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A Thematic Unit for Integrating Social Studies and Science in the First Grade

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A THEMATIC UNIT FOR INTEGRATING SOCIAL STUDIES
AND SCIENCE IN THE FIRST GRADE

A Project Report
Presented to
The Graduate Faculty
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Master of Education

by
Lin Marjorie Lasater
July, 1992

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AND SCIENCE IN THE FIRST GRADE

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A thematic unit for integrating social studies and science with other curriculum areas was developed for first grade students. The theme for the unit centered around farms. The unit was divided into five subunits: farms, farm animals, orchards/vineyards (to include fruits of the Yakima Valley and apples), crops (to include vegetables of the Yakima Valley, pumpkins, and wheat), and nutrition/four food groups. The literature was reviewed to establish a theoretical foundation for the unit and for activities that focused on reading, writing, and language development.

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TABLE OF CONTENTS

CHAPTER	PAGE
1. INTRODUCTION	1
Background of the Study	1
Statement of the Problem	2
Purpose of the Study	2
Procedures	3
Limitations of the Study	3
Definition of Terms	3
2. REVIEW OF THE LITERATURE	6
Teaching Practices in Content Areas	6
The Value of Thematic Teaching in Content Areas	9
Development of Reading, Writing, and Language Through Thematic-based Teaching	13
Integrating Literature and Webbing Techniques into the Content Areas	16
Semantic Mapping and Webbing Techniques	18
Summary	22
3. THEMATIC UNIT: FARMS	24
Unit Format	26

CHAPTER	PAGE
4. THE PROJECT	29
Farms	29
Farm Animals	34
Orchards/Vineyards - Fruits of the Yakima Valley	39
Crops	45
Nutrition/Four Food Groups	53
Summary of the Farm Unit	57
Annotated Bibliography for Chapter 4	58
5. SUMMARY, CONCLUSIONS, AND RESULTS	84
Summary	84
Conclusions	85
Recommendations	86
REFERENCES	87
APPENDIX A - FARM ANIMAL ACTIVITIES	92
APPENDIX B - APPLE ACTIVITIES	127
APPENDIX C - CROPS	138
APPENDIX D - PUMPKIN ACTIVITIES	140
APPENDIX E - WHEAT ACTIVITIES	151
APPENDIX F - NUTRITION/FOUR FOOD GROUP ACTIVITIES	156

LIST OF FIGURES

FIGURE		PAGE
1.	Example of a semantic map for farms	25
2.	Example of a brainstorm chart on farms . . .	30
3.	Example of semantic map of farms developed from the brainstorm chart . . .	32

CHAPTER 1

INTRODUCTION

Background of the Study

The teaching of social studies and science is often given low priority or neglected in the primary grades. According to Atwood (1986), some schools report very little or no social studies instruction. Tilgner (1990) states that over half of elementary teachers rank science fourth out of five subjects and that science instruction at the elementary level tends to be low in quality and taught too infrequently to be effective. These two content areas are usually taught by a procedure of reading from the adopted textbook series the appropriate chapter that meets the desired content of the student learning objective (SLO) or by reading the whole book from cover to cover, regardless of the content. A student then completes the questions at the end of each chapter or responds to worksheets that are recommended and takes an accompanying test. There is infrequent writing and language development of the major concepts or related areas in either discipline.

However, recent research has support that there may be better methods to teach social studies and science. By integrating reading, writing, and language into thematic

units, a more integrated organization is created that encompasses the same SLO's and content covered by traditional textbooks. Thematic units reflect patterns of thinking, goals, and concepts common to bodies of knowledge. They link together content from many areas of the curriculum and depict the connections that exist across disciplines. Thematic units provide a framework for a community of learners in which all children can continue to learn language and to construct knowledge (Pappas, Kiefer, & Levstik, 1990). Thematic unit development allows students to integrate reading, writing, and language development with science and social studies in a natural setting. This format encourages young students to use their prior learnings and increase their knowledge base.

Statement of the Problem

Research indicates that by incorporating reading, writing, and language development in a thematic-based curriculum in the content areas, students can better internalize important concepts. There are few thematic-based curriculum units available to meet the student learning objectives in social studies and science for the primary-aged student.

Purpose of the Study

The purpose of this project is to develop one thematic unit that will integrate social studies and science student learning objectives with reading, writing, and language

development. The unit will be designed to teach students in a first grade classroom.

Procedures

After reviewing literature on reading, writing, and language development in the content areas, a thematic unit will be developed that will incorporate two of the required social studies and science student learning objectives for students in a first grade classroom. Each topic in the unit will include using a thematic approach to the adopted textbooks for social studies and science, a booklist of related supplemental literature and nonfiction books, related first grade reading level trade books, appropriate content-related writing units, webbing techniques, and teacher's reference list.

Limitations of the Study

The thematic unit developed will incorporate some, but not all, of the social studies and science student learning objectives for students in first grade. The thematic unit is designed keeping in mind that the students come from varied backgrounds and abilities, and varying stages of language development.

Definition of Terms

The following terms were defined for the purpose of this project:

Thematic unit

A framework for developing the content necessary to meet the student learning objectives established for first grade students at Moxee Elementary School, in which students can continue to learn reading, writing, and language and increase their knowledge base (Pappas, Kiefer, & Levstik, 1990; Gamburg, Kwak, Hutchings, & Altheim, 1988).

Student learning objectives

Statements of identified learnings developed by the school district in all courses of study included in the school district program (Revised Code of Washington, 1989).

Science

The observation, identification, description, experimental investigation, and theoretical explanation of natural phenomena (The American Heritage Dictionary of the English Language, 1969).

Social studies

A course of study, including geography, history, government, and sociology, taught in secondary and elementary schools (The American Heritage Dictionary of the English Language, 1969).

Writing development

Skills, processes, and products that provide ways for the learner to access literacy (Heller, 1991).

Reading development

Skills, processes, and products that provide ways for the learner to acquire literacy (Heller, 1991).

Language development

The acquisition of a major system by which meanings are communicated and expressed among people. Moreover, language is learned as it is used for various purposes in various social contexts (Pappas, Kiefer, & Levstik, 1990).

CHAPTER 2

REVIEW OF THE LITERATURE

The purpose of this project is to develop a thematic unit, that will integrate science and social studies student learning objectives with reading, writing, and language development for teaching first grade students. The review of the literature will: (1) review teaching practices in science and social studies, (2) examine the value of thematic teaching, (3) discuss the development of reading, writing, and language through thematic units, (4) integrate literature into the content areas for theme teaching, and (5) present a rationale for semantic mapping and webbing techniques as an important component in vocabulary and language development of a thematic unit.

Teaching Practices in Content Areas

Social Studies

Social studies instruction in the primary grades is often characterized by teaching from an adopted textbook series or from offhanded activities that teachers define as social studies. As presented in the position paper Social Studies for Early Childhood and Elementary School Children Preparing for the 21st Century, Goodlad (1984) concludes that

many elementary teachers have not identified the curricular components necessary for understanding the United States in a global context. Relying solely on reading textbooks, completing worksheets, taking tests, and listening eliminates the active participatory power of social studies that is essential to the education of citizens in a democracy. (p. 20)

A contention of this paper is that, while primary-grade teachers often suggest that everything they do is related to social studies, they need to realize that an effective social studies program cannot be just a haphazard collection of unrelated activities.

Traditionally, many elementary teachers rely on the textbook to delineate the curriculum and to form the boundaries of knowledge. The teacher's role in that case is to help children acquire the information that is within those boundaries. The teacher and the children share the same source of information and the teacher has the "answers" at least insofar as the text and teacher's guide provide them. (Pappas, Kiefer, & Levstik, 1990, p. 235)

Science

Science is taught by a variety of methods. The most common methods of teaching science in the elementary school involve the use of experiments, reading, reporting, discussion, field trips, resource persons, and audio-visual

materials. For primary age children, some of these methods are too abstract for their current level of development. Gega (1990) stated "the science that adults find useful in our society, must be modified to suit children before we can expect them to learn it" (p. 18).

It is important for children to learn both the content and process of science. The methods used to teach children should achieve the desired behavioral objectives. Often teachers are concerned with only the methods of teaching science (Victor, 1989). Teachers feel that this is an important phase of teaching science, thus they look for good experiments and demonstrations, which they can perform for the students, to emphasize the concepts that students are to learn. Also, teachers look for good films or filmstrips that will present the content. If their selections are good, they assume that the students' learning of the content and processes of science will be achieved. Often these teachers are frustrated with their efforts and results that are achieved by their students. Victor (1989) comments that the methods of teaching science are the means through which content and process are learned and the objectives of science are achieved. "However, these results cannot be accomplished by selecting the methods first. We must know what we want to teach and why before we can begin to think of how we want to teach it" (p. 63).

Elementary teachers often feel they lack experience and understanding in their knowledge of science and their ability to effectively teach science, thus leading them to rely more and more on the textbook to provide the knowledge they think their students ought to learn (Tilgner, 1990). In examining science texts and science curricula, findings of Kamil and DeVries (cited in McNairy, 1985), suggest that early childhood science relies heavily on presenting scientific knowledge as learning names and labels of science concepts rather than helping children to gain knowledge of science through an active process of inquiry and construction of relationships. Overemphasizing the verbal concepts and not allowing children to be involved in the learning of science through active inquiry reduces children to be passive recipients of accumulated knowledge rather than allowing them to be discoverers of physical knowledge and a constructors of logical knowledge (McNairy, 1985). Thus, teaching science through a variety of sources will allow children to become involved and lead them to begin to understand relationships and add to their learning. Thematic teaching in the content areas may be a way to get children actively involved in their learning.

The Value of Thematic Teaching in Content Areas

Science and social studies can be integrated into other areas of the curriculum through the use of thematic units. Thematic units integrate studies from the various

disciplines like language arts, mathematics, science, social studies, art, music, and drama. Social studies and science are two areas which do not stand alone in the curriculum.

Gega (1990) states:

It is only common sense to realize that learning in science often calls for skills from other parts of the curriculum to be applied. When pupils look up information about caves in the encyclopedia, they are reading. When they measure and graph changes in a growing plant, they use mathematics. They use language skills to organize and report their findings in experiments and observations. When children plan and draw a large panel picture to illustrate conservation practices, this is art. Such integration of subjects is both desirable and usually necessary if you want to promote useful, whole learning. (p. 16)

In social studies, there are primary skills related to understanding and using directional and locational terms with maps and globes. However, there are other skills that enhance the child's abilities to learn within the social studies context. It is stated in the Social Studies for Early Childhood and Elementary School Children Preparing for the 21st Century (1989):

Skills that are shared with other parts of the curriculum but may be powerfully taught through social studies include communication skills such as writing

and speaking; research skills such as hypothesizing, comparing, drawing inferences; decision-making skills such as considering alternatives and consequences; interpersonal skills such as seeing other's points of view, accepting responsibility, and dealing with conflict; and reading skills such as reading pictures, books, maps, charts, and graphs. (p. 16)

Thematic units often use topics that are broadly based and thus allow the integration of the other disciplines within the primary level curriculum. Pappas, Kiefer, and Levstik (1990) state that themes provide a central focus for linking many subject areas. In thematic units, language, the arts, mathematics, science, and social studies become vehicles for thorough exploration. These authors comment that thematic units can provide children choices in developing their learning and gives them a sense of ownership as they participate in exploring the topics within a thematic unit.

In using thematic units to plan an integrated curriculum, the teacher becomes a learner along with the children within the classroom. Pappas, Kiefer, and Levstik (1990) present the view that a teacher's role changes when developing thematic units. There is no way teachers can know all there is to know about a topic and thus they become fellow learners with the students. Being a more experienced learner, the teacher can probably bring in more background

knowledge to provide more understanding in the area, but the project is a "joint endeavor" with the students and teacher learning together.

Science and social studies provide a strong basis from which to choose topics for theme teaching. An example, mentioned by Strickland and Morrow (1990), explains ideas based on farms: types of farms, farm work, crops, animals, food, field trips, related jobs. These categories under farms form a basis for developing oral language through discussions, reading, and writing activities from field trips and listening to children's literature about farms, and experiments in science and food preparation. The content in a theme such as farms generate enthusiasm, meaning, and purpose for students in their learning.

Krogh (1990) presents the view that learning in the real world is not compartmentalized into separate subject areas, but is more along the lines of an integrated curriculum. A thematic approach correlates science and social studies with other curricular areas. There are many natural connections among the various areas of the curriculum (Atwood, McGuire, & Nickell, 1989). The skills of observing, inferring, classifying, serial ordering, and gathering, organizing and interpreting data are used in social studies, science, language arts, math, and the fine arts. "When these connections are recognized and teaching is structured to acknowledge and reinforce them, integration

or correlation may occur" (p. 19). Thematic teaching provides the basis to incorporate the different areas of the curriculum, linking the subjects together for an in depth study of a topic (Pappas, Kiefer, & Levstik, 1990). By linking curriculum areas and integrating the skills students need to be learning, they are using the important skills of reading and writing, and learning the language related to the topic of study.

Development of Reading, Writing, and Language Through Thematic-based Teaching

Social studies and science instruction is an important part of the elementary school program. These areas can be used to integrate, reinforce, and enhance the other curricular areas, and support literacy development in reading, writing, and language development. McClure (1982) states "with an integrated approach, reading instruction is embedded in a meaningful context and does not separate reading from the other language arts. Reading is language--along with writing, speaking, and listening" (p. 785).

A very important part of primary grade teaching is helping students to become literate, knowing how to read, write, and increase their language skills. Strickland and Morrow (1990) content that:

When literacy skills are developed in an integrated fashion, through themed units and literacy activities serving a realistic function, then children see

purposes and reasons for becoming literate.

Conversely, if we teach literacy skills that do not reflect real-life experiences and that lack interesting content, children perceive no usefulness in the skills. (p. 604)

Science and social studies units that use all parts of the curriculum help students to see relevancy in their learning. Bisard (1988) relates that "your students should read, write, observe, and think as they participate in science. After all, science is hardly a subject unto itself" (p. 20). Anderson (1984) notes that writing is a way to improve students' comprehending, learning, and remembering of social studies concepts in stories and texts.

Lunstrum and Irvin (1982) contend that the social studies content being studied becomes subject matter for improving basic skills. By integrating total language into the social studies curriculum, they feel that this provides the teacher with resources to make social studies more meaningful without sacrificing content. At the same time, the basic skills in language--reading, writing, and vocabulary development--are being reinforced.

Social studies at the primary level, according to Hartoonian and Laughlin (1989), should allow students to develop an understanding of their roles and responsibilities to their families, at school, and the world around them. By integrating social studies throughout the curriculum with

thematic units, students can develop participation skills and practice research skills by gathering and recording information on their own, with a small group, or with the whole class. They can develop citizenship skills through sharing and cooperative activities. Language skills--reading, writing, listening, and speaking--can also be incorporated through a variety of integrated social studies activities.

A language experience approach to science was demonstrated by Barrow, Kristo, and Andrew (1984) as a way to facilitate learning of both science and reading. Students, either individually or in small groups, investigate or manipulate science related content or objects. This basis provides a common experience from which the students and teacher can develop, discuss, write, and read a language experience story. The approach also allows the students to expand their experiences and at the same time develop "science skills and concepts--such as observation, classification, measurement, inference and prediction, data collection, and organization--while stimulating students to ask questions and to respond through speaking, listening, writing, and reading" (p. 191).

McNairy (1985) describes another approach to science that works well into thematics units. She refers to the term "sciencing" to distinguish it from traditional science education. Sciencing, as McNairy defines it, is "the

process of active inquiry into and subsequent construction of relationships in both the physical and social world" (p. 385). Active inquiry meaning to investigate and explore both objects and ideas. To be more specific, McNairy contends that the term refers to developing and using scientific processes by interacting with the environment to encourage creative problem solving which in turn helps in the development of knowledge. The scientific processes she feels are appropriate for young children are observation, classification, measurement, computation, experimentation, and prediction. Active inquiry and the scientific processes can be used to provide a framework for developing and organizing science into a thematic unit to connect with other curricular areas and encourage language development.

Integrating Literature and Webbing Techniques into the Content Areas

Literature can provide a rich source for understanding and concept development in an integrated curriculum that is centered around thematic units. Both fiction and nonfiction books provide a basis for students to explore areas of their interest and gain answers to questions they may have about the current topic of study. Barrow and Salesi (1982) relate that nonfiction books are available for science topics, but also that fictional books can "provide children with vicarious experiences through the book's characters and help children develop language and concepts" (p. 65). In drawing

upon two chapters on classifying and contrasting animal groups in a second grade science text, Vivian (1990) found that it "provided a natural link to literature about animals or certain animals of interest to students of this age group" (p. 2). Norton (1982) contends that literature may be also used to connect social studies and language arts through units such as "Pioneer America" and "The Search for Freedom" (p. 349).

In the position paper, Social Studies for Early Childhood and Elementary School Children Preparing for the 21st Century (1988), it is stated that early childhood and elementary teachers "need to be able to integrate concepts, processes, and examples from science, literature, mathematics, music, art, and social studies" (p. 21). Literature and curriculum webbing techniques allow the teacher the flexibility to integrate the concepts, processes, and examples from all areas of the curriculum. Crook and Lehman (1991) state that the web becomes an ideal basis for developing integrated units. Norton (1982) suggests a webbing process to develop literature units "that encourage elementary children to apply reading and language arts skills, search for information, work together in interest or research groups, share an enthusiasm for books, increase knowledge in social studies and science, and share their findings in creative ways" (p. 384).

A literature web serves to link the child's experience with the book to the child's knowledge, past experiences, and developing abilities. Using a literature web serves to help the teacher to fill in a gap in content area courses with children's literature. Brozo and Tomlinson (1986) contend that "children's literature used skillfully in tandem with texts makes the content more palatable, comprehensible, and memorable and that use of literature is likely to promote student's interest in and involvement with content material and thereby increase their learning" (p. 288). These authors also feel that literature can provide background and bring to the child's mind related ideas for better understanding of the textual information. Barrow and Salesi (1982) feel that it also "serves as a bridge to related literature and other school disciplines. Thus, its construction calls for both the interrelating and fusion of the language arts, reading, literature, science, social studies, mathematics, and the creative arts" (p. 65). Using literature books to supplement content area material is not new and has theoretical rationale, but research needs to be done to validate their usage (Brozo & Tomlinson, 1986).

Semantic Mapping and Webbing Techniques

Brainstorming is one main way to generate the information that will become a semantic map or web (Gamburg, Kwak, Hutchings, & Alheim, 1988). These authors describe brainstorming as "recorded discussions about a certain

topic" (p. 17). Brainstorming has several useful purposes. It can provide the teacher with an indicator of the children's prior knowledge of a topic, thus serving as the basis for teachers to guide students new learning. A brainstorm session can help identify areas of student's interests. In a brainstorming activity, all children are encouraged to participate, because the ideas from everyone will be recorded and discussed (Gamburg et al., 1988).

"Webbing is a schematic technique, the realization of a brainstorming process. A WEB is a semantic map, a mental representation of concepts and relationships" (Pappas, Kiefer, & Levstik, 1990, p. 52). Semantic mapping provides a visual representation of the ideas, topics, and vocabulary that can be used to help students to relate new information to their prior knowledge (Johnson & Pearson, 1984). It provides a diagram for children to see how words are related to one another. Semantic maps are good devices to help children build concepts and related vocabulary in the content areas (Johnson & Pearson, 1984).

Semantic mapping has other uses suggested by Johnson, Pittleman, and Heimlich (1986). One, it is used as a prereading activity by introducing new, key vocabulary and activate students schema related to the story topic. This better prepares students to understand, assimilate, and evaluate the information that is to be read. Two, after reading the selection, a discussion of the semantic map can

be a way to emphasize the main ideas presented in the written material. This enhances comprehension by relating students prior knowledge to the new information, thus adding to the readers schemata. Three, semantic mapping can provide a framework for children to organize their ideas prior to writing or reading activities in both language arts and content area. A complete map can serve as a guide to structure a story by category headings serving as the topic sentences, or main ideas for paragraphs. The underlying subheadings and details can be used to develop the content.

Semantic maps may also serve as a way to illustrate and develop new relationships among content areas, such as language arts with math, science, art, music, and social studies and form the basis for developing thematic units (Johnson et al., 1986; Pappas et al., 1990).

Stahl and Vancil (1986) acknowledged the importance of semantic maps for providing relationships between key words or concepts and related words or concepts, but also cited the importance of discussion along with semantic mapping. In their research study, three classes were randomly assigned to three different treatments. One class received a full treatment using semantic mapping and discussion of the relationships of target content words. Discussion only focusing on the target words was the treatment for one class. The third class used only a semantic map similar to the full treatment class, but the relationships of the words

were not discussed. The treatment lasted two weeks and then each class was tested using a cloze test, a multiple-choice synonym test, and a sentence anomaly test, where students needed to choose from two sentences which sentence used the target word correctly. The research results found that the two classes which used discussion, one with a semantic map and one using just discussion of the key words, scored higher on the three tests than did the class that did semantic mapping without discussion. Scores in the two groups using discussion did not differ significantly. Therefore, the researchers concluded that there seems to be a crucial factor in semantic mapping which leads to better comprehension.

Stahl and Vancil (1986) felt that discussion is important because (1) it may force children to process word meanings more actively, a student must show a deeper understanding of the word on a semantic map than on a worksheet, and students must be prepared with the correct answer because they may be called on; (2) class discussion of a semantic map enables students to connect new information more efficiently with prior knowledge. In discussing, the teacher is also able to correct misunderstandings, make clear important points, and direct the discussion to the needs of the learners involved; (3) it involves the students in thinking about the relationships between the target words and the students own experiences.

"It is this active thinking that leads to effective vocabulary learning" (Stahl & Vancil, 1986, p. 66). As children's vocabulary increases, their language abilities develop to allow them to internalize different relationships, thus adding to their knowledge base (Athey, 1982; Pappas et al., 1990).

Summary

Thematic units allow flexibility in designing the curriculum to meet the school district student learning objectives. Social studies and science concepts can be integrated with other areas of the curriculum to provide activities that will interest and encourage students to be active learners. By integrating the curriculum for first grade students, the teacher is allowed to go beyond the textbooks and link the learnings of the students from their prior knowledge to current areas of interest and the learnings established for the school district program.

With an integrated curriculum, the student's development in reading, writing, and language can be broadened and strengthened as they are exposed to the relationships among the related areas being studied. Literature, both fiction and non-fiction, provides a way to add and extend topics in the content areas by providing background information, keeping students' interests, and opening avenues for children to explore the theme being studied more thoroughly. Through webbing with literature,

relationships can be drawn for students to understand and add to their own knowledge.

Semantic mapping and brainstorming are techniques to directly involve students in developing the topics to be explored in a thematic unit. In brainstorming, all learners can participate, because all ideas are acceptable and will be discussed as to how they are related to the theme. The semantic web will be the visual representation of the concepts, ideas, vocabulary, and topics that are to be studied throughout the thematic unit.

CHAPTER 3
THEMATIC UNIT: FARMS

The theme for this unit centers around "Farms." Farms provide a variety of topics for students to explore and primary age children enjoy learning about farms. The subtopics, or categories, for the unit are: farm animals, crops, orchards and vineyards, nutrition, and the four food groups. A schematic web for the unit and the subtopics is shown in Figure 1. Each subtopic is planned with the social studies and science student learning objectives integrated in the unit. The lesson format of activities, resources, and books related to each topic follow the same basic outline, but are opened-ended to allow flexibility based on the teacher's goals and expectations for the students and the interest and prior knowledge of the students. These questions--What do you know? What do you want to know or need to know? How do you find out? What did you learn?-- and the way the students answer the questions provide the teacher with a focus to direct students through the thematic unit (see Figure 1).

Figure 1. Example of a semantic map for farms.

FARM ANIMALS

Dairy cows
Beef cattle
Sheep & Goats
Poultry
Horses
Pigs

ORCHARDS/VINEYARDS

Fruits
Grapes
Apples

CROPS

Grains
Wheat
Vegetables
Pumpkins

FARMS

NUTRITION/FOUR FOOD GROUPS

Milk group
Protein/ Meat Group
Bread/Grain Group
Fruits/Vegetables Group

The student learning objectives for science and social studies that are integrated into the thematic unit are listed below:

Science: The student will explain how living things are alike.

Social Studies: Draw four fruits and four vegetables grown in the Yakima area.

Unit Format

The lessons included in this unit are varied to get students into writing, reading, listening, speaking, discussing, thinking, comparing and contrasting, being involved in their learning, and having fun doing it.

The basic outline for each subtopic is as follows:

- A. Brainstorming with the group and writing all ideas generated on a chart. According to Gamberg, Kwak, Hutchings, Altheim, and Edwards (1988), brainstorming serves a number of useful purposes: listing children's prior knowledge, identifying interests, encouraging participation of all students, generating ideas throughout the unit as needed, and providing a means of summary at the end of the unit.
- B. Webbing the brainstormed ideas into related categories and listing these on a chart. Pappas et al. (1990), define webbing as a "schematic technique, the realization of a brainstorming process. A WEB is a semantic map, a mental representation of concepts and

relationships. Webbing allows you to extend a theme in many meaningful directions, fleshing out the topic by choosing meaningful categories and subcategories" (p. 52).

- C. Resources and fiction and nonfiction books are listed to provide information needed to research the topics and provide literary enjoyment and enrichment to the different subjects. When developing questions about literature, the following guidelines may provide a basis (Weaver, 1988):
1. As a general rule, don't ask literal recall questions unless they are a springboard to more challenging questions.
 2. Ask questions that focus on the motivation and feelings of the characters. The literal question "What did so-and-so do when . . .?" leads into questions like "Why do you think so-and-so did this?" and "How do you think so-and-so felt when . . .?"
 3. Ask questions that involve students in evaluating the actions of the characters. "Do you think so-and-so did the best/right thing when . . .?"
 4. Ask questions that invite students to project themselves into the story and to imagine themselves in similar situations: "How do you think you would have felt if . . .?" or "How do

you think you would feel if . . .?" "What would you have done when . . .?" or "What would you do if . . .?" (p. 155).

Another important aspect of questioning strategies is allowing "think-time." Gambrell (1980) suggests that teachers allow a minimum of five seconds after posing a question to permit students to think about a response. Think-time should also be provided after a student response to allow for higher-level thinking.

- D. Activities for each topic are listed, such as: writing, art, observations, experiments, math activities, related food tasting sessions, reading, and listening to books about the topics, videos, and filmstrips, and possible field trips.
- E. A list of poetry and songs related to the topics are presented to enhance the subject.
- F. Summarization of the subtopic: What did the student learn? What was their favorite part? What may need to be changed to improve the study?
- G. An annotated bibliography of the resources and books is listed at the end of Chapter 4. The videos listed came from the Educational School District 105 Catalog (ESD 105, 1991). The filmstrips came from the Moxee Elementary School Library.

CHAPTER 4
THE PROJECT

The lessons for the thematic unit on farms will be presented in the following order: farms (as an introductory lesson), farm animals, orchards/vineyards (to include fruits grown in the Yakima Valley and apples), crops (to include vegetables grown in the Yakima Valley, wheat, and pumpkins), and nutrition/four food groups.

Farms

1. Begin the unit by having students brainstorm what they know about farms. List their suggestions on a large chart. Discuss the ideas listed on the chart. An example of a brainstorm chart is shown in Figure 2.

Figure 2. Example of a brainstorm chart on farms.

FARMS

cows pigs lambs

chickens

sheep goats cats dogs eggs

milk horses rabbits barns

pasture hay

wheat apples corn peaches

grapes

dairy pumpkins beef cattle tractors

pears

cherries meat orchards fruits

vegetables

peppers alfalfa oats barley

2. With teacher guidance and using the brainstorm chart, have the students create a semantic map. Have the students suggest main category headings that will be used to develop the semantic map. The teacher can record the semantic map on a large chart. Discuss the created map and explain to students that they will be learning about different kinds of farms and how farms are important to us. For an example of a semantic map, see Figure 3.

Figure 3. Example of semantic map of farms developed from the brainstorm chart.

Farm Animals Need

barn

hay

pasture

Vegetables

peppers

corn

pumpkins

Animals

cows

pigs

lambs

chickens

sheep

ducks

goats

cat

dog

horse

rabbit

Grains

wheat

barley

corn

Used on Farms

tractors

FARMS

Fruits

orchards

strawberries

apples

peaches

cherries

grapes

pears

Food

eggs

milk

fruits

vegetables

peppers

pumpkins

corn

wheat

3. Read pages 90-99 in the social studies textbook Heath Social Studies, Homes and Neighbors (1989), other informational books about farms, and/or show filmstrips or videos that describe farms. Discuss the information presented using the questioning strategy explained in chapter three of this manuscript. Add any new facts that are discovered to the semantic map. This procedure provides the foundation to begin the thematic unit on farms and brings in students prior knowledge to form a connection for them with the material that will be studied. Save this semantic map for the thematic unit summary.

Farm Animals

1. Ask students to brainstorm the different types of farm animals they know and the different things they can remember about farm animals. The teacher lists the students' suggestions on a large chart making sure all students get one of their ideas on the chart. Each student should contribute something important to the study. Discuss the ideas written on the chart. An example of a brainstorm chart is shown in Appendix A, Farm Animal Activities.

2. Create a semantic map from the brainstorm chart by asking students to help name the categories and classify the information under the headings they feel each fact best belongs. An example of a semantic map is shown in Appendix A, Farm Animal Activities.

3. Read several books about farm animals and pages 26-27 and 40-41 from the science textbook Merrill Science, Level 1 (1989) that discuss the farm animals that the students have generated from the brainstorming session. Discuss the animals in the story using such questions as the following:

What animals were in the story?

What are some of the facts stated about the farm animals? (These could be listed on a chart and compared with the beginning brainstorm chart and the semantic web or added to the web.)

Did you learn anything new about farm animals?

What is your favorite farm animal and why?

What do farm animals need to survive and why?

What do farm animals need from people and why?

4. Choose favorite farm animals to research, either as a whole class, in groups according to interest, or individually, depending on the teacher's and students' preference.

For whole class research, have students suggest an order in which they would like to learn more about each farm animal. An example of an order would be: beef cattle, dairy cattle, sheep poultry (including chickens, turkeys, and ducks), pigs, and horses.

For individual and group research, after the farm animal has been selected, provide research materials for the students to use and a guide to help them with their research. The guidance can include steps and suggestions on how to record the information from their research.

5. Bring other resources for students to learn from, such as filmstrips, videos, members of the community, 4-H members, and/or FFA members from the high school. After one of these sessions, do a class language experience story. The text created by the students can be written on the bottom of large sheets of construction paper and small groups of children can add the illustrations above the text. The pages can then be put together to create a class big book for the classroom library.

A smaller version of the big book can be created for each child in the class by writing the text on smaller sheets of paper. Each child can then receive a copy, illustrate the text for each page of their book, and staple the book together. Then the students should be allowed time to practice reading their books. The books can then be taken home and read to family members.

Create a baby farm animal book, labelling the names for the mothers and babies. Have the students make the illustrations or color dittos of mother and baby farm animals. A worksheet of baby farm animals is in Appendix A. (Taboni, 1991)

6. Classify farm animals into appropriate groups. Some categories may be: ruminants, birds, mammals, types of products each animal generates, or how people can benefit from farm animals.

7. Graph each of the students favorite farm animal to create a math graph for discussion of more, most, least, less.

Make up word problems about farm animals for students to solve. For example: Seven chickens are in the chicken coop. Five chickens walk out of the coop. How many chickens are left inside the coop? The students can illustrate the problems and write the correct number in a sentence.

Have students create word problems, write them down, draw pictures to go with the math problem, and write the correct number sentence to go with the word problem they created. This activity can be done with partners. They can take turns writing word problems for their partner to solve.

8. Discuss and review each farm animal, products we get from them, and the care farm animals need from the people who own them (if needed, refer students back to the science textbook, pages 26-27 and 40-41 Merrill Science, Level 1, 1989). Have students write about them and the different products obtained from them. The writing can be open-ended or sentence frames and word banks can be used.

Suggestions for sentence frames are listed below. Word banks can be created by asking children to give examples of words that would complete the sentences and listing them on a large chart or on the chalkboard.

My favorite farm animal is a _____.
I like this farm animal because _____.

Beef cattle give us _____ and _____. My
favorite beef meat is _____.

From dairy cows we get _____, _____, and
_____. My favorite dairy food is _____.

We get wool from sheep. Things we make from wool are
_____, _____, and _____.

Pigs give us meat. My favorite is _____.

The animals I would raise on my farm are _____

9. Present art lessons or projects related to farm animals, such as painting, dot-to-dot pictures, drawing, coloring, paperbag puppets, clay sculptures, construction paper activities, and/or cut-and-paste activities. A how to draw farm animals worksheet is in Appendix A (Taboni, 1991) along with other worksheets that could be used for art activities.

10. Teach children songs and poems related to farm animals. Make a poetry book or a song book for children to follow along and learn to read the words. Resources for some songs and poems related to farm animals are: Animal Piggyback Songs and Animal Rhymes, (Warren, 1991) and Farm Animals (Taboni, 1991). Some examples of these songs and poems are in Appendix A.

11. Review and discuss what was learned during the unit on farm animals by brainstorming and webbing the information suggested from the students. Use the semantic web to compare to the one done at the beginning of the unit or add information to the first farm animal map.

12. Ask students to comment on what they liked about their study of farm animals, what they didn't like, and what could be a way to change the study.

Orchards/Vineyards

Fruits of the Yakima Valley

1. Have students brainstorm things they know about orchards, vineyards, and fruits grown in the Yakima Valley. The teacher records these on a large chart, making sure each student has a suggestion or idea on the chart. Discuss the ideas on the chart.

2. From the brainstorm chart, create a semantic map. Discuss the fruits and related ideas suggested by the students. Emphasize the fruits that are grown in the Yakima Valley.

3. Read books about fruits and/or present videos or filmstrips related to fruit. Read pages 152 and 159 from the science textbook (Merrill Science, Level 1, 1989) about what trees and plants need to grow. Discuss information presented from these sources and add to the semantic map.

4. Have a fruit tasting party. Ask students to taste the different fruits and choose their favorite one. Discuss with students why they like the fruit they choose encouraging them to use descriptive words such as sweet, tart, crunchy, soft, juicy, or the color of the fruit.

5. Graph the students favorite fruits and make a comparison, similar to the farm animal graph, discussing more, most, least, and less.

Have students make up word problems using fruit trees. For example, the peach tree has four peaches left to be

picked. In the basket are three peaches. How many peaches in all? The students could illustrate the problem and write the correct number sentence. After providing some examples, have students write their own problems, illustrate them, and write the correct number sentence. This could be done as a partner activity, by having one student write a problem and the partner write the solution.

6. Have students write about their favorite four Yakima Valley grown fruits, using their own words or a sentence frame. For example:

My favorite four Yakima Valley grown fruits are _____, _____, _____, and _____.

Students can select the fruit names from a class generated word bank.

7. Have students draw a picture of their four favorite Yakima Valley grown fruits to illustrate their writing.

8. Review and discuss what was learned during the orchards/vineyards and fruits of the Yakima Valley unit by having students brainstorm and create a semantic map. The teacher can record their suggestions on a chart. The semantic map created at the beginning of the fruit unit can be added to and discussed as an alternative to making a new map.

9. Discuss with students things they liked in this unit on fruits, what they didn't like, and what could be changed to make it more interesting and fun.

Apples

1. Have students brainstorm different things they know about apples and apple products. The teacher should record the students' ideas on a large chart.

2. With teacher guidance, have the students create a semantic map with the information listed on the brainstorm chart. Discuss the categories and define terms related to the categories.

3. Read fiction and non-fiction books and present videos and filmstrips related to apples: how they grow, different kinds of apples, how apples are packed, and how apples are processed. Discuss the ideas from these sources, compare what is learned to the semantic map, and add any new information that is presented to the semantic map.

4. Read the big book about Johnny Appleseed and discuss the story using such questions as:

What did Johnny Appleseed do to make him famous?

Why do you think he wanted to plant apple seeds in the wilderness?

Who were his friends and why did they like him?

What would it have been like to be Johnny Appleseed?

Present a video about Johnny Appleseed and make a comparison with the big book story. Compare what things are the same and what is different. Record the comparison.

5. Make dried apples with the students. Have the students predict what they think will happen to the apples when they are dried. Record their predictions. Using an apple peeler-corer-slicer, with adult supervision, have the students make apple slices for drying. Weigh the apple slices before putting into the dehydrator and record the weight. Ask students to observe what the apples look like before they are dried and record their comments on the prediction chart. After the apples are dried, weigh the apples again and compare the weights. Ask students to observe what the apples look like after being dried. Discuss and check the students predictions about what happens when apples are dried. Then, EAT!

6. Read the story An Apple Tree Through the Year, by Claudia Schnieper. Discuss the stages of growth of an apple.

Teach the children the "Apple Story" poem listed below.

First come the green buds, closed up tight.

They burst into pink blossoms in the warm sunlight.

Next, small, green apples grow that you can see.

They grow into big, red apples for you and me.

After the students know the poem, have them use the pictures, apple patterns and poem worksheets to sequence the

growth of an apple in a book form. These worksheets are in Appendix B. Have the students practice reading the book at school and then take it home to read and share with members of their family.

7. Apple art projects that students may enjoy are apple prints, apple cut-apart puzzle, color an apple being eaten sequence, and paint an apple tree with watercolor paints or tempera paints. Examples are shown in Appendix B.

8. Make apple cider and applesauce. Observe and record what happens to the apples in each process. Write a language experience story about each process and have the students make the illustrations to go with the story. The language experience story can be made into a class big book and put in the classroom library.

9. Read The Seasons of Arnold's Apple Tree by Gail Gibbons. Discuss the story using the question guide as outlined in Chapter 3. Have students write about what the tree looked like in each season. Have children make the four seasons of an apple tree by painting four brown trees and decorating with tissue paper: white for snow in winter, light green with pink for new spring leaves and blossoms, darker green for summer leaves, and fall color leaves with red for apples in autumn. Have students label each season.

10. Discuss and review the apple unit by brainstorming and mapping students suggestion of things they learned about

apples. A comparison can be made with the semantic map developed at the beginning of the apple unit.

Using the semantic map, have students write a story about things they learned about apples. Discuss with them some ideas to get them started on their writing. Ask students to illustrate their story.

Crops

1. Ask students to brainstorm ideas about crops.

This may be a word they do not understand, so they will need teacher guidance and explanation. List their suggestions on a large chart and discuss the ideas.

2. With teacher guidance, have students suggest the way to create a semantic map from a brainstorm chart. Discuss the categories made and the words under each category. An example of a semantic web for crops is listed in Appendix C.

3. Read fiction and non-fiction books related to crops to give students more background information about the topic. Books on gardening, vegetables, and grains would give insight to what crops are and how they are grown. Page 152 of the science textbook (Merrill, Science Level 1, 1989) can be read. Discuss the information presented in these books and add new ideas and facts to the semantic web. This provides the background for studying three areas under crops: vegetables, pumpkins, and wheat.

Vegetables of the Yakima Valley

1. Have students brainstorm things they know about vegetables grown in the Yakima Valley. The teacher records these on a large chart, making sure each student has a suggestion or idea on the chart. Discuss the ideas on the chart.

2. From the brainstorm chart, create a semantic map. Discuss the vegetables and related ideas suggested by the students. Emphasize the vegetables that are grown in the Yakima Valley.

3. Read books about vegetables and/or present videos or filmstrips related to vegetables. Discuss information presented from these sources and add to the semantic map. Discuss what vegetable plants need in order to grow and include these ideas on the semantic map in an appropriate category.

4. Have a vegetable tasting party. Ask students to taste the different vegetables and choose their favorite one. Discuss with students why they like one particular vegetable encouraging them to use descriptive words such as the color, juicy, smooth, crunchy, stringy, crisp or mushy.

5. Graph the students favorite vegetable and make a comparison, similar to the farm animal graph, discussing more, most, least, and less.

6. Have students write about their favorite four Yakima Valley grown vegetables, using their own words or a sentence frame. For example:

My favorite four Yakima Valley grown vegetables are _____, _____, _____, and _____.

Students can select the vegetable names from a class generated word bank.

7. Have students draw a picture of their four favorite Yakima Valley grown vegetables to illustrate their writing.

8. Review and discuss what was learned during the vegetable unit by having students brainstorm and create a semantic map. The teacher can record their suggestions on a chart or the semantic map created at the beginning of the unit can be added to and discussed.

Pumpkins

1. Have students brainstorm what they know about pumpkins. List these on a large chart. Discuss the ideas suggested by them.

2. Create a semantic map from the brainstorm chart, asking the students to help name the categories and classify the information under the heading they feel it best belongs.

3. Read books about pumpkins, both fiction and non-fiction. Discuss the stories and information, adding new ideas to the semantic map.

4. Read The Pumpkin by Joy Cowley. Discuss the story using the questioning strategy presented in Chapter 3. Have students create their own story by filling in names of people doing the different jobs using a cloze story frame. Students can add the illustrations. An example of the story frame is shown in Appendix D. The students can share their story with the class. Usually this type of story is fun to read chorally.

A follow-up activity for this story is to cook a pumpkin, make pumpkin puree, and use the pumpkin puree to make pumpkin muffins. Students can read the story again and eat the muffins as a way to be eating pumpkin. Observing and recording the changes in the pumpkin from pumpkin to puree can become a science lesson for the students.

5. Have students make a small book that sequences the growth of a pumpkin from seed to Jack o'lantern. Ask them to color the pictures, then read the book together as a class, with a partner, and after taking it home, read the book to family members. A worksheet for this activity is listed in Appendix D. An excellent book to read is Pumpkin, Pumpkin by Jeanne Titherington.

6. Visit a pumpkin patch so children can see where pumpkins grow. Each child should choose a pumpkin to take back to the classroom. Discuss the field trip to the pumpkin patch and write a class language experience story. Have children make the illustrations for the story and make it into a big book for the classroom library.

Have students write frame sentences about their experiences at the pumpkin patch and use a class developed word bank from which words can be chosen to complete the sentences. Two examples of some sentence frames are:

At the pumpkin patch we _____, _____, and _____.
My favorite thing we did was _____.

I saw many things at the pumpkin patch. Some of the things I saw were _____, _____, _____, and _____.

7. Have students complete a pumpkin measuring book by first guessing how many unifix cubes the pumpkin is in diameter and height. Then, have students guess how many pounds their pumpkin weighs. After they have made their guesses and recorded these in their measuring book, have students measure the diameter using string (that has been measured around their pumpkin) and unifix cubes. Then, they count and record how many unifix cubes were used. The height can be measured by stacking unifix cubes and comparing the stack to the pumpkin. The students count how many unifix cubes were used to match to the height and record this in their book. Each pumpkin can be weighed on a baby scale, or other scale available, and students can record the weight. Discuss with students how their guesses compared with the actual measurements. An example of a pumpkin measuring book is shown in Appendix D.

8. Using a pumpkin that has been chosen for a class pumpkin, have students suggest types of jack o'lantern faces that they would like to have the teacher carve or paint on the pumpkin. Create a graph of the students' favorite jack o'lantern face and the one with the most will be the kind of face that will be carved or painted on the pumpkin.

9. Have students write a story about their pumpkin using their own words or words that have been suggested on a word bank. The students are encouraged to illustrate their story. Students are invited to read their created story to the class.

10. For art activities, students can create their own jack o'lantern by using a pumpkin tracer to make the pumpkin shape, cut the pumpkin out, and add pieces of construction paper to make the face. A pumpkin tracer is shown in Appendix D.

11. Review the pumpkin unit by brainstorming and creating a semantic map of ideas suggested by the students about things they learned in the unit. Ask students what they liked about the study of pumpkins, what they did not like, and what they would change.

Wheat

1. Have students brainstorm what they know about wheat. The teacher records their ideas on a large chart, making sure all students have an opportunity to respond. The ideas suggested are discussed.

2. A semantic map is created from the brainstormed chart, with the students suggesting the categories and the teacher recording the information. The categories and related ideas are discussed.

3. Read fiction and non-fiction books about wheat and products made from wheat. Read pages 94-99 from the social

studies textbook about wheat (Heath Social Studies, Homes and Neighborhoods, 1989). Present videos and filmstrips related to wheat and wheat products. Discuss the information and add new ideas to the semantic map.

4. Read The Little Red Hen by J. P. Miller and discuss the story with such questions as:

Explain the Little Red Hen's problem and how did she solve it?

What did the Little Red Hen do and why?

What did her friends do and why?

How did the Little Red Hen feel?

How would you feel and what would you do if you were the Little Red Hen?

As a whole class, have the students suggest the sequence of events in the story. Record their suggestions and write the separate events on the bottom of large construction paper. Divide the students into groups according to the number of events and have them create the illustrations for that page. Put the pages together to make a big book for the classroom library.

5. Have students plant wheat and watch it begin to grow. If wheat is grown in a white styrofoam cup, students can create a face on the cup. As the wheat grows, it becomes the hair for the face.

6. If a wheat grinder is available, weigh, measure, and grind wheat to make flour. After the wheat is flour,

weigh and measure the quantity of flour made and compare to the beginning weights. Use the flour made to make bread as a classroom cooking project. Discuss other ways we use wheat and flour. Record these ideas on a chart.

7. Write a class language experience story about wheat from planting to bread. Make a book for each student to create the illustrations for the text. Have students practice reading their books and then take them home to read to family members to share what they have learned about wheat. A sample of worksheets that could be used to make the book is shown in Appendix E (Heath Social Studies, Homes and Neighborhoods, 1989).

Another writing activity is to use a frame sentence and have students use their own words to complete the sentence or generate a word bank from which students could select the words to complete the sentence. An example is:

Wheat is a grain crop grown by farmers. Some foods we get from wheat are _____, _____, and _____.

8. Review the wheat unit by having students brainstorm things they learned about wheat. Create a semantic map from their ideas and compare to the map that was made at the beginning of the unit. Discuss the information.

Ask students what they liked about the unit on wheat, what they did not like, and what they feel could be done differently.

Nutrition/Four Food Groups

1. Ask students if they know what nutrition is and the Four Food Groups. Have them brainstorm any ideas they may have about the topic. The teacher records these on a large chart. Discuss the ideas with the students.
2. Using the brainstorm chart, create a semantic map using the students suggestions for categories and related terms and teacher input. Discuss the map.
3. Read fiction and nonfiction books, read pages 96-99 from the science textbook (Merrill, Science Level 1, 1989) and show videos and filmstrips about nutrition and the Four Food Groups. Discuss the information and add any new ideas to the semantic map.
4. Present and discuss each food group and the kinds of food that are categorized in each group (Four Food Group posters are helpful to use). Using pictures of foods, or foods cut out from magazines, have students place the foods in the appropriate food group. Collage posters can be created for each food group by writing the name of the group on the top of a large piece of butcher paper, having students find foods in magazines, cut them out, and paste onto the appropriate food group poster. During this activity, the teacher is checking with each student and discussing with them their reasoning for placing a particular food on a certain food group chart. When the posters are completed, discuss with the students each of the

food groups and the different foods placed under each category.

5. For each food group have students write about their favorite foods in this group. Students can use their own words getting ideas from the created food group posters or from the printed Four Food Group posters.

Sentence frames and word banks can also provide writing activities for the students. Examples of some sentence frames for food group writing are:

From the Milk Group we get dairy products. My favorite foods from this group are _____, _____, and _____.

The Meat Group provides us with protein foods. My favorite protein foods are _____, _____, and _____.

There are many kinds of foods in the Bread and Cereal Group. _____, _____, and _____ are my favorite ones.

Fruits and vegetables are good for me. I like to eat _____, _____, and _____.

6. Have the students brainstorm snacks that they like to eat. The teacher records their ideas on a large chart. Make a chart with two categories, one for healthy snacks and unhealthy snacks. Using the brainstorm list of snack foods, have the students categorize the foods under the appropriate category. Discuss the lists that are developed. Ask

students to bring a healthy snack to school to share with the class and have a healthy snack party.

7. Discuss with students foods that make up a healthy meal. Using the worksheets in Appendix F have students color, cut, and paste different foods to make a healthy meal. Ask students to tell about the foods they included in their meal.

8. Invite the head of the food service department in your school district or a nutritionist (dietitian) from the local hospital to come talk with the class about nutrition. Prepare the class for the visit by reviewing the things they have been learning about nutrition.

After the visit, write a class language experience story about what the person discussed with them about nutrition. Have students illustrate the text to make a class big book for the classroom library.

Have students write a thank you letter to the person that came and tell them what they liked about the presentation concerning nutritious and healthy foods. An outline of a letter can be provided for the students to follow and a word bank can be generated to help them in writing the letter. The teacher can provide guidance. The students can add a picture to help illustrate the text.

9. As a culminating activity for this unit, the class could have a food tasting party. Everyone would be asked to bring a food from a particular food group, so that foods

from each group could be tasted. The placemat for the party would be a worksheet with a square for each of the four food groups (an example is shown in Appendix F). A placemat could also be made using large construction paper, folded into fourths and foods from each group could be colored, cut, and pasted into the appropriate category. Food pictures for the different groups are shown in Appendix F.

At the food tasting party, the students would be asked to select foods from each of the four food groups and on their placemat put the foods into the correct group. Before eating, ask each student to name some of the foods that they are tasting and what group it belongs in.

10. Have students brainstorm things they learned during the nutrition/Four Food Groups unit and create a semantic map from their ideas. Discuss the map.

Ask students what they liked about studying this unit, what they did not like, and what could be changed to make it better.

Summary of the Farm Unit

Review the farm semantic map made at the beginning of the thematic unit. Discuss with students any changes that can be made based on the things they have learned about farms and products we get from farms. Add to the first map, or develop a new map based on the suggestions of the students and the outcome of the discussion.

Ask students what they liked about the thematic unit, what they didn't like, and what could be changed or added to the unit to make it better.

Annotated Bibliography for Chapter 4

Farm Books and Resources

Cooney, B. (1979). Ox-cart man. New York: Scholastic, Inc.

Describes what a farm family grows and makes throughout the year to sell at the market in the fall.

Miller, J. (1986). Seasons on the farm. New York: Scholastic, Inc.

Photographs and a story describe the seasons on a farm.

Murphy, D. J. (1992). Agriculture in the USA today. San Francisco: Mellen Research University Press.

A resource book for teachers that provides background information, student activities, questions for discussion, vocabulary words, and teacher and pupil resources of available materials related to agriculture.

Poskanzer, S. C. (1989). What's it like to be a dairy farmer. Mahway, NJ: Troll Associates.

Follows a family of dairy farmers throughout their day as they tend the cows, operate milking machines, and deliver milk to a refrigerated truck which takes it to a dairy plant to be pasteurized.

Reque, B. R. (1989). Heath social studies: Homes and neighborhoods. Lexington, MA: D. C. Heath and Company, pp. 90-99.

Describes different products produced by farmers.

Swayne, D., & Savage, P. (1978). I am a farmer.

Philadelphia: J. B. Lippincott Company.

Farmer Sue describes some of the chores, animals, and helpers on her farm.

Farm Videos and Filmstrips

Farms in the seasons series. (1976). Farms in the fall. (JOUR).

Presents fall as harvest time on most farms.

Farms in the seasons series. (1976). Farms in the spring. (JOUR).

Portrays life on the farm in spring: snow melting, birds arriving, planting crops.

Farms in the seasons series. (1976). Farms in the winter. (JOUR).

Winter brings cold temperatures. Fields are deserted. Yet grocery counters are filled with fruits and vegetables from climates where crops grow all winter long.

Visit to a dairy farm. (1987). (JOUR).

A visit to a dairy farm, and a district agricultural show, milking cows, and feeding out the hay.

Farm Animals Books and Resources

Blood, C. L., & Link, M. (1976). The goat in the rug. New York: Parent's Magazine Press.

Story is told by Geraldine the goat about how her Navajo owner, Glenmae, uses her goat's mohair to make a rug.

Bonforte, L. (1980). Who lives on the farm? New York: Merrigold Press.

Describes the different animals that live on the farm. Good illustrations.

Brown, M. W. (1989). Big red barn. New York: Scholastic, Inc.

Describes animals that live in the big red barn together.

Carruth, J. (1973). My big book of farm animals. New York: E. P. Dutton & Co., Inc.

Describes different farm animals and babies of the farm and what they like to eat.

Coldrey, J. (1987). Where animals live: The world of chickens. Milwaukee: Garth Stevens Publishing.

Simple text with photographs depicts chickens feeding, breeding, and defending themselves in their natural habitats.

Cowley, J. (1990). The farm concert. San Diego, CA: The Wright Group.

Noisy farm animals wake up the farmer. What will he do? Easy to read.

Curran, E. (1985). Hello, farm animals. Mahwah, NJ: Troll Associates.

Depicts farm animals in their natural setting, doing their customary activities. The cassette tape available reads the story and also has a description of a farm for children to listen. Big book, cassette, and six readers are available.

Cutting, J. (1988). The farm. San Diego, CA: The Wright Group.

A farm animal counting book, has two word phrases and is easy for young readers.

Damon, L. (1988). Hide-and-seek on the farm. Mahwah, NJ: Troll Associates.

As the barnyard animals play hide-and-seek, the reader can join in by helping locate the hiding animals. Easy to read.

dePaola, T. (1990). Charlie needs a cloak. New York: Scholastic, Inc.

A story of a shepherd describing the method used to make a new cloak from shearing the sheep to the finished product.

dePaola, T. (1978). Pancakes for breakfast. New York: Scholastic, Inc.

A wordless picture book showing a lady trying to make pancakes for breakfast. Students or the class could write the text for the story.

Dodd, M. M. (1965). All kinds of cows. Chicago: Follett Publishing Co.

Discusses all kinds of cows, where they are kept, and the products we get from them.

Dolch, E. W., & Marguerite, P. (1958). On the farm. Champaign, IL: Garrad Publishing Co.

Easy Dolch reader with short chapters about animals and happenings on the farm.

Fox, M. (1986). Hattie and the fox. New York: The Trumpet Club.

Hattie the hen spies a fox in the bushes, but the other farm animals don't believe her until the fox comes out. Hattie escapes. A read-aloud predictable book.

Gammell, S. (1981). Once upon MacDonald's farm New York: Macmillan Publishing Co.

MacDonald tries farming with exotic circus animals but has better luck with his neighbor's cow, horse, and chicken--or does he?

Gibbons, G. (1985). The milk makers. New York: Aladdin Books, Macmillan Publishing Co.

Explains how cows produce milk and how it is processed before being delivered to stores.

Hackett, J. K., Moyer, R. H., & Adams, D. K. (1989).

Merrill science, level 1. Columbus, OH: Merrill Publishing Co., pp. 26-27 and pp. 40-41.

Classroom science textbook.

Helweg, H. (1978). Farm animals. New York: Random House.

Identifies and explains the usefulness of animals commonly found on farms.

Humphrey, H. (1978). The farm. Garden City, NY:

Doubleday & Company, Inc.

Shows many different animals that live on a farm.

It is a story of a real farmer and his family. It describes farm life using simple text.

Hutchins, P. (1968). Rosie's walk. New York: Aladdin Books, Macmillan Publishing Co.

Rosie the Hen went for a walk around the farm, oblivious to the fox following her.

Kaufman, E. E. (1992). Baby animals. Scholastic Book Fairs.

An informational book about baby farm animals.

Kaufman, E. E. (1984). Farm animals. Scholastic Book Fairs.

An animal information book that describes farm animals.

King, P. E. (1986). Down on the funny farm. New York: Random House.

A farmer thinks he is getting a bargain when he buys a farm for \$1.00 until he finds out that all the animals are mixed up as to what their job on the farm is. A Step into Reading Book: Step 2 Book, grades 1-3.

Jacobsen, K. (1986). A new true book: Farm animals. Chicago: Children's Press.

Briefly describes some of the most common farm animals: chickens, cows, pigs, sheep, goats, and horses.

Lenski, L. (1946). My friend the cow. Chicago: National Dairy Council.

A mother tells her son about how milk gets from the cow to their house.

Martin, B., Jr., & Archambault, J. (1986). Barn dance! New York: Henry Holt & Company.

Unable to sleep on the night of a full moon, a young boy follows the sound of music across the fields and finds an unusual barn dance in progress.

Melser, J. (1990). Yes, ma'am. San Diego, CA: The Wright Group.

The traditional rhyme adapted by June Melser.

Good poem for choral reading with the class.

Miller, J. (1983). Farm animal counting book. New York: Scholastic, Inc.

Counts farm animals and also has combining and comparison questions for students to answer.

Moncure, J. B. (1975). Thank you, animal friends. Chicago, IL: Children's Press.

Briefly introduces some of the useful products which sheep, hens, cows, and bees provide for man. Big, colorful pictures.

Pearson, T. C. (1984). Old McDonald had a farm. New York: Dial Books for Young Readers, E. P. Dutton, Inc.

The inhabitants of Old McDonald's Farm are described verse by verse.

Provinsen, A., & Provinsen, R. (1978). The year at maple hill farm. New York: Atheneum.

This story is about farm animals and what happens during one year on a farm.

Rae, M. M. (1988). The farmer in the dell: A singing game. New York: Puffin Books.

This illustrated edition includes the entire song with the music and ideas for playing this traditional game.

Sharr, C. (1972). Milk. New York, NY: Wonder Books.

Describes all kinds of animals that produce milk, but mainly focuses on cow's milk. Excellent nonfiction book that can be read aloud. It has controlled vocabulary and may be appropriate for young readers.

Toboni, V. (1991). Farm animals theme unit. Cypress, CA: Creative Teaching Press, Inc.

Provides a variety of activities and reproducibles for classroom use centered around farm animals. This resource book is available from Creative Teaching Press, Inc., P.O. Box 6017, Cypress, CA 90630-0017.

Warren, J. (1990). Animal piggyback songs. Everett, WA: Warren Publishing House.

Songs about a variety of topics that are sung to familiar tunes, including a section on farm animals. This resource can be purchased from Warren Publishing House, Inc., P.O. Box 2250, Everett, WA 98203.

Warren, J. (1990). Animal rhymes. Everett, WA: Warren Publishing House.

"Down on the Farm" is a rhyming poem about farm animals that is included in this book. The pages can be reproduced for classroom use to make a book for children to read and color. This resource can be purchased from Warren Publishing House, Inc., P.O. Box 2250, Everett, WA 98203.

Williams, S. (1989). I went a walking. New York: Gulliver Books, Harcourt, Brace, Jovanovich.

A rhythmic, repetitive text for young readers to read and recite along with. During the course of his walk a young boy identifies animals of different colors (mainly farm animals). The pattern of the story provides a basis for making other stories about the farm.

Farm Animals Videos and Filmstrips

Animal families series. (1989). (BARR). Animal families:

The sheep.

Gives the viewer a glimpse at the farm life of the sheep. Most sheep are raised for their fine wool. Several types of wool, such as long wool, short wool, fine wool, and coarse wool can be obtained from sheep. Also the film covers the process from sheep to yarn.

Barnyard animal series. (1988). Barnyard babies. (SVE).

Visit the barnyard and get acquainted with the cows, horses, sheep, chickens, pigs, and other barnyard animals.

Chick chick chick. (1975). (CHUR).

Poultry narration. About chicks, chickens, and the dramas of an old fashioned barnyard, cluck, cluck, cluck . . .

Cow, the. (1968). (CF)

Non-narrative. A newborn calf licked dry by its mother tries to stand on collapsible legs and eventually finds its first meal.

Eggs to market: The story of automated egg processing.

(1964). (BFA).

Studies the production, processing, and distribution of eggs. Emphasizes automated egg processing.

Farm animals in rhyme. (1968). (CORF, SIMO).

Rhymes take us on a trip around a farm. Familiar animals, the sounds they make, and the activities.

Milk: From farm to you. (1972). (EBEC).

Story of milk from the cow to the carton. Shows a modern dairy farm, tasks of various workers, products made from milk.

National Geographic Society. (1977). Animals around you: Farm animal.

A filmstrip with cassette tape that explains some of the different farm animals and what they are raised to provide. Explains the steps and processes by which much of their food is brought from the farm to them.

National Geographic Society, (1980). Our foods and where they come: Meat, fish, and poultry. Washington, D.C.

A filmstrip with cassette that explains where our meat and meat products come from. Shows the process from the source to the store.

Reading Rainbow Series. (1989). (GPN). Milk makers.

How this most nutritious food travels from a dairy cow to the neighborhood supermarket. LeVar learns how to milk a cow by hand and gets an introduction to the modern way of milking and feeding 600 cows.

Visit to series. (1975). Visit with farmer Joe. (JOUR).

Introduces children to the world of farm animals
and their products.

Orchards/Vineyards - Fruits of the Yakima Valley Books and Resources

Day, J. W. (1976). What is a fruit? New York: Gold Press, Western Publishing Co., Inc.

Tells about different kinds of fruits: What they look like, gives a description, and about their seeds. Good illustrations.

Hackett, J. K., Moyer, R. H., & Adams, D. K. (1989). Merrill science, level 1. Columbus, OH: Merrill Publishing Co., pp. 152 and 159.

Classroom science textbook.

Russell, S. P. (1962). About fruit. Chicago, IL: Melmont Publishers, Inc.

Describes many different kinds of fruits, where they are grown, and distinctive characteristics of each fruit. A good resource for teachers to share with students.

Fruits of the Yakima Valley Video and Filmstrips

National Geographic Society. (1980). Our foods and where they come from: Fruits and vegetables. Washington, D.C.

Describes how fruits and vegetables are grown and the process of getting them from farm to factory for processing and to the store.

Fruits of the Yakima Valley Apple Books and Resources

Aliki. (1963). The story of Johnny Appleseed. New York:
The Trumpet Club.

Describes the life of Johnny Appleseed in a story
format. This is a big book.

Gibbons, G. (1984). The seasons of Arnold's apple tree.

San Diego: Harcourt, Brace, Jovanovich.

All through the seasons Arnold enjoys a variety of
activities as a result of his apple tree.

Includes a recipe for apple pie and a description
of how a cider press works.

Schnieper, C. (1987). An apple tree through the year.

Minneapolis: Carolrhoda Books, Inc.

Follows an apple tree through the four seasons,
detailing the yearly growth cycle and examining
the ecosystem of the entire apple orchard.

Fruits of the Yakima Valley Apple Videos and Filmstrips

A is for apple. (1982). (HAND).

Growing of the apples, varieties, and suitable climate conditions. Techniques of budding and grafting. Nutrition, ways to serve, and more apple lore.

Fresh Washington apples: A growing tradition. (1985).

(MTPS).

The Washington apple industry from planting, pruning, and thinning, to picking and the warehouse processes. Distribution and the satisfied customers.

Crops/Vegetables Books and Resources

Brown, M. W., & Hurd, E. T. (1951). Two-little gardeners.

Racine, WI: Western Publishing Co., Inc.

Describes two children planting a garden and how the vegetables grow from seed to harvest.

Ehlert, L. (1987). Growing vegetable soup. San Diego:

Harcourt, Brace, Jovanovich.

A father and child grow vegetables and then make them into a soup.

Lerner, S. (1967). I like vegetables. Minneapolis, MN:

Lerner Publications Company.

Describes different vegetables, how they grow, and the importance of vegetables in our diet.

Moncure, J. B. (1975). Plants give us many kinds of food.

Elgin, IL: The Child's World, Inc.

Introduces some of the seeds, leaves, roots, and fruit of plants that can be used as food by man and animals.

Sobol, H. L. (1984). A book of vegetables. New York:

Dodd, Mead, & Company.

Introduces fourteen vegetables including brussel sprouts, cauliflower, onions, and zucchini and describes the plants on which they grow. Good photographs.

Crops/Vegetables Videos and Filmstrips

Farming. (1985). (NAGE).

The importance of farms, kinds of crops grown on farms, farms that raise animals, and stages of production of agriculture from seed to crop to market.

National Geographic Society. (1980). Our foods and where they come from: Fruits and vegetables. Washington, D.C.

Describes how fruits and vegetables are grown and the process of getting them from farm to factory for processing and to the store.

Crops/Vegetables Pumpkin Books and Resources

Berenstain, S., & Berenstain, J. (1990). The Berenstain bears and the prize pumpkin. New York: Random House.

Mama Bear's reminders about the true meaning of Thanksgiving are left in the dust as the spirit of competitions takes over and Papa Bear and the cubs begin a campaign to win first prize in the Thanksgiving pumpkin contest.

Kroll, S. (1984). The biggest pumpkin ever. New York: Scholastic, Inc.

Two mice fell in love with the same pumpkin and each did not know the other mouse was taking care of it, one by day and the other by night. The pumpkin grew and grew and grew into the biggest pumpkin ever.

Titherington, J. (1986). Pumpkin, pumpkin. New York: Scholastic, Inc.

Describes how a boy planted a pumpkin in spring and it grew to be used to make a jack o'lantern in the fall.

Crops/Vegetables Wheat Books and Resources

Galdone, P. (1973). The little red hen. New York:

Clarion Books.

A cat, dog, mouse, and red hen live together. Hen does all the work. Red Hen decides to plant wheat to eventually bake a cake.

Miller, J. P. (1978). The little red hen. Racine, WI:

Gold Press, Western Publishing Co., Inc.

The Little Red Hen found a grain of wheat and plants it. She tries to get her friends to help. The story describes the process of wheat from seed to bread.

Mitgutsch, A. (1981). From grain to bread. Minneapolis:

Carolrhoda Books, Inc.

Highlights the step-by-step process of planting wheat seeds, harvesting the crop, grinding wheat into flour, and baking bread.

Crops/Vegetables Wheat Videos and Filmstrips

Bread. (1987). (EBEC).

Shows the process of bread making. Harvesting wheat, grinding of grain into flour, and the steps for baking bread and other bakery goods.

National Geographic Society. (1980). Our foods and where they come from: Grains and dairy products.

Washington, D.C.

Describes grains and dairy products and shows how these foods are processed to get from farm to store.

Nutrition/Four Food Groups Books and Resources

Adoff, A. (1979). Eats. New York: Lothrop, Lee & Shepard Books.

Poems about food.

Gaskin, J. (1984). Eating. New York: Franklin Watts.

Tells all about food and eating, different kinds of food and what happens when you eat.

Hackett, J. K., Moyer, R. H., & Adams, D. K. (1989).

Merrill science, level 1. Columbus, OH: Merrill Publishing Co., pp. 96-99.

Classroom science textbook.

Johnson, H. L. (1976). Let's make soup. New York:

Lothrop, Lee & Shepard Company.

Step-by-step directions for making vegetable and beef soup and chicken soup with variations on the basic steps.

Moncure, J. B. (1980). Magic monsters learn about health.

Elgin, IL: The Child's World, Inc.

Magic monsters demonstrate the results of following a few basic health rules.

Morris, A. (1989). Bread, bread, bread. New York:

Scholastic, Inc.

Describes different kinds of bread that is eaten and has pictures of how to make bread. Simple, appealing text with colorful photographs.

National Dairy Council. (1992). Nutrition education materials. Seattle, WA: Washington State Dairy Council.

The Washington State Dairy Council has a list of resource materials available to purchase for classroom use. A variety of units, for different grade levels, provide an excellent resource for teaching nutrition and about the four food groups. The address is: Washington State Dairy Council, 3830 Stone Way North, Seattle, WA 98013.

Showers, P. (1985). What happens to a hamburger. New York: The Trumpet Club.

Describes what happens when food is digested and how it helps your body to grow.

Nutrition/Four Food Groups Videos and Filmstrips

Food to live and grow. (1975). (BFA).

Introduces the basic food groups. Encourages children to eat a variety of foods.

Reading Rainbow Series. (1984). Gregory the terrible eater. (GPN).

The story of Gregory, a young goat who worries his parents by being a fussy eater. LeVar visits a zoo to find out some surprising facts about the eating habits of goats and other animals.

Additional Resources

American Sheep Producers Council, Inc.

200 Clayton Street

Denver, CO 80206

303/399-8130

Divisions: American Lamb Council/American Wool Council

Pendleton Woolen Mills

Home Economics Department

218 S.W. Jefferson Street

Portland, OR 97201

Washington State Apple Commission

P.O. Box 18

Wenatchee, WA 98801

Washington State Beef Commission

1720 Canyon Road

P.O. Box 799

Ellensburg, WA 98926

Washington Wheat Commission

409 Great Western Building

Spokane, WA 99201

CHAPTER 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The purpose of this project was to develop a thematic unit that will integrate social studies and science with reading, writing, and language development. A focus was to incorporate into the unit student learning objectives, in social studies and science, established for first grade students in the East Valley School District. Another goal was to create activities that would develop reading, writing, and language skills in relevant situations.

Farms were chosen as the topic for the thematic unit because they encompass many areas that relate to the everyday world of children. Most children are very interested in learning about farms and have some prior knowledge related to farms. Using their interest and prior knowledge as a basis to begin each section of the thematic unit established a foundation from which to build and add to their learning.

In reviewing the literature, the author looked at teaching practices in social studies and science. The objective of this search was to see if there may be a better way to teach some parts of these subjects through

integration with other curriculum areas. Further review of the literature related to establishing a theoretical basis for implementing thematic teaching and developing reading, writing, and language, while still meeting the goals of the content areas.

The integration of literature into social studies and science units, the use of semantic mapping, and literature webbing were reviewed as techniques to link the children's experiences to the goals the teacher had established for these content areas. The literature can provide a background knowledge, remind the children of related ideas, and may help them to have a better understanding of the content material. Through semantic mapping and literature webbing, students ideas can be related to the information that is to be learned and allows them to possibly see new relationships and develop new understandings.

Conclusions

The literature reviewed in Chapter 2 supports the use of thematic teaching and integrating social studies and science across the curriculum. Teaching in this manner requires extensive planning and searching for materials that support and provide the needed content to meet the educational needs of the students. The value of thematic teaching is that the students can bring their knowledge to the study to establish the basis for beginning a unit. This basis allows the teacher to see the needs of the students,

provide the necessary materials for learning, and plan for the integration of social studies and science.

Recommendations

After reviewing the literature and developing the thematic unit, the following recommendations are made:

1. Further research needs to be conducted to determine the validity of thematic teaching and integrating social studies and science across the curriculum.
2. When integrating content areas with other curriculum components, a wide variety of resource materials need to be available to the teacher as well as the students.
3. Resource materials to be used by students need to be at an appropriate reading level.
4. Planning in advance of teaching a thematic unit is a must for effective integration of content areas and locating resource materials.
5. Teachers need to include interesting and fun activities to keep students involved in the learning process.

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APPENDIX A
FARM ANIMAL ACTIVITIES

FARM ANIMALS

cows	pigs	goats	horses
lambs	chickens	dog	cat
meat	milk	cheese	ice cream
yogurt	T-bone steak	hamburger	
wool sheep	eggs	ham	pork chops
beef cattle	dairy cow	rooster	
turkey	ducks		

Beef Cattle

meat
calves
hamburger

Dairy Cows

milk
cheese
ice cream
yogurt
butter

Pigs

bacon
ham
pork chops
meat

FARM ANIMALS

Sheep & Goats

wool
lambs
meat
milk

Poultry

eggs
meat
feathers

Horses

riding

Who Is Your Mother?

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How to Draw Farm Animals

Name _____

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Worksheet 28

Name _____

Make your own farm.

Name _____

Draw some **farm** animals.

Oral Language



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Farm Animal Shapes, page 1

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Farm Animal Shapes, page 2

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Barnyard Gate

Name _____

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Down on Grandpa's Farm

Name _____

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P. E. and Games

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Animal Piggyback Songs

Compiled by
Jean Warren

Illustrated by Marion Hopping Ekberg
Chorded by Barbara Robinson

Warren Publishing House, Inc.
Everett, Washington

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On the Farm

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76 On the Farm

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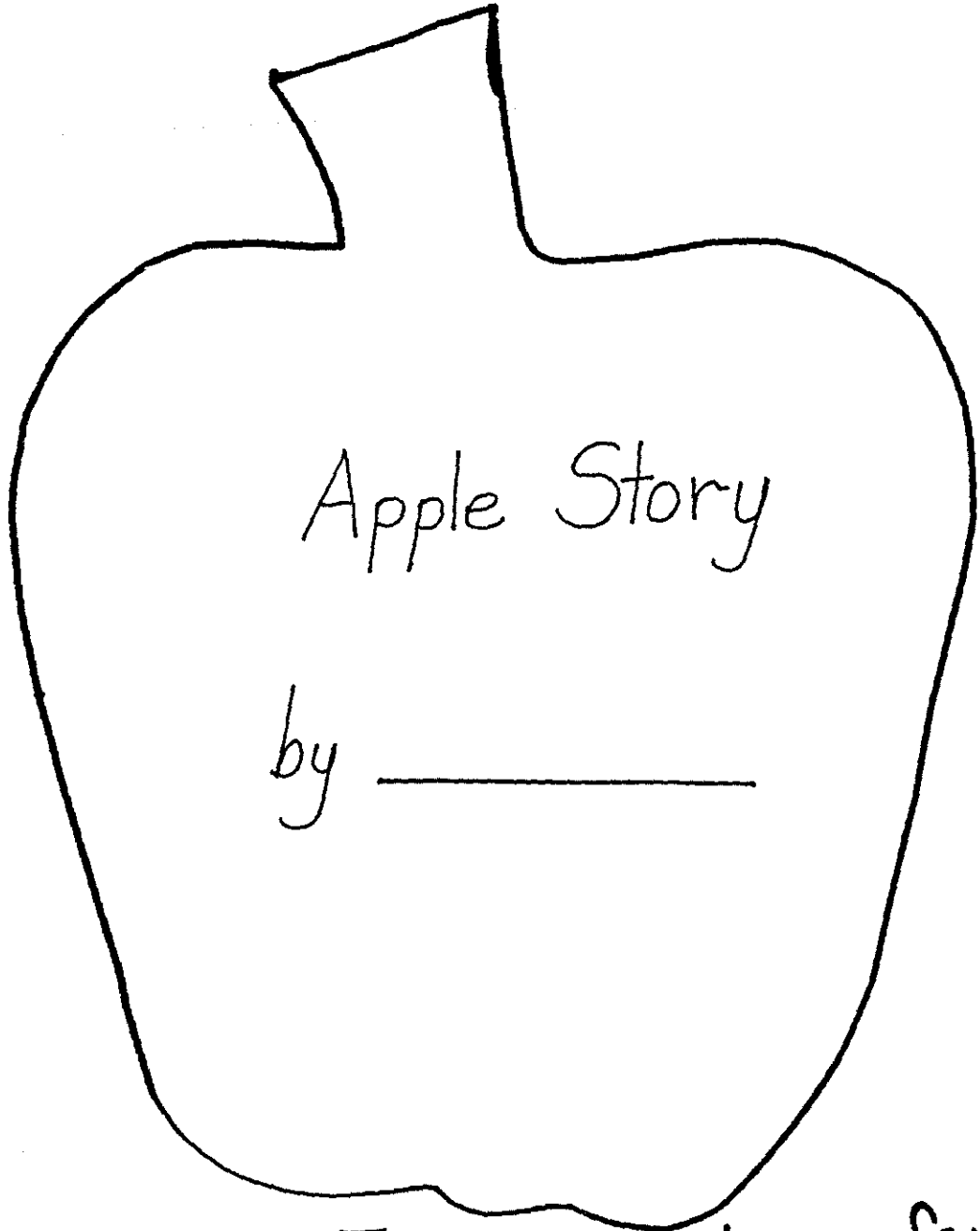
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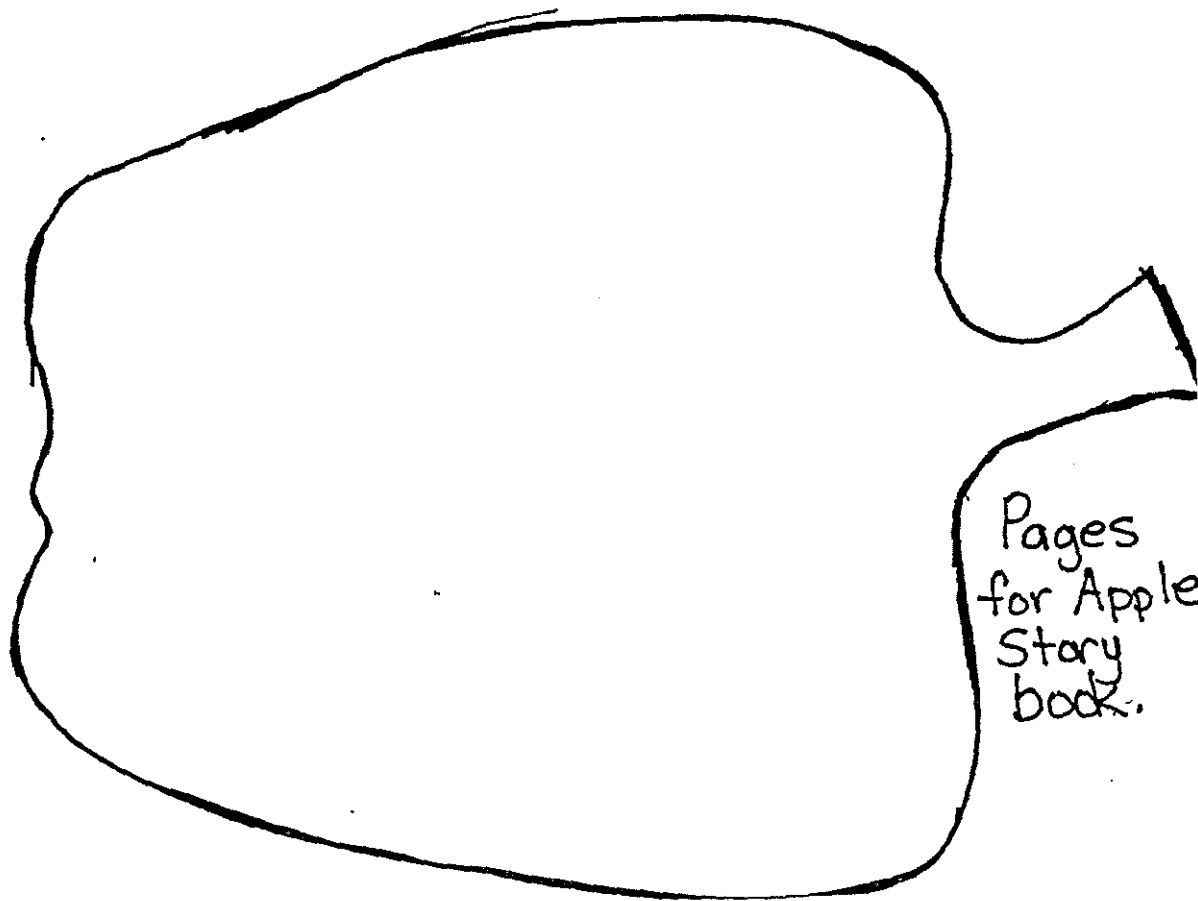
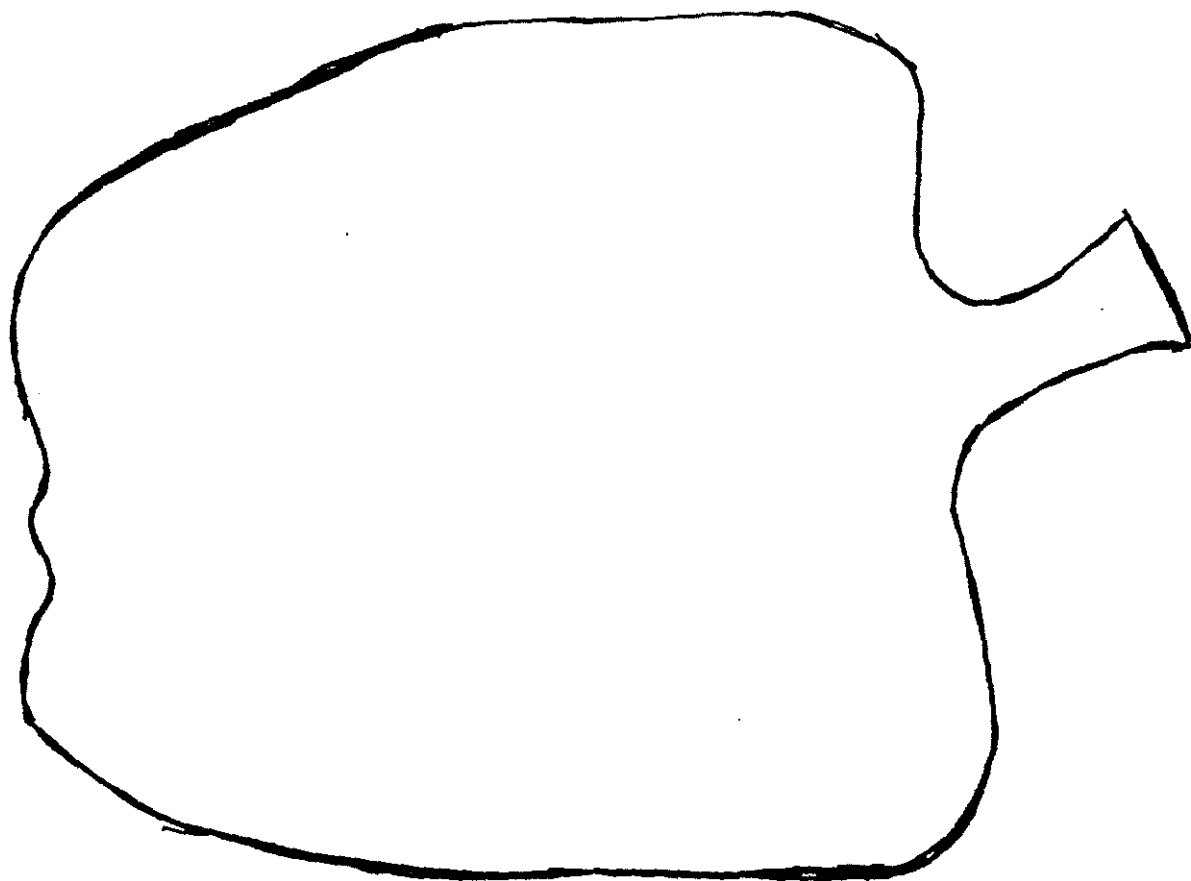
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APPENDIX B
APPLE ACTIVITIES



Apple Tracer Pattern for
cover to the apple story book.



Pages
for Apple
Story
book.

APPLE STORY

1 First come the green buds,
closed up tight.

2 They burst into pink blossoms
in the warm sunlight.

3 Next, small, green apples grow
that you can see.

4 They grow into big, red apples
for you and me.

APPLE STORY

1 First come the green buds,
closed up tight.

2 They burst into pink blossoms
in the warm sunlight.

3 Next, small, green apples grow
that you can see.

4 They grow into big, red apples
for you and me.

APPLE STORY

1 First come the green buds,
closed up tight.

2 They burst into pink blossoms
in the warm sunlight.

3 Next, small, green apples grow
that you can see.

4 They grow into big, red apples
for you and me.

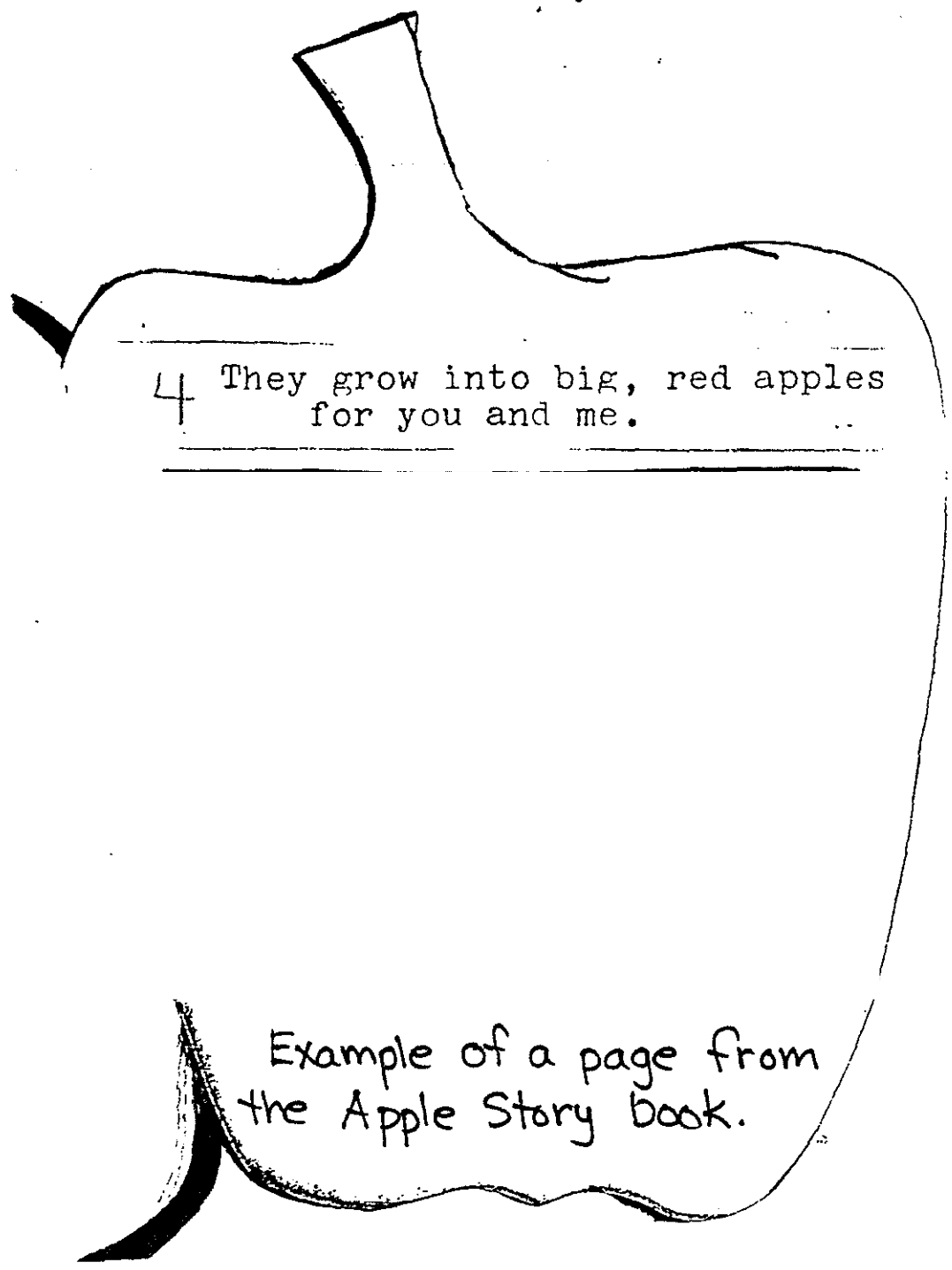
APPLE STORY

1 First come the green buds,
closed up tight.

2 They burst into pink blossoms
in the warm sunlight.

3 Next, small, green apples grow
that you can see.

4 They grow into big, red apples
for you and me.



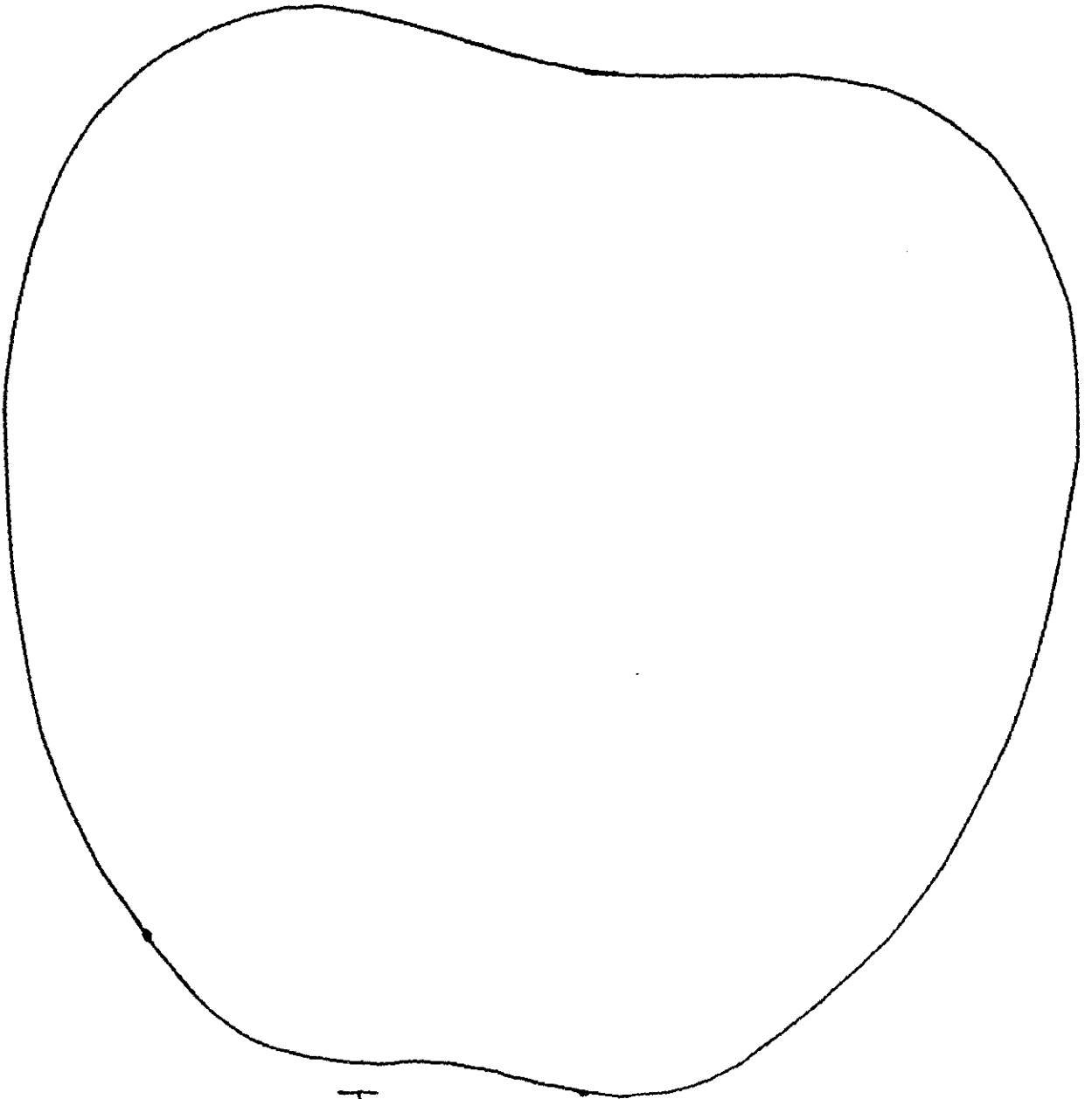
4 They grow into big, red apples
for you and me.

Example of a page from
the Apple Story book.

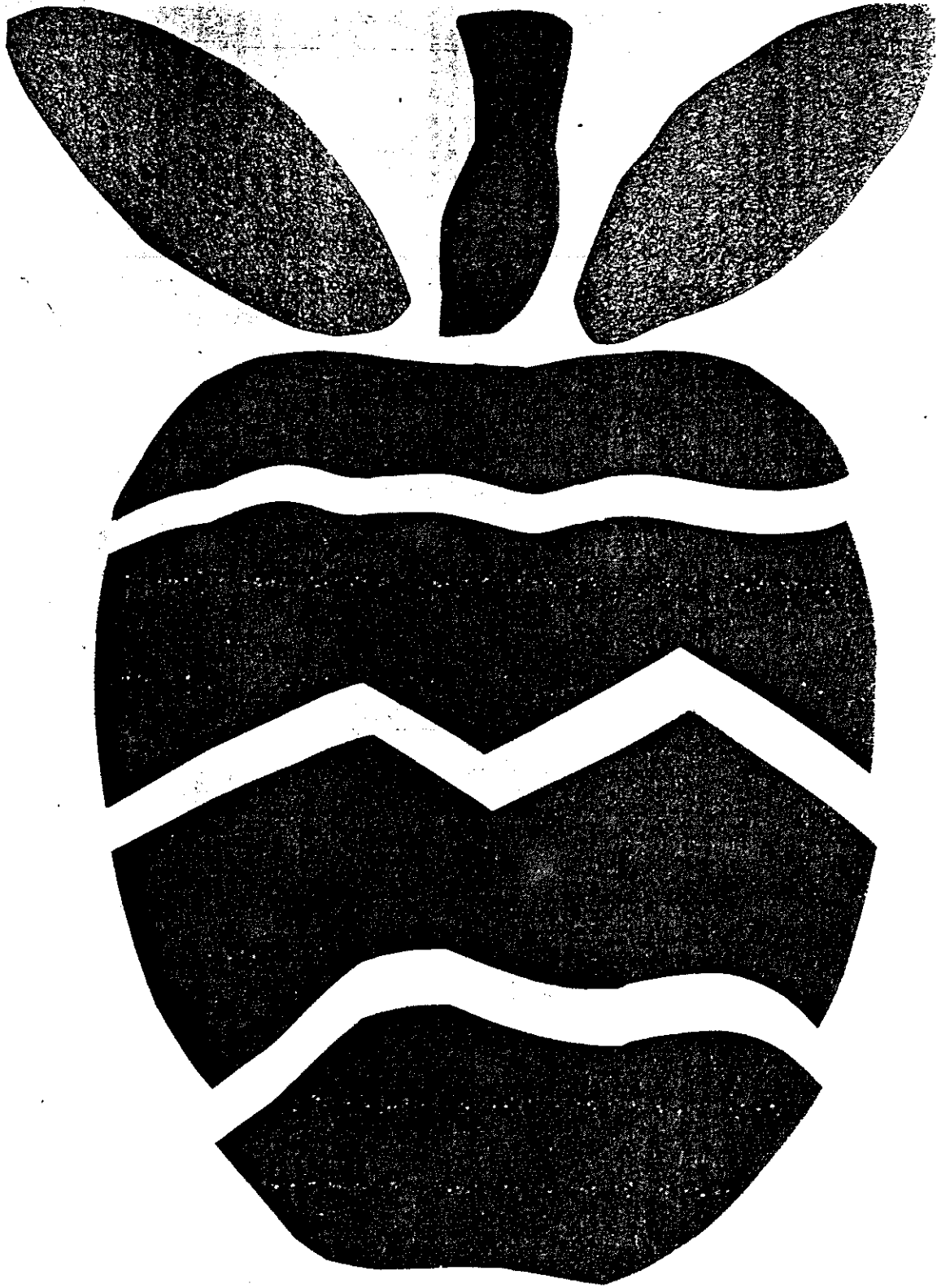
Directions for Apple Puzzle

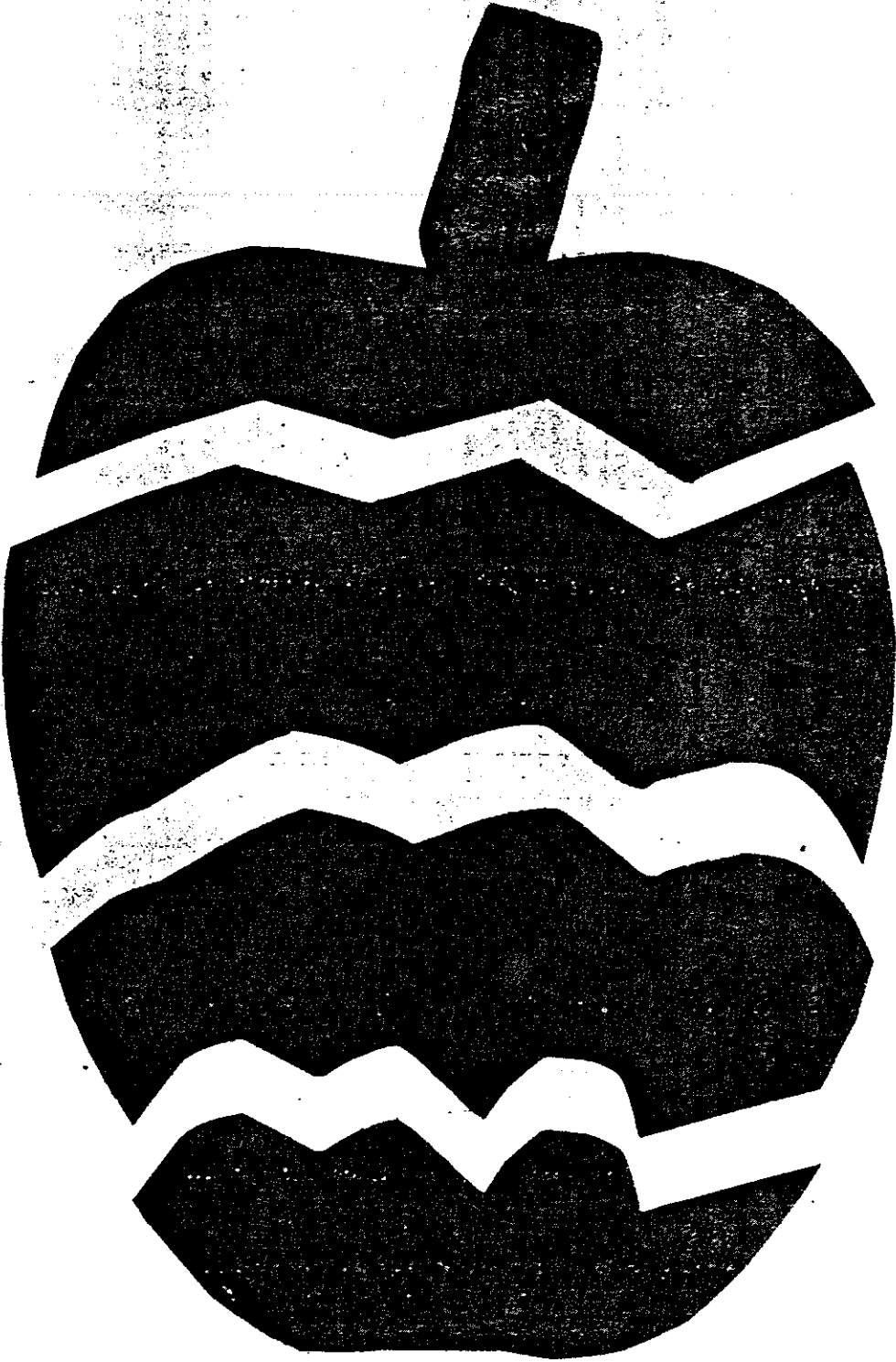
1. Students choose what color apple they would like to make from a choice of red, yellow, or green construction paper.
2. Using the apple tracer, students trace the apple shape on to the construction paper and cut it out.
3. Cut the apple into puzzle-like strips.
4. Paste the strips on to a 9 x 12 piece of construction paper (any color that has been chosen for the background) leaving a space between the strips, so it looks like the pieces will fit together.
5. Students cut the stem and leaves from brown and green construction paper, then paste them on to the apple puzzle in the appropriate place.

Examples of an apple puzzle and the apple tracer are on the following pages.



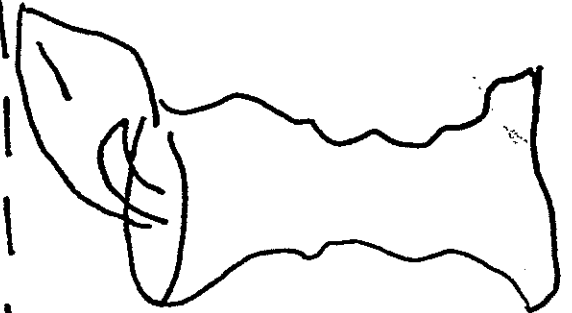
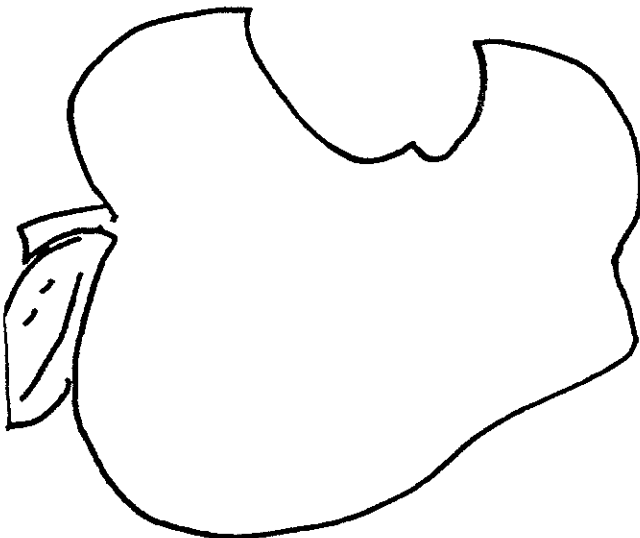
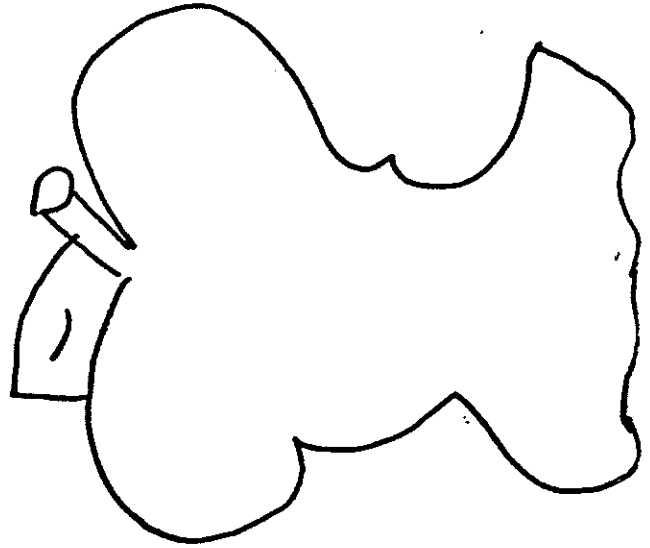
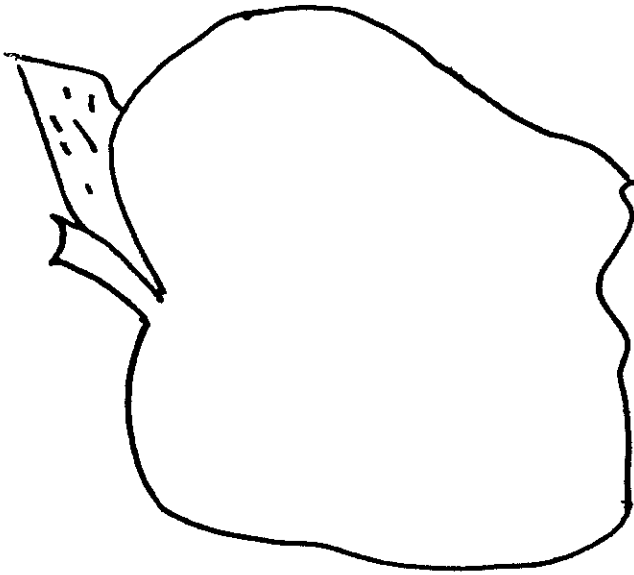
Tracer for Apple Puzzle





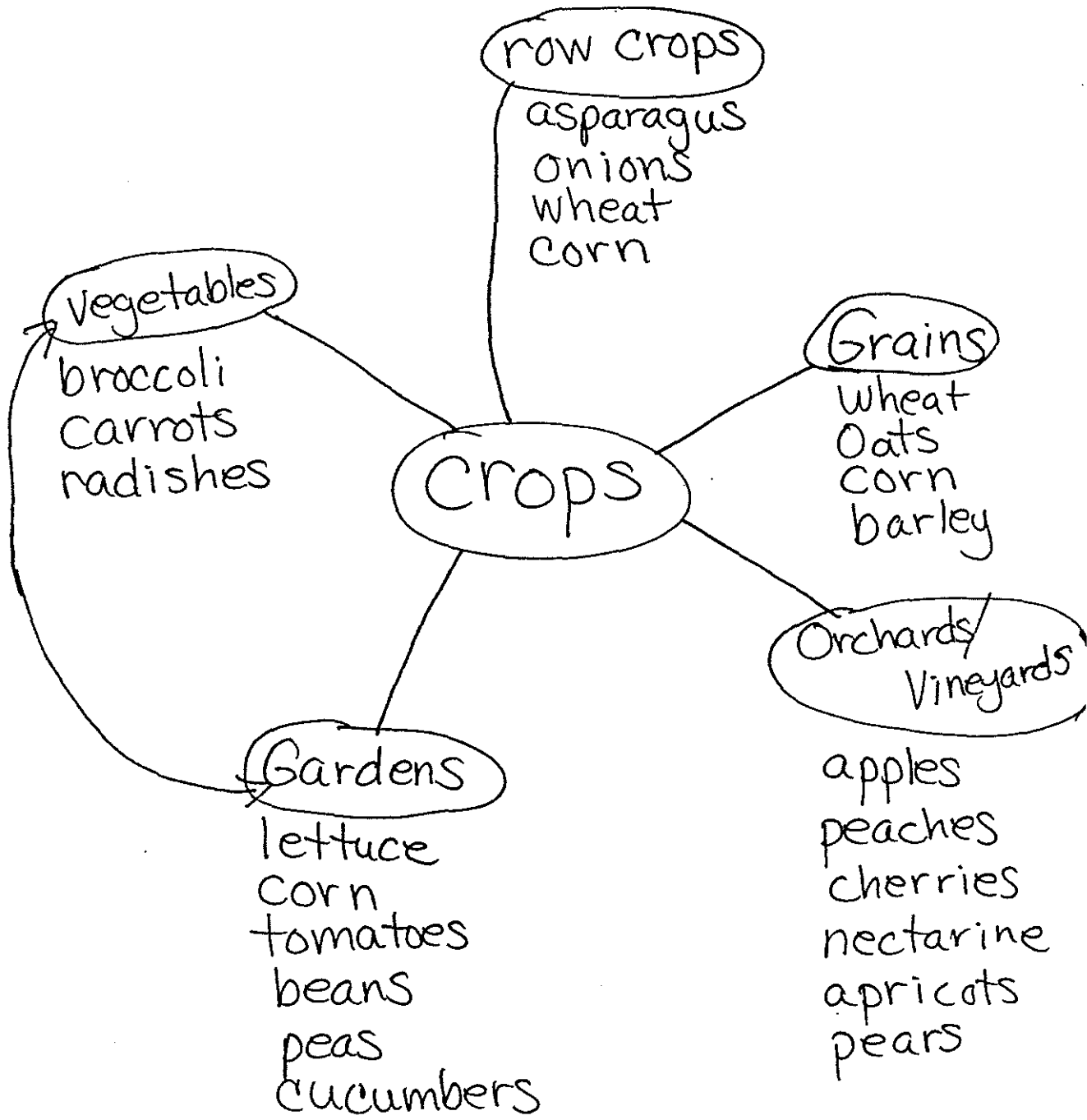
Apple Sequence

Color, cut, place in order, and paste
the apple being eaten.



APPENDIX C

CROPS

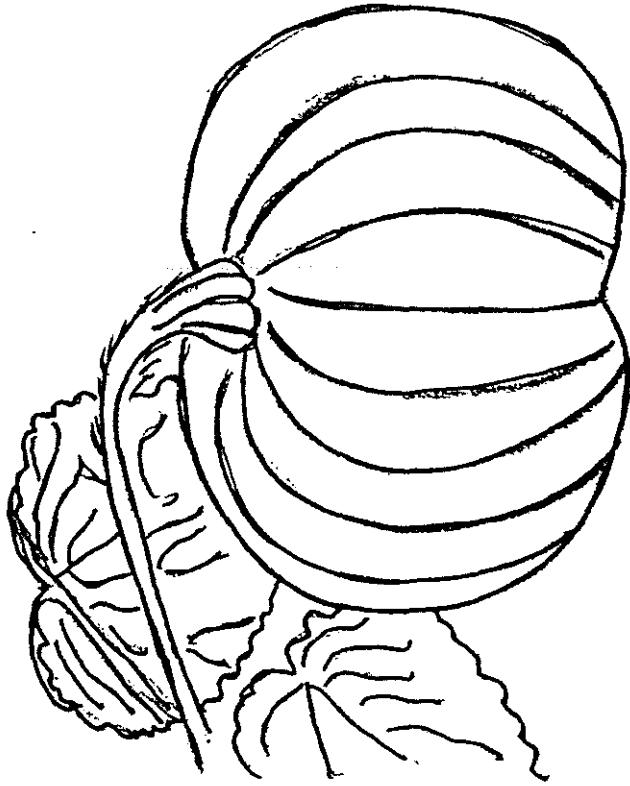


APPENDIX D
PUMPKIN ACTIVITIES

Directions for Pumpkin Story Frame

1. Copy the cover page.
2. Copy pages 1 and 8. On the back of these pages, copy pages 2 and 7.
3. Copy pages 3 and 6. On the back of these pages, copy pages 4 and 5.
4. Stack the pages in the following order from the bottom to the top: cover, pages 1 and 8 placed face down (pages 2 and 7 will be face up), pages 3 and 6 face down (pages 4 and 5 will be face up). Pages 4 and 5 are in the middle of the book.
5. Fold the pages in half and staple the fold. As you turn the pages, they will be in the correct order from the cover to page 8.

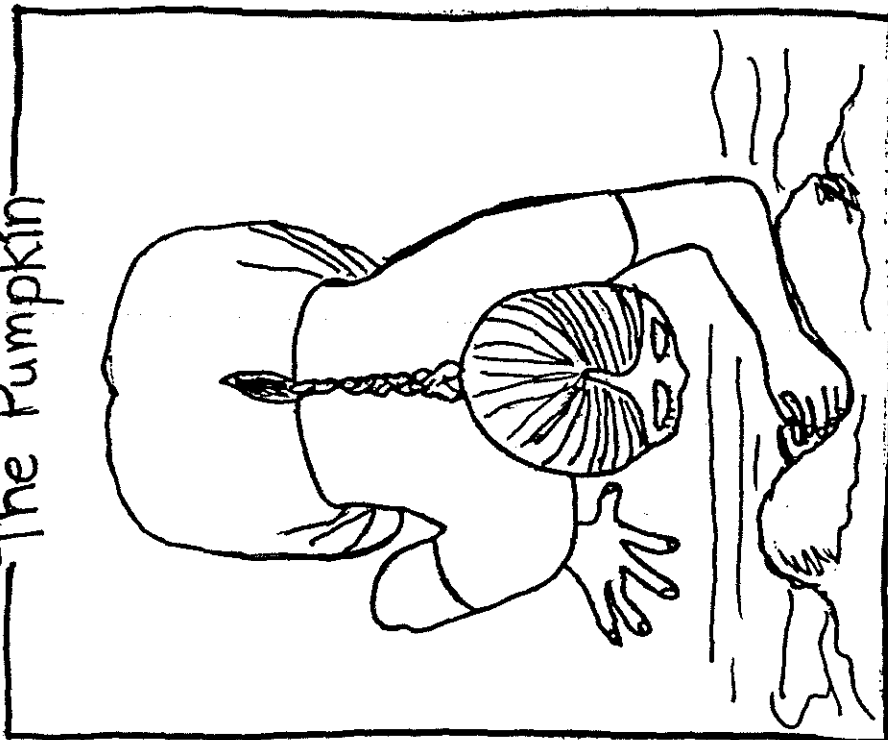
The Pumpkin



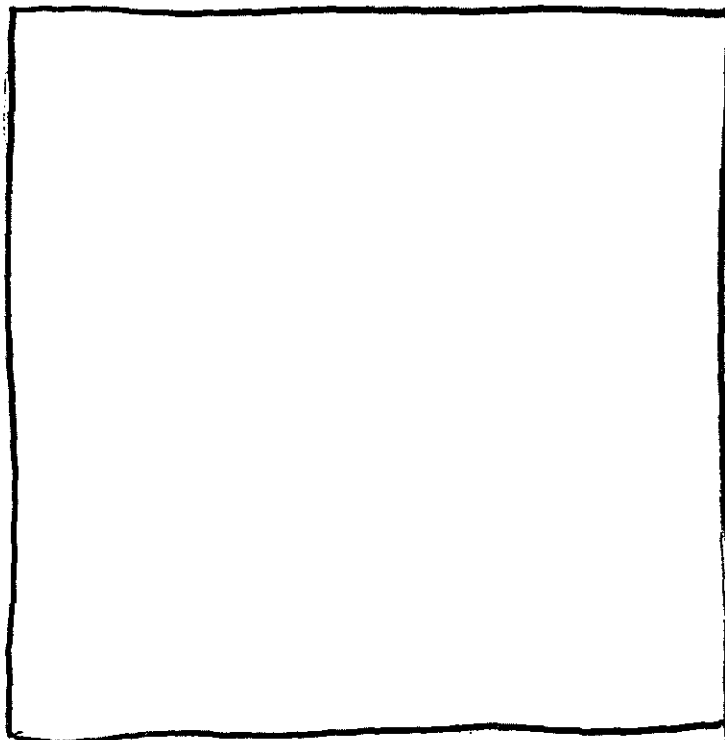
by Jay Cowley

cover

The Pumpkin

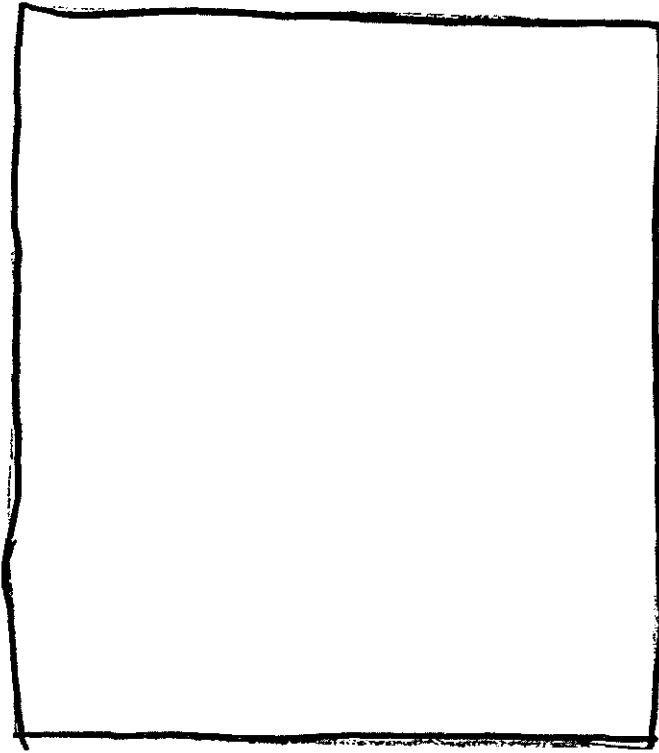


by Joy Cowley



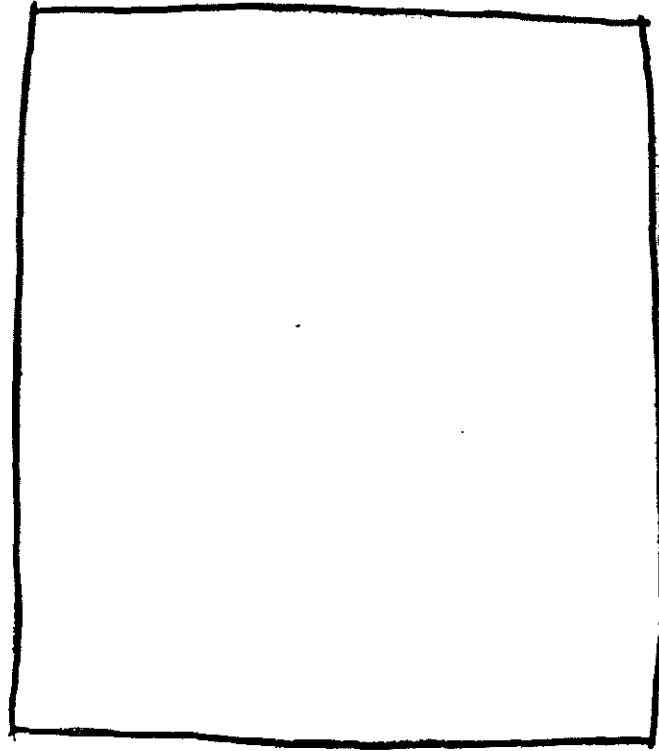
Jumpkin, jumpkin,
we all had pumpkin.

8



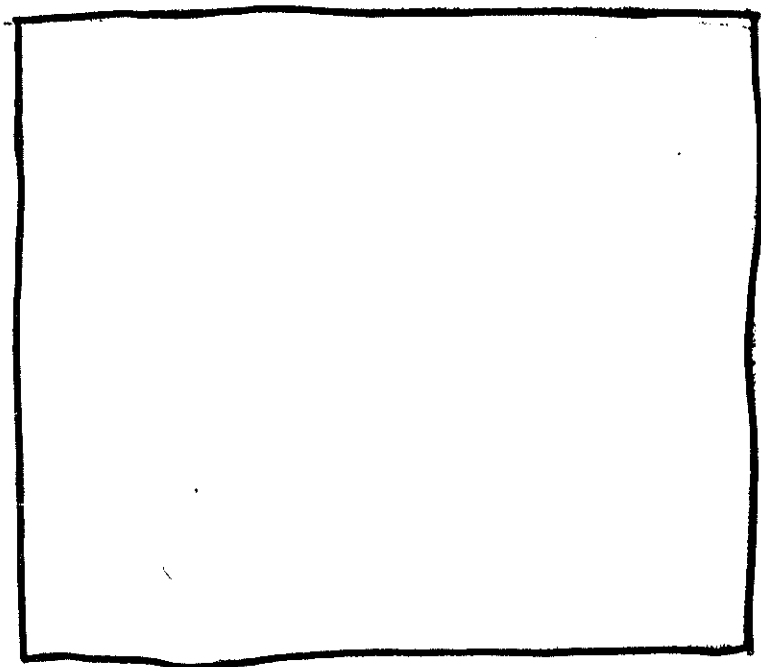
 planted a
pumpkin.
Jimkin, jumpkin,
we'll all have pumpkin.

2



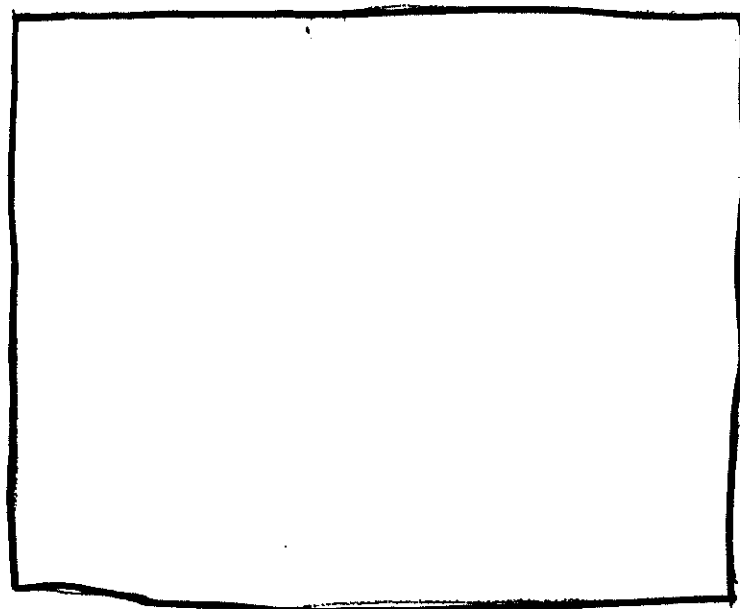
 cut the
pumpkin and put it in
a pot.

7



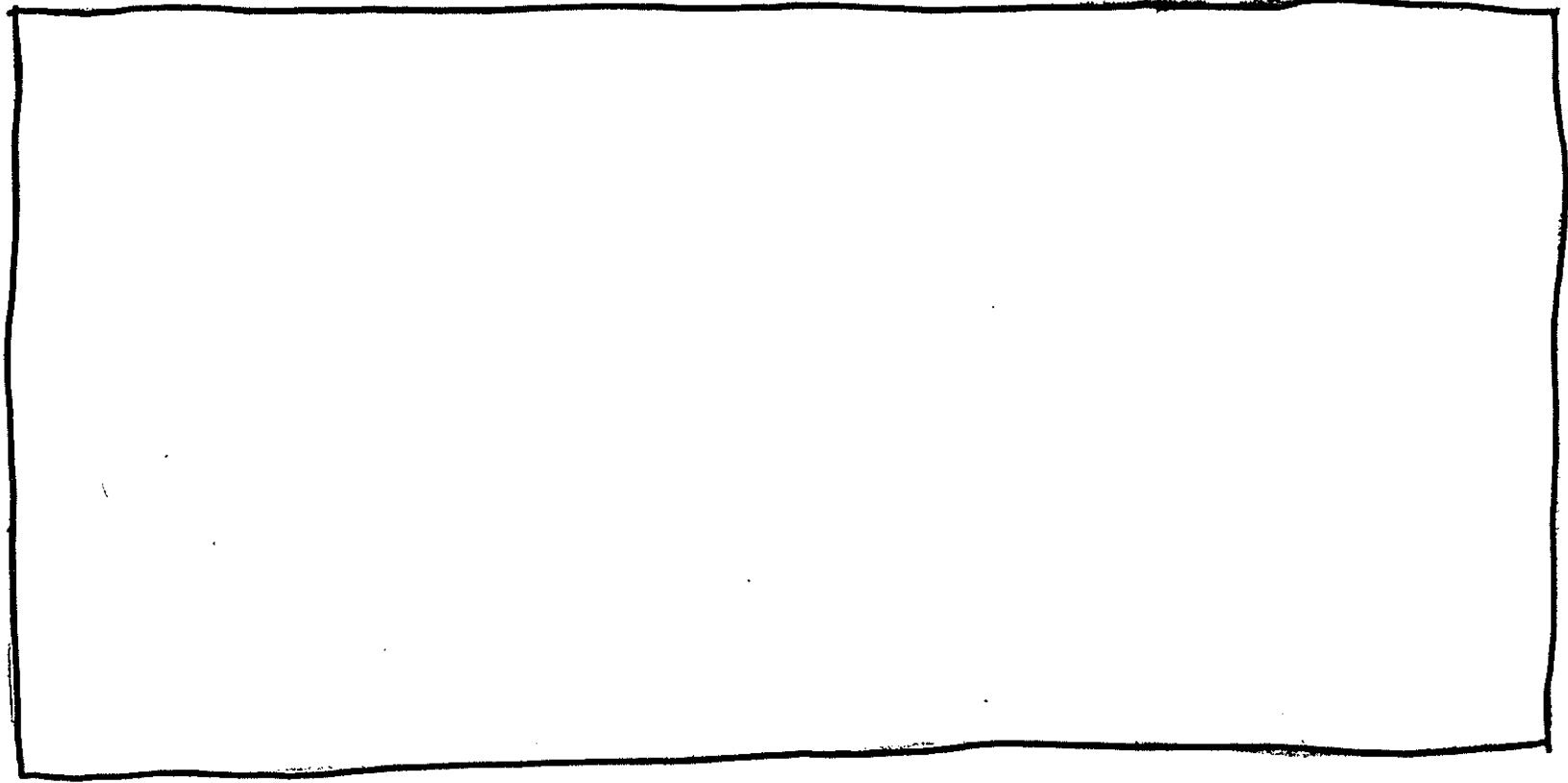
_____ picked the
pumpkin.

6 Jimpkin, jumpkin,
we'll all have pumpkin.



_____ hoed the
pumpkin.

3 Jimpkin, jumpkin,
we'll all have pumpkin.

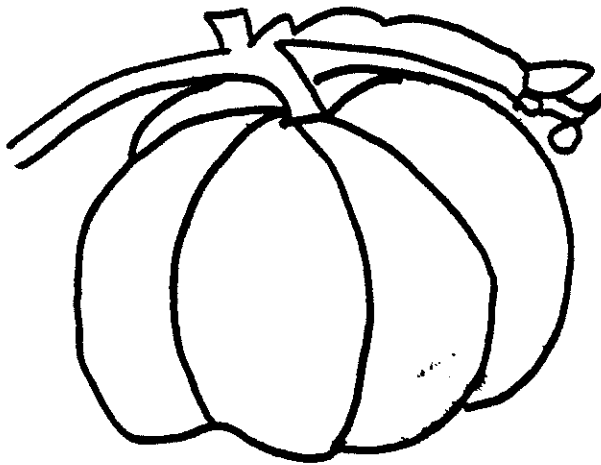


_____ watered
the pumpkin.

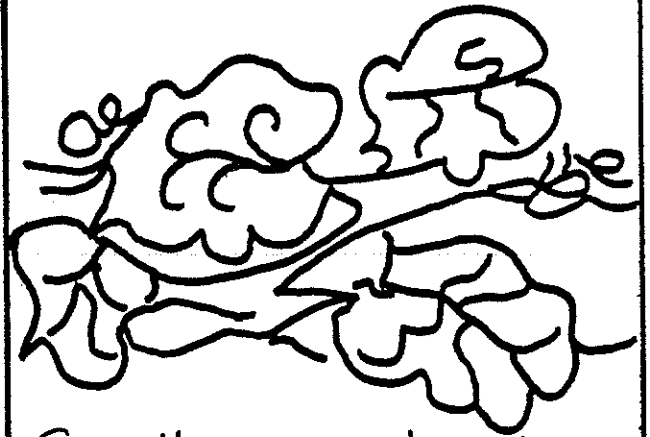
Jimpkin, jumpkin,
we'll all have pumpkin.

4

5



See the big pumpkin.



See the pumpkin vine.



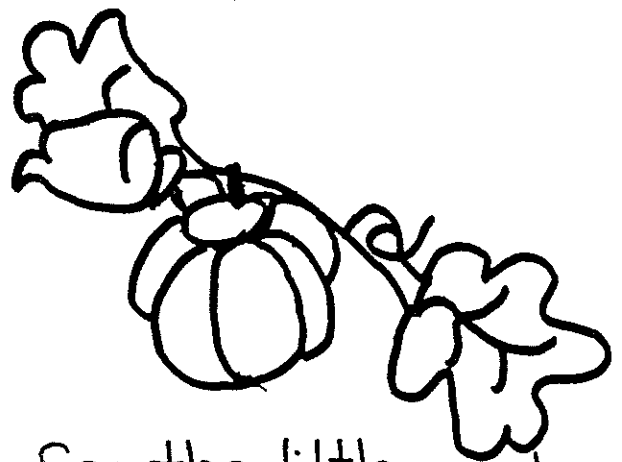
See the jack-o-lantern.



See the pumpkin flower.



See the pumpkin seed.



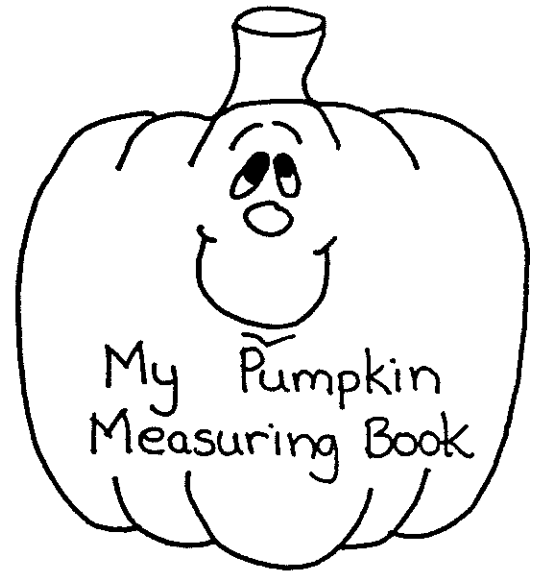
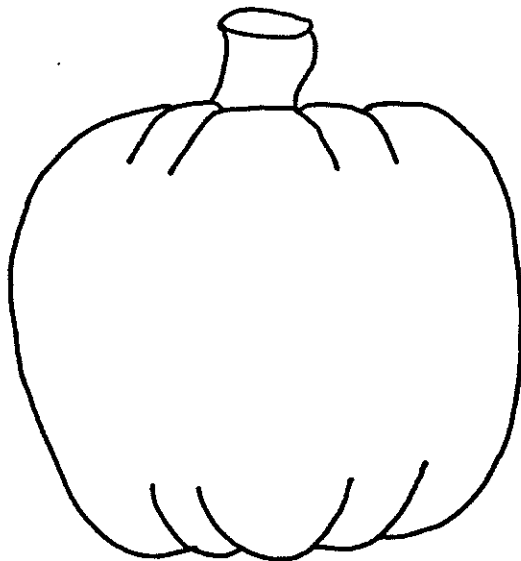
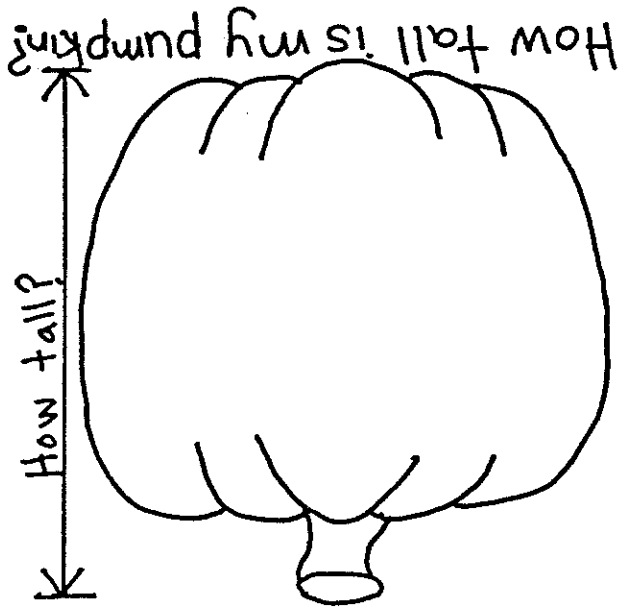
See the little pumpkin.

Directions for Pumpkin Measuring Book

To make the pumpkin measuring book, fold the book in half the "hamburger way" (across the width). Fold in half again so the title "My Pumpkin Measuring Book" is on top.

check guess

check guess

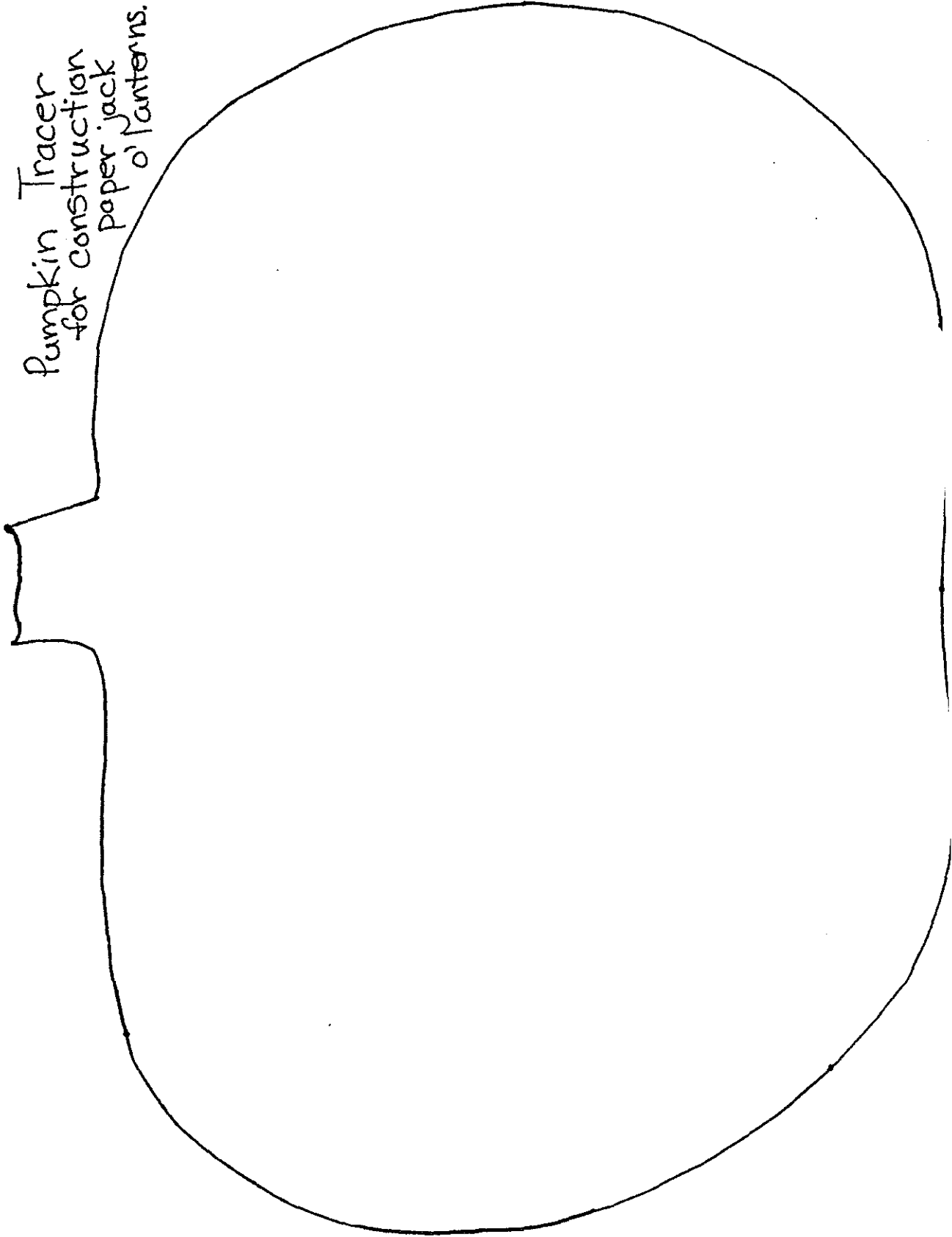


How much does my pumpkin weigh?

guess check

name _____

Pumpkin Tracer
for construction
paper jack
o' lanterns.



APPENDIX E
WHEAT ACTIVITIES

Worksheet 29

Name _____

Please note: Content on this page was redacted due to copyright concerns.

Please note: Content on this page was redacted due to copyright concerns.

Worksheet 29

Name _____

Please note: Content on this page was redacted due to copyright concerns.

Worksheet 30

Name _____

Please note: Content on this page was redacted due to copyright concerns.

APPENDIX F
NUTRITION/FOUR FOOD GROUP ACTIVITIES

Name _____

Placemat for food tasting party.

<u>Name</u>	<u>Four Food Groups</u>
Fruit and Vegetables Group - 4 servings	Milk Group 2-4 servings
Meat and Protein Group - 2 servings	Grain Group 4 servings

On the following pages are pictures of foods in Four Food Groups that can be colored, cut-out and pasted on large construction paper (divided into fourths) to make a placemat for the food tasting party.

Eat foods from each of the four food groups each day.

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Please note: Content on this page was redacted due to copyright concerns.