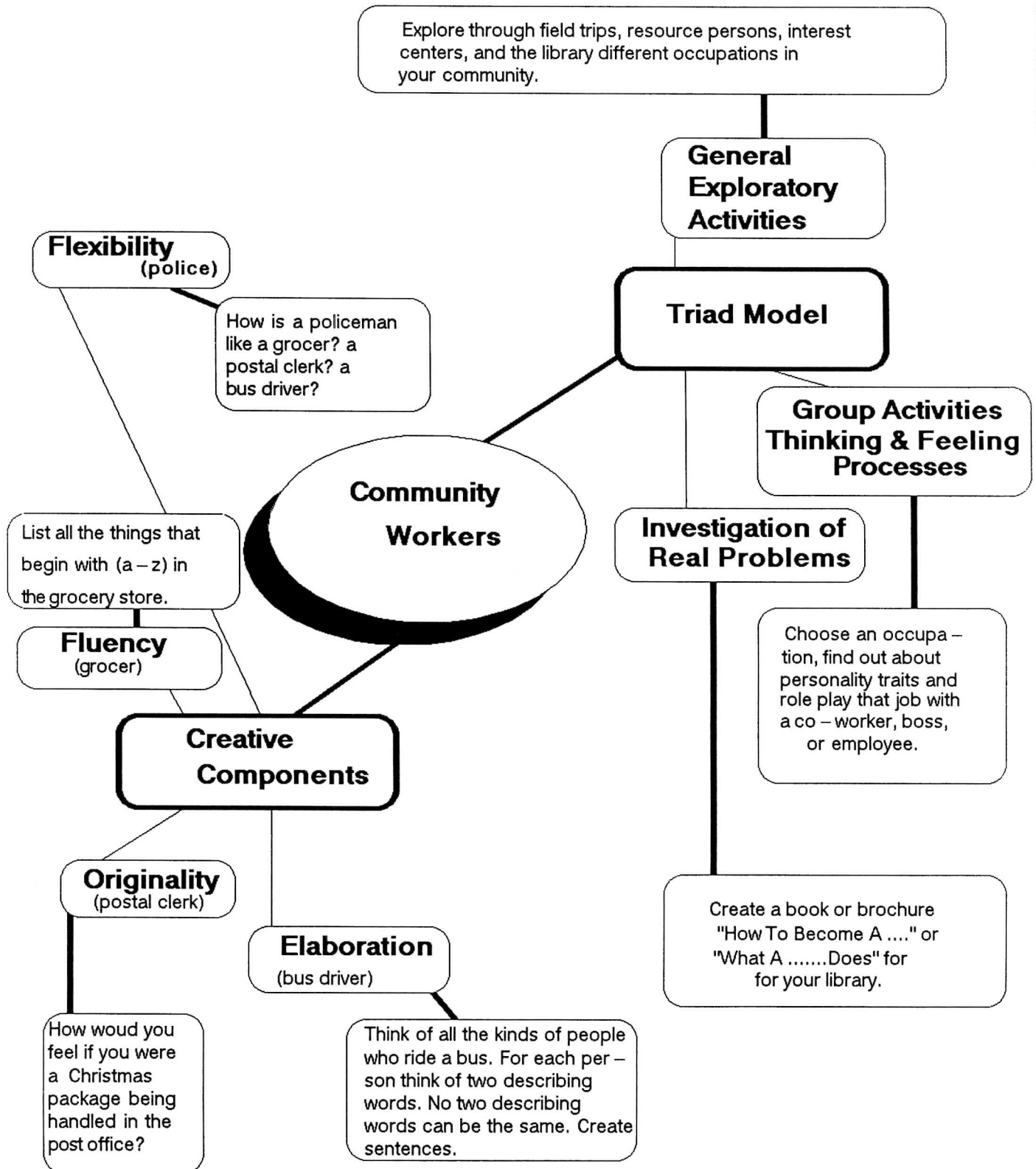
Specific activities follow on the next two pages.

# Learning Model MindMap



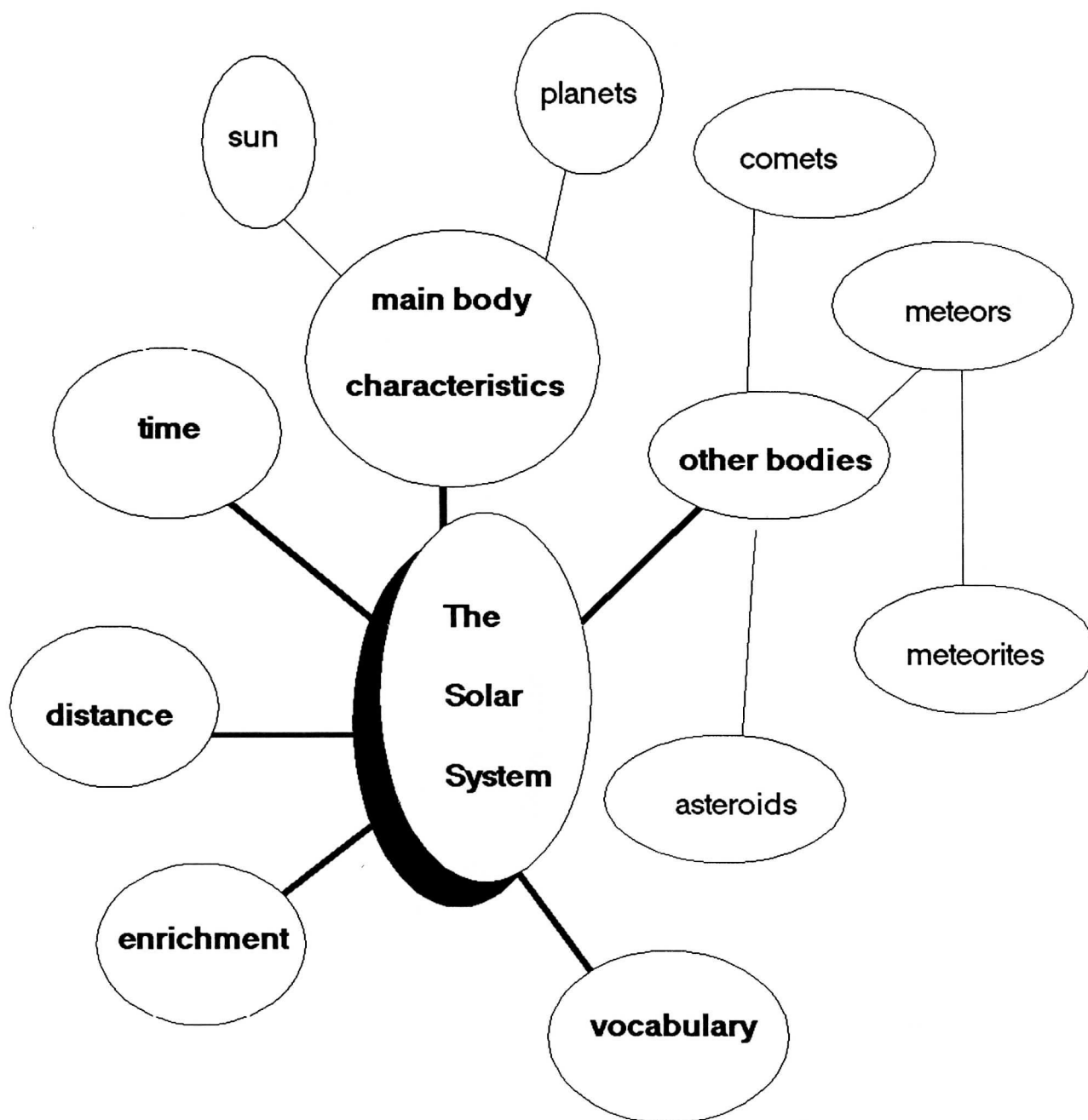


# Learning Model MindMap



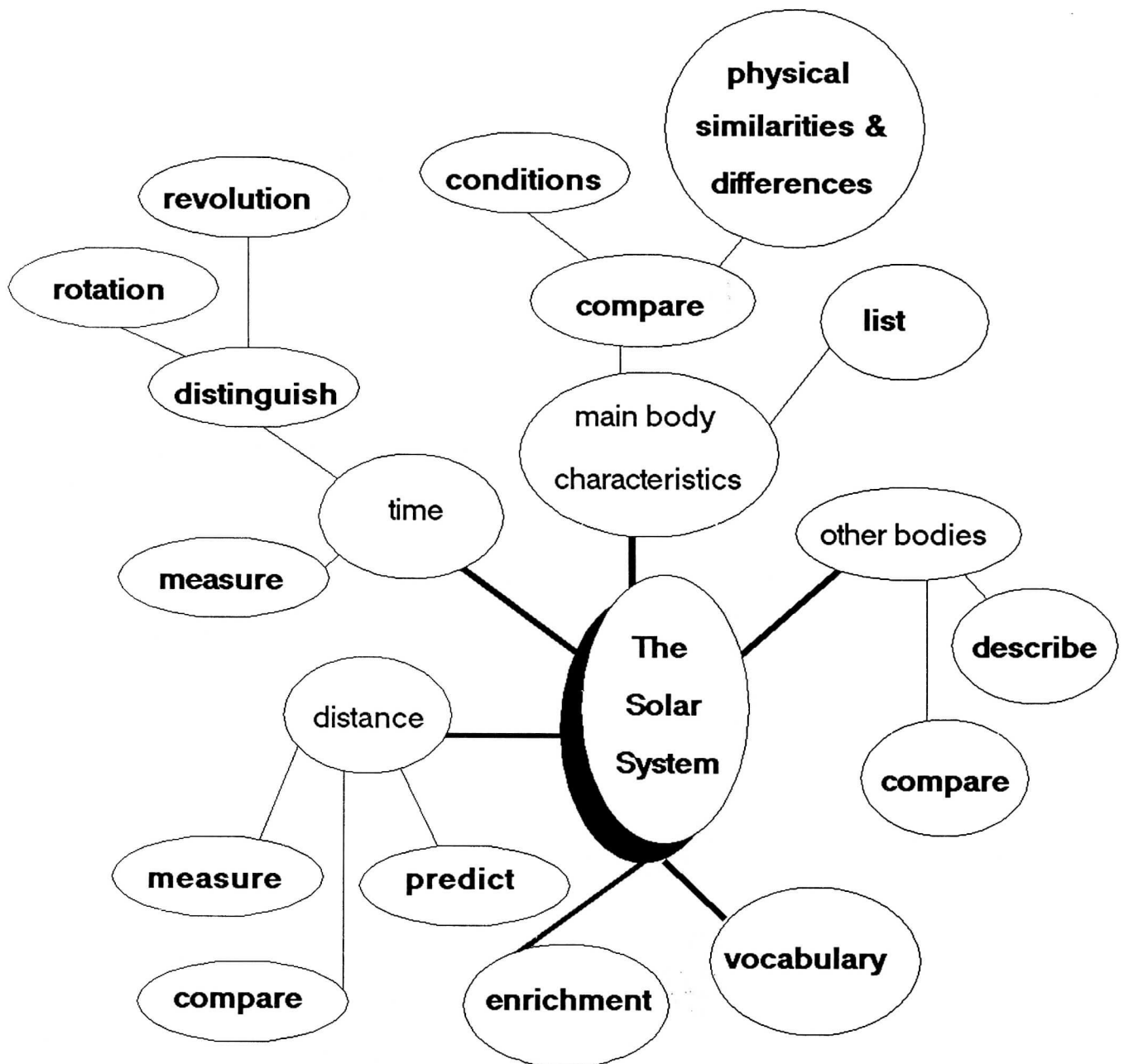
# Teaching Unit MindMap

Major knowledge/comprehension objectives:



# Teaching Unit MindMap

Specific objectives are stated with verbs to discover the levels of thinking needed to achieve the objectives.



Activities to meet the objectives are on the following page.

## Teaching Unit Activities: The Solar System

**\* Vocabulary** asteroid, carbon dioxide, comet, helium, hydrogen, inner planet, meteor, meteorite, nitrogen, outer planet, oxygen, revolution, rotation, characteristic, compare, condition, contrast, describe, distinguish, list, measure, predict

### **\* Main Body Characteristics**

1. **Describe** the physical characteristics of the sun.
2. **List** the planets. **Locate** them in the solar system. **Memorize** their position in the solar system. **Describe** the physical characteristics of the planets. **Draw** the solar system. **Label** the planets. **Draw** your idea of the surface of one of the planets..
3. **Compare** the physical similarities and differences of the internal make up of the planets. **Compare** their similarities and differences with the internal make up of the sun.
4. **Compare** the surface and atmospheric similarities and differences of the planets. **Compare** their similarities and differences with the surface and atmospheric conditions of the sun.

### **\* Time**

5. **Explain** the difference between revolution and rotation. **Distinguish** between a year and a day in its relationship to revolution and rotation. **Demonstrate** revolution and rotation.
6. **Compare** length of day and year of different planets.

### **\* Distance**

7. **Measure** the distances of the planets from the sun. Make a **model** of the solar system.
8. **Compare** the distances of the planets from the sun.
9. **Predict** the distance of Pluto from the sun.

### **\* Other bodies**

10. **Describe** comets, meteors, meteorites, and asteroids. **Identify** their locations in the solar system.
11. **Compare** and **contrast** the physical characteristics of other bodies.

### **\* Enrichment**

1. Investigate the term **ellipse**; draw one; what things take on the characteristics of an ellipse?

2. **Math:** If you lived on the planet \_\_\_\_\_, how old would you be?
3. Investigate **mythical gods** associated with the solar system.
4. **Compare** the physical characteristics of the **inner** and **outer** planets. **Hypothesize** the reason(s) for their similarities as a group and differences as inner and outer planets. Consider distances from each other.
5. Investigate the **greenhouse** effect.
6. **Create** a travel brochure for one of the planets.
7. Investigate **early astronomers** and the **history** of the theories of placement of earth in relationship to the sun.
8. Considering the atmospheric conditions of the planets, **draw** possible **inhabitants** of the planets and explain **adaptations** necessitating a particular look, dress, or equipment.
9. Investigate the various **space probes** and their results (i.e. Pioneer, Voyager).
10. **Who** and in what way were the planets **discovered**?
11. **Recommend** which of the planets we should first inhabit and **explain** why.

\* **Levels of Thinking** in this unit:

**Knowledge** - memorize, list, label

**Comprehension** - describe, locate, identify, explain

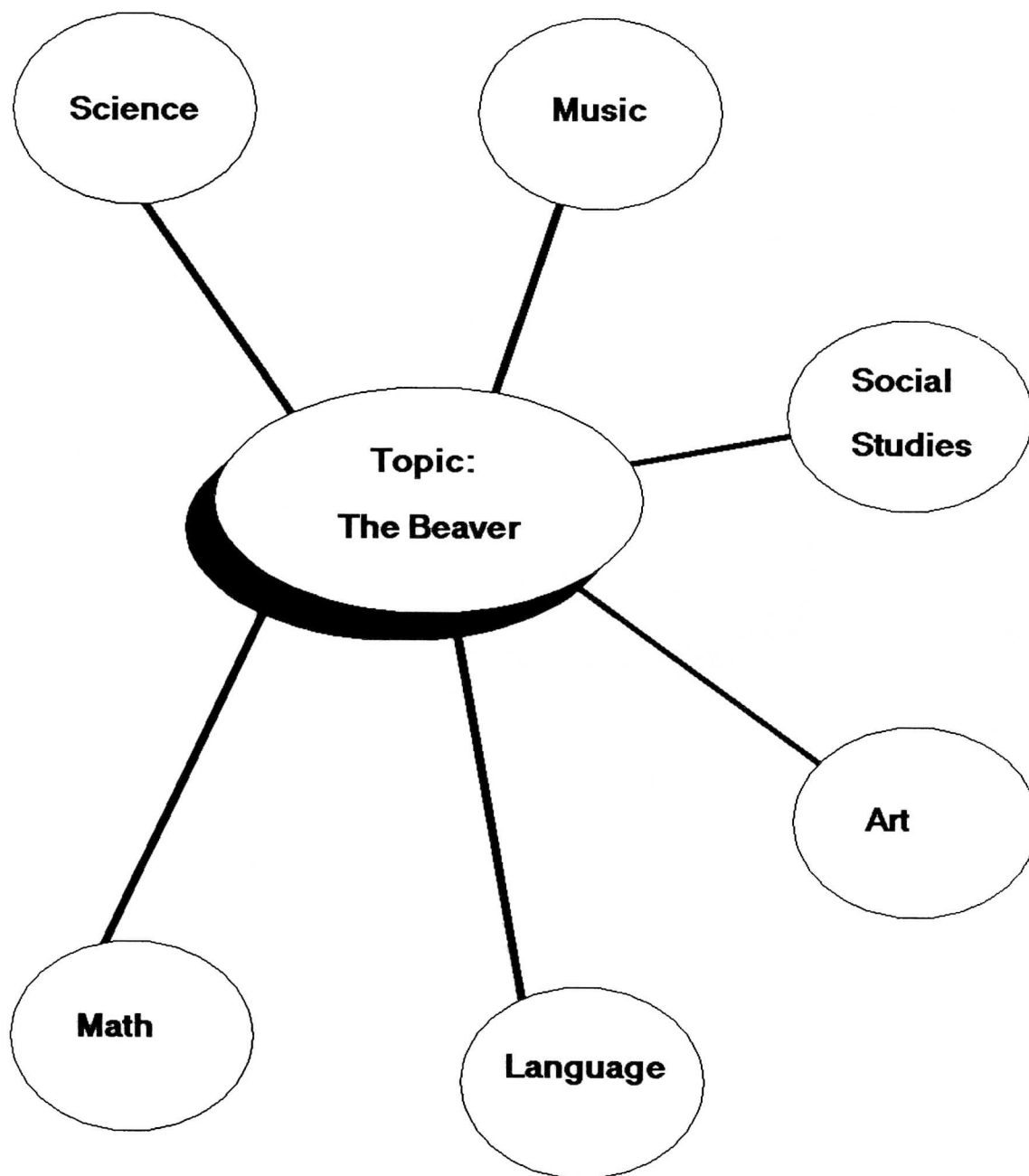
**Application** - demonstrate, illustrate

**Analysis** - compare, contrast, investigate, distinguish

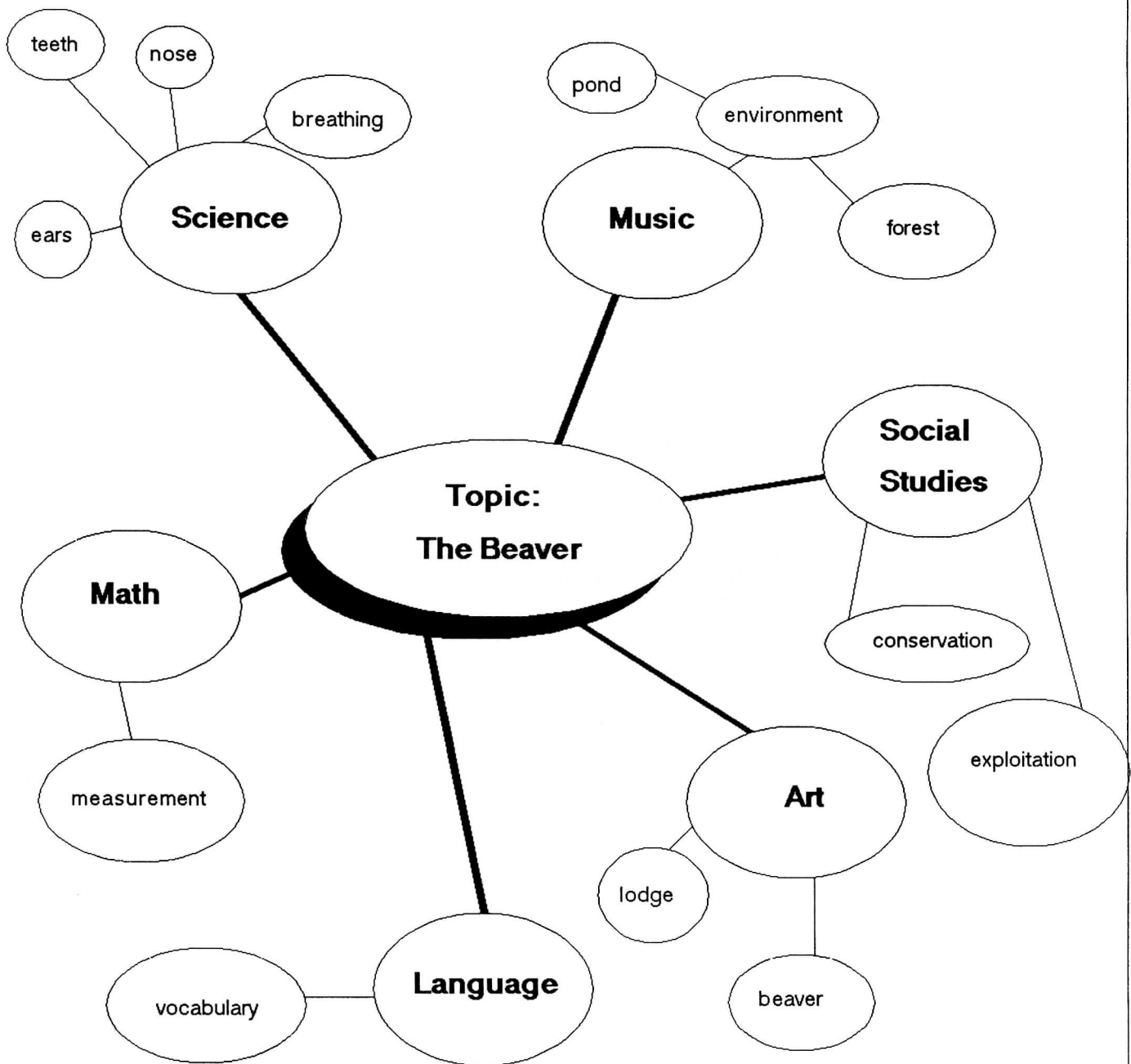
**Synthesis** - create, predict, hypothesize

**Evaluation** - compare, predict, recommend

# Cross Curriculum MindMap



# Cross Curriculum MindMap



Detailed activities in the subject areas are found on the next page.



## Cross Curriculum Activities Focused on "The Beaver"

\* **Science** Investigate the teeth of the beaver and the necessity for gnawing. Investigate other structural adaptations such as the inability to breathe through the mouth, valves in the ears and nose, and its life in the water.

\* **Social Studies** Compare Indian and white man's need for the beaver (fun, food, teeth) and their conservation practices.

\* **Music** Investigate sounds made by the beaver, pond sounds, and forest sounds. Recreate the sounds with musical instruments and your body. Tape record the sounds and use them as background for a guided imagery written by students about a beaver in his environment.

\* **Art** Draw a cross section of a beaver lodge and label. Make a mural of a beaver pond. Make paper mache or clay beavers.

\* **Language** Read from The Tales of Hiawatha "The Hunting of Pau-Puk Keewis". Write a guided imagery for the class of a beaver building a dam. The vocabulary words peculiar to a beaver include dam, lodge, canal, kit, and yearling. How else are these words defined? With whom or what are they related?

\* **Math** A measurement unit includes the following questions:

**Discover.....**

.....the beaver length in inches and centimeters

.....the beaver weight in pounds and kilograms

.....the dam length in feet and meters

.....the dam height in feet and meters

.....the canal length in feet and meters

.....the canal depth in feet and meters

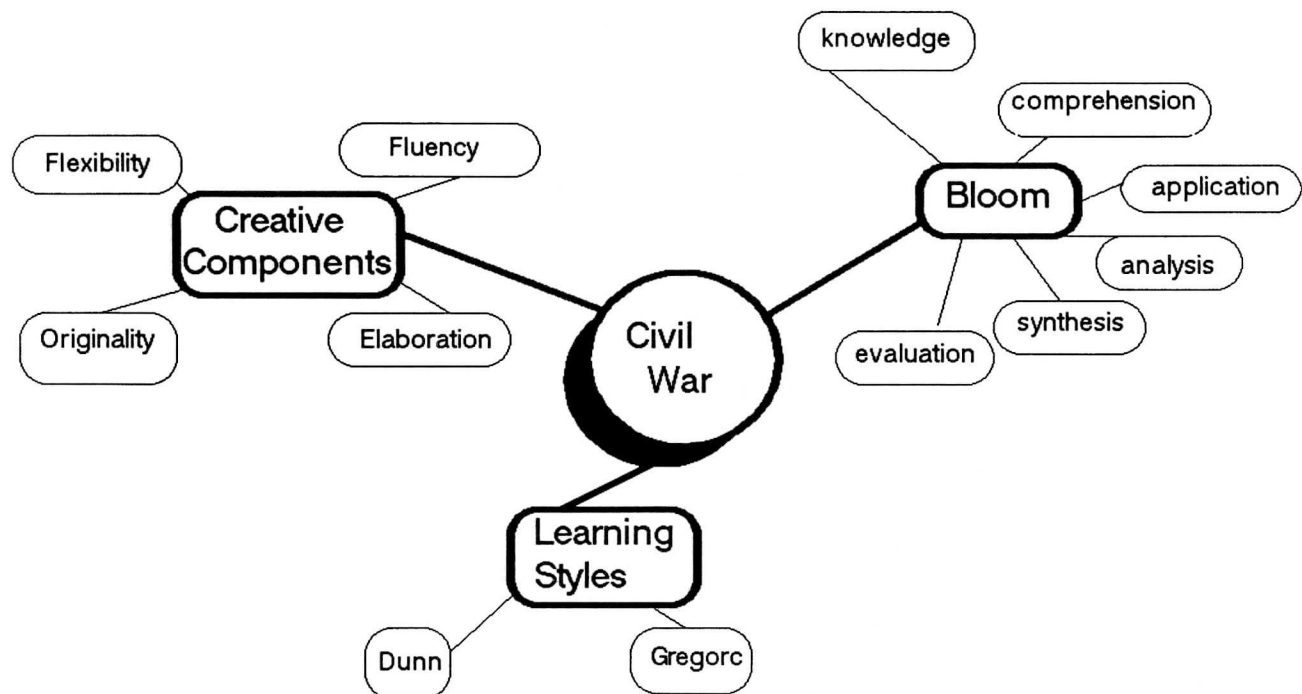
.....how fast a beaver can swim in miles per hour and kilometers



# Learning Model MindMap

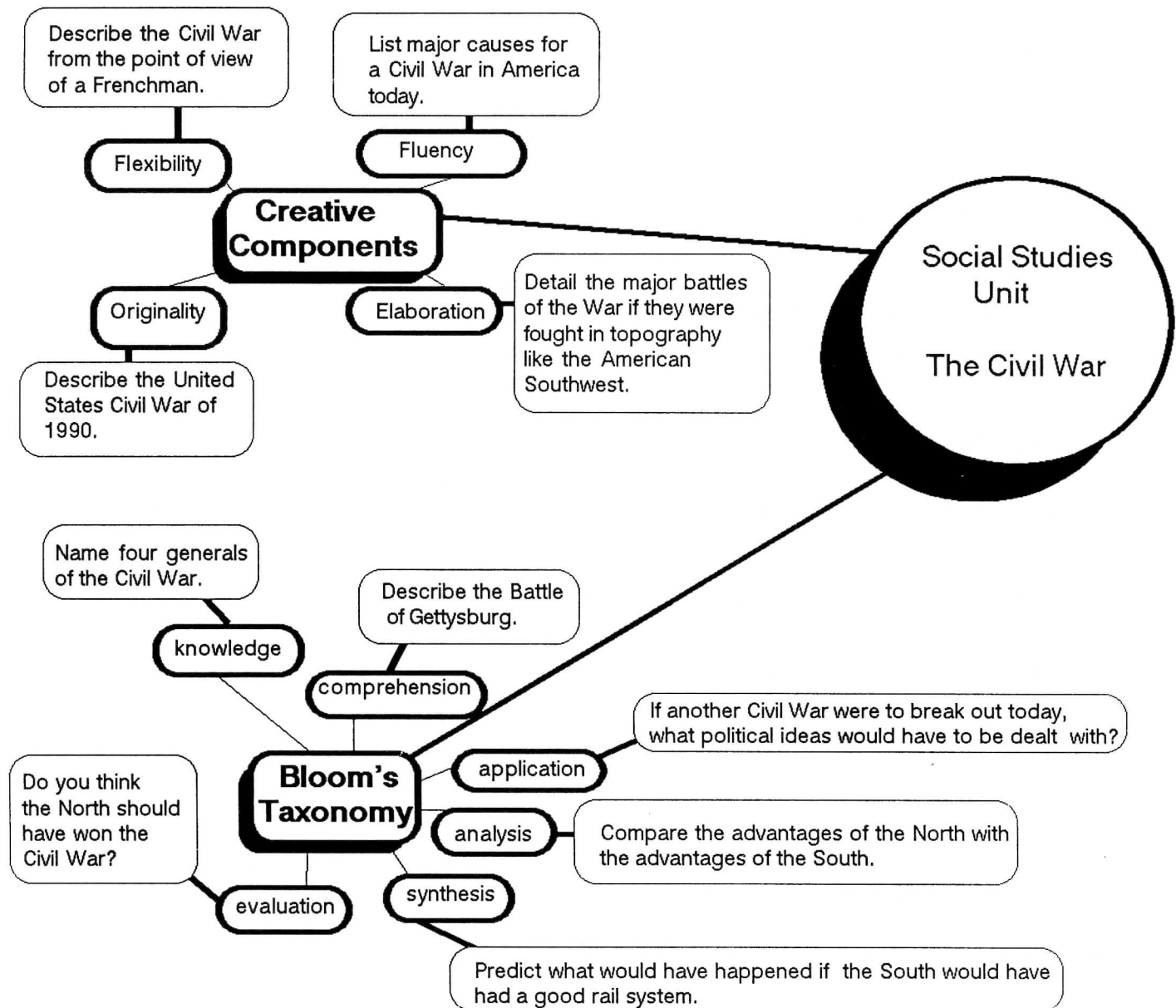
## Upper Elementary

MindMapping is excellent for curriculum planning when many types of learning styles, learning theories, and heterogenous groups are included. Planning is more encompassing and allows a teacher to meet individual needs concerning methods of learning, higher level thinking skills, and allowing for creativeness.



On the following page two of the links, Creative Components and Bloom's Taxonomy are more fully elaborated upon.

# Learning Model MindMap





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**It's About Writing** is for K-12 teachers, students, and administrators. Kathy capitalizes on the 90s students' visual learning styles. Using mindMapping—the visual framework that allows for generating ideas, elaborating, developing sentences, sequencing, and editing—you can explore the possibilities of writing as a manipulative. *It's About Writing* illustrates and describes an alternative writing process that accommodates random as well as sequential learners. You'll find over 20 curriculum examples for subject areas and student activity pages. High-level thinking skills and different questioning techniques can be incorporated in the student activities that involve the mindMapping process. Also included are administrative planning ideas for educators. **K-12**

**Kathy Balsamo** has served as an elementary teacher, Illinois state consultant in gifted education, program specialist for the Council for Exceptional Children, writer and editor for a major textbook developer, and is Vice President of Creative Learning Consultants Inc. She was feature writer for *Challenge* magazine for 7 years and has authored *Exploring the Lives of Gifted People in the Arts* and *Exploring the Lives of Gifted People in the Sciences*.

