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Integrating the research process in the early primary curriculum

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Integrating the research process in the early primary curriculum

Abstract

The purpose of this project was to design a developmentally appropriate curriculum that provides primary teachers with the rationale, planning, procedures, and guidance needed to incorporate research projects into their primary grade curriculum. This program is not limited to talented and gifted students; it is recommended for all students.

The literature review consists of profiling the work of teachers and authors in the field of education who incorporate research techniques into their teaching practice. The literature builds a foundation for the importance and benefits of research skills and projects for students of all ages and ability levels.

When primary students are allowed to choose research topics of interest to them they are intrinsically motivated to learn. They become an active part of the learning process by becoming the 'curriculum planners'. Primary age students can produce quality research projects that may change the way we view primary curricula in today's education.

Integrating the Research Process in the Early Primary Curriculum

A Graduate Project

submitted to the

Division of Talented and Gifted Education

Department of Curriculum and Instruction

in Partial Fulfillment

of the Requirements for the Degree

Master of Arts in Education

UNIVERSITY OF NORTHERN IOWA

by

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Titled: Integrating the Research Process in the Early Primary Curriculum

has been approved as meeting the research requirement for the
Degree of Master of Arts in Education).

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ABSTRACT

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Primary age students can produce quality research projects that may change the way we view primary curricula in today's education.

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CHAPTER I

It is the beginning of the second semester. The teacher stands in front of the room and announces that the students will be working on research papers or projects throughout the remaining school year. The teacher's announcement is followed immediately by cheers from the eager twenty-four students. When the cheering dies down, a brainstorming session begins. The students begin by defining what research projects and papers are. Next, the students brainstorm possible research topics. The teacher records the students' suggestions on the chalkboard. Immediately following the brainstorming session, the students record in their journals their top three choices for a research topic. The teacher then helps the students to narrow down their choice to one topic. The children begin working in groups or on an individual basis, searching out information pertaining to their own personal research questions. This scenario would be a common one except for the age of the students: they are all second graders. Any observer may have many immediate questions. Is this a gifted classroom or a regular second grade classroom? How have the students been prepared for such a task? Is this assignment appropriate for young primary age students?

Problem Statement

Teachers often assign research projects to upper primary students, junior high students, high school students, and college students. Projects are usually assigned as a culminating activity to assess skills in writing, library research, speaking, analysis, and synthesis. Project topics may be assigned or chosen by the individual students. However, lower primary students rarely have been given the opportunity to formally explore new areas of interest to them. First and

of interest to them. First and second grade students are regarded as just that, too young to be able to do research. Lower primary age students should be encouraged to develop research skills as a method of acquiring new information that is of a specific interest to them.

Research Question

In what developmentally appropriate ways can first and second grade students (working in groups or individually) plan, investigate, document, and report research projects?

Purpose Statement

The purpose of this project is to design a developmentally appropriate curriculum that provides primary teachers with the rationale, planning, ideas, procedures, and guidance needed to incorporate research projects into their early primary grade curricula. This program is not limited to TAG students, it is recommended for all students. It is designed around the four R's: Research Rationale, Research Readiness, Research Artistry, and Research Rewards.

Project Description

"Integrating the Research Process in the Early Primary Curriculum", the attached project developed by the author, is a program designed for first through third grades. The curriculum is a step by step program that enables elementary teachers to engage early primary students in the research process. Students are given opportunities to investigate, document, and report on research projects. Students may work individually or with a group of peers as they research topics they have chosen. The program consists of cooperative group activities, lesson plans, learning center ideas, a list of materials needed, and student/teacher/parent evaluation forms.

Importance of Project

This project allows teachers to extend the curriculum to provide students with opportunities to explore areas of interest, work with peers, create reports and projects, share data with classmates and parents, and to use alternative assessment tools for self-evaluation. Students will be using the skills of inquiry, reading for information and details, application, analysis, synthesis, and evaluation. Students will have the opportunity to explore research topics and information during classroom time, under teacher supervision, on a weekly basis. Depending on time constraints and students' ability levels, some students may produce up to five research projects a semester. This is a remarkable difference from the one traditional research project or paper often assigned to upper grade level students.

Rationale

Research projects can foster the following objectives for students of all ages:

- * enhance any language arts program
- * expose students to fiction and non-fiction materials
- * introduce students to a variety of research materials
- * develop research skills and techniques
- * encourage and expand students' creativity
- * promote independent study
- * enhance students' higher level thinking skills
- * promote a cooperative classroom environment
- * provide opportunities for parent/student/teacher communication
- * encourage alternative assessment opportunities

When primary students are allowed to choose topics of interest to them they are intrinsically motivated to learn. They become an active part of the learning process by becoming the 'curriculum planners'. Knowing that the teacher is there in the capacity of a facilitator, they have the freedom to use their

own unique learning styles to search for answers, learn new material, and experience success.

Definition of Terms

What is cognitive development?

Cognitive development is the development of the child's thinking and reasoning abilities.

What is cooperative learning?

Cooperative learning is a form of instruction used in a variety of ways to promote group interaction and collaboration in the classroom. Cooperative learning helps children build on and strengthen the interpersonal skills necessary to work and communicate with others.

What is meant by developmentally appropriate curriculum?

Developmentally appropriate curriculum involves activities that are age and individually appropriate for each child.

What grade levels are designated by the descriptors "early primary or lower elementary"?

For purposes of this paper, early primary or lower elementary will refer to first through third grades.

What are learning centers?

Learning centers are designated areas where children can perform a variety of tasks and activities that are planned around basic skills, themes, or units being taught. Learning centers can be developed from any subject area. Learning centers may be set up for individual or group use. Learning centers may be utilized as reinforcement or enrichment areas depending on the needs of the students.

What is research?

Sharp and Howard, in their 1996 book, *The Management of a Student Research Project*, define research as “. . . seeking through methodical processes to add to one’s own body of knowledge and hopefully, to that of others, by the discovery of non-trivial facts and insights” (p.7). James E. Ford (1995, p.13.) believes that the research process is an important part of learning in which all students should engage. He defines research in the following manner:

We could probably define ‘research’ generally as the seeking out of information new to the seeker, for a purpose, and we could probably agree that the researcher has to present the fruits of his or her research, appropriately ordered and interpreted, in symbols that are intelligible to others, before that research can be evaluated and can have an effect.

Chapter II

The Literature Review consists of profiling the work of teachers and authors in the field of education who incorporate research techniques into their teaching practice and methodology. The literature will build a foundation for the importance and benefits of research skills and projects for students of all ages and ability levels.

Research projects or papers are usually assigned to students in the upper grades and at the college level as a culminating activity for a semester grade or to assess skills in writing, library research, speaking, analysis, and synthesis. James E. Ford addresses this teaching technique on page 16 of his 1995 book:

'Research' (students are allowed to infer) is a specialized activity that one engages in during a special course, or late in a regular semester or year, but that one does not ordinarily need to be concerned about and can indeed, for the most part, forget about. Designating the research paper as a separate project therefore seems to me to work against the purposes for which we allegedly teach the research paper: to help students familiarize themselves with ways of gathering, interpreting, drawing upon, and acknowledging data from outside themselves in their writing.

Ford stresses that much learning is lost by teaching the research paper in writing courses as an independent event. He is concerned that this happens in most English departments in colleges today. Does this happen in high schools, junior highs, and upper elementary classes as well? Nancy Polette (1986) believes it does. In *The Research Project Book*, she claims:

By about grade four, students in schools with library/media programs have, for the most part, achieved familiarity with the contents of their particular media center and have acquired most of the basic skills of location of library/media materials. It would follow then that by the end of grade four that independent study projects should be a basic part of the curriculum. However, regardless of the skills the student may possess, many research assignments do not call for the utilization of these skills. Teachers bemoan the fact that most students tend to copy information from the encyclopedia or the handiest reference book and that the majority of research assignments are not looked forward to eagerly by students (p. 1).

Why assign research projects then? Ford (1995, p.17) argues that research assignments are necessary and worthwhile activities. He states:

. . . I don't come before you to urge that students of writing need not engage in "research." I think that they should engage in research. I think that they should understand that in order to function as educated, informed men and women they have to engage in research, from the beginning of and throughout their work as writers.

Ford's statement "from the beginning of and throughout their work as writers" is an interesting quote. Although Ford is primarily referring to high school and college students, it leads to several thought provoking questions. Could Ford's statement include writers of all ages? Could beginning writers, in primary grades, engage in research? Should the research process be limited to older students? Are gifted students the only students who are capable of research activities in primary grades? John A. Sharp and Keith Howard

(1996, p. 7) address these questions in the following way:

Most people associate the word 'research' with activities substantially removed from day-to-day life and which are pursued by outstandingly gifted persons with an unusual level of commitment. There is, of course, a good deal of truth in this viewpoint, but we would argue that the pursuit of research is not restricted to this type of person and indeed can prove to be a stimulating and satisfying experience for many people with a trained and enquiring mind. . . . Thus, if it is accepted that lower level work and training are prerequisites for the expansion of knowledge it would seem that 'research' is an activity which can be undertaken at any time in an individual's life when reasoned thinking is possible.

When are childrens' cognitive skills developmentally ready? Theorists describe this stage of development in several different ways. The behaviorists believe that children grow intellectually through accumulating more and more information. The interactionists view development of knowledge as a direct impact of the child's interaction with his or her environment. Maturationists believe that learning is the unfolding of a child's potential if the optimal environment is provided.

Cognitive development describes the changes that take place in children's abilities to think and reason. Jo Ann Brewer (1995, p. 13.) describes the patterns of cognitive development in lower primary age children as follows:

Seven to Eight Years Old

- * Differences in reading and language abilities widen.
- * Transition to concrete operational thinking begins.
- * Talking and discussion are important.
- * Is able to plan.
- * Can sustain interest over long periods of time.
- * Begins to understand cause and effect.
- * Understands and uses more abstract terms.
- * Expresses more awareness of community, world.

In education today, there is a controversy over the concept of young children's 'readiness' for learning.

If children are viewed as competent young learners, then it follows that they have predispositions to learn from their earliest days and, as such, are ready for learning from birth (and, some would say, before). The consequence of this view is that children are never not ready to learn and the notion of children 'emerging' into literacy, numeracy, and so on, assumes engagement in concepts which at one time would have been deemed inappropriate for young minds (Hall, 1987; Hughes, 1986, as cited in Fisher, 1996).

There seems to be evidence that young children have the capability to learn, understand, and apply higher level thinking skills and processes to material that in earlier educational history were deemed inappropriate. This sets a good foundation for allowing students as young as primary grades to explore and research topics through a guided research process.

This concept is not an entirely new one. Often, students identified as gifted and talented are encouraged to research topics for a written or oral report. Susan Winebrenner (1992) identifies this strategy as an independent study.

Students browse through topics that interest them. After a student has had sufficient time to browse through many books, the teacher encourages the student to research one topic in depth and create a project from the information gathered. Winebrenner (1992) has also created a strategy for primary age gifted students to use. This strategy is used in independent study as well. The student gathers data on a topic that is of interest to that student in order to become a "Resident Expert Planner" (p. 61). They then share their expert knowledge with the rest of the class.

Nancy Polette has written several books on research projects for gifted students, including one for gifted primary students in grades kindergarten to grade three. *First Research Projects* (Polette, 1984) uses the term "observational research". The teacher prepares research cards for individual interests. The cards ask the student to find the answers to three or four questions on a particular topic. Polette stresses that beginning book research should use students' skills of observation. Picture books, encyclopedias, and children's dictionaries are good resources. *The Research Book for Gifted Programs* (Polette, 1984) offers guidelines for teachers who want to explore research activities with gifted students in grades kindergarten to third grade:

- * Research activities for primary children are largely teacher selected.
- * Best activities are hands on observational experiences.
- * Students learn about and relate information by interacting with the material.
- * Independent learning centers are often used.
- * Beginning book research should stress the use of skills of observation.

Hopping into Literature and Primary Research (Chapin and Flegenheimer-Riggle, 1992) uses learning centers to promote higher level thinking skills and research activities. This book encourages students to be independent problem solvers. The activities promote life-long learning skills including map reading, interviewing, library work, letter writing and observation. The book is geared for all students, but it is especially applicable for students showing high aptitude in the area of creative thinking.

Research skills and higher level thinking skills are not the only benefits of using research projects, papers or learning centers in a gifted education program or in a regular classroom setting. Steven Wolk, is a fifth grade teacher who has incorporated project-based learning in his own classroom (Wolk, 1994). He has scheduled a one-hour project time in the morning and a one-hour parallel instruction project time in the afternoon. The morning project allows the students the opportunity to investigate anything they choose, either individually or collaboratively. The afternoon project slot is designed for a class exploration. Wolk has found that not only do the students use higher level thinking skills, but they also experience success in their research work:

Projects also help students succeed because they allow them to use all their 'intelligences', just as the 'projects' of normal day -to - day living do. Therefore, I was not surprised to learn that Howard Gardner (1992), who has advanced the theory that there are multiple forms of intelligences, is a strong proponent of project-based learning. In their explorations, my students have drawn upon the gamut of skills and abilities (Wolk, 1994, p. 45).

The class research projects are not limited to classroom resources. The students use resources on the Internet, community people, zoos, museums and the telephone directory. "When children are allowed to choose what to explore, they become intrinsically motivated - more than happy to work hard and strive for the highest quality" (Wolk, 1994, p. 43).

Fort Pitt Elementary School in Pittsburgh, PA, has also experienced phenomenal success in allowing independent research projects for students in grades three through five. The school's approach is somewhat different than the process described in Wolk's work. One week each month for four months, intermediate teachers dispense with their normal routine and lead groups of ten students each in an in-depth look at one topic. All group projects incorporate targeted performance areas: science, math, writing and research (Hartman, DeCicco, & Griffin, 1994, p. 46). The purpose of the project was to help urban students to succeed as independent learners and researchers. The project was based on seven principles:

1. All children are capable of learning at high levels.
2. In-depth study of concepts enhances learning.
3. Children learn most rapidly in a community of learners.
4. Children do not have to learn basic skills before they think critically.
5. Learning is more meaningful when it is integrated.
6. Children can truly demonstrate their capabilities when adults have their best interests in mind.
7. Families and community are an indispensable part of learning.

(Haberman, 1991, Maeroff, 1988, as cited in Hartman et al, 1994, p. 46.).

In summation, it should be the responsibility and the right of teachers and students to engage in the research process.

The best service we can render to . . . the students themselves, I would argue, is to insist that students recognize their continuing responsibility for looking attentively at their experiences; for seeking out, wherever it can be found, the information they need for the development of their ideas; and for putting such data at the service of every piece they write. That is one kind of service we can do to advance students' humanistic and liberal education (Ford, 1995, p. 18).

The literature cited in this review sets a good foundation for using the research process with early primary age students as well as at the college level. Integrating the research process into the curriculum benefits all students regardless of their age or ability levels. Research projects can build upon and expand students' interests and talents. Using research tools and techniques in the classroom on a regular basis can develop skills needed for life-long learning.

Chapter III

Project Development

The project was developed to expand the knowledge and talents of first through third grade students using research techniques and skills. Listed below are the steps or stages the students and the author went through to prepare themselves for research projects. These steps are easily adaptable to any classroom and to any grade level. (The following steps are described briefly. See attached project for a more extensive description of steps.)

1. Children should be exposed to all kinds of literature, fiction and non-fiction.
2. Children should be given opportunities to browse through reference materials early in the Fall semester, such as dictionaries, encyclopedias, charts, graphs, cookbooks, maps, and an atlas.
3. Creative writing should be encouraged daily. Individual dictionaries should be used.
4. Cooperative group activities should be planned in all subject areas.
5. Oral and written book reports should be assigned.
6. Show and Tell time can give positive opportunities for speaking in front of the class.
7. Create simple learning centers that require students to use research skills to answer four or five questions on a certain topic.

After the students have had ample time to practice the first seven skills, then the following procedures can be accomplished:

1. The teacher/facilitator demonstrates how reference books can be used in various subjects and in a variety of ways.
2. Students brainstorm possible topics for research.
3. The teacher/facilitator and the students brainstorm possible ways to present information to their classmates and parents.
4. The teacher/facilitator models for the students what a good research project would look like in comparison to an unsatisfactory project.
5. Students may then choose their top three choices of projects from the list created during the brainstorming session. The teacher/facilitator groups the students according to their top choices.
6. The teacher/facilitator gathers books, posters, magazines, computer software, and tag board for the students' projects.
7. The students begin to gather information, review the information, build a project around the information, and then present the information to peers, parents, and teacher.
8. The teacher's role is that of a facilitator.

The Project

Integrating the Research Process into the Early Primary Curriculum is a developmentally appropriate curriculum designed for grades first through third. The program is intended to be used with all students. The program is a step - by - step process that allows the teacher to incorporate research projects in the classroom. The curriculum is based on the philosophy that learning is the

responsibility of both the student and the teacher. The teacher's role is that of a facilitator. Students work individually or in small groups researching a topic of interest to them. The students must also plan how they want to present their information, (report, chart, poster, etc.), The final step is evaluation. Students are required to evaluate the work of their peers as well as their own work on the project.

Recommendations for Future Project Development

A longitudinal study of students who began research projects in first grade and continued using the research process until the eighth grade would be a very interesting study. Possible questions that may arise would be: Have the students' interest levels changed over the years? In what areas or skills have the students progressed? Are the motivational levels the same? In comparison to Iowa Tests of Basic Skills for groups of students in past years, have these students' scores changed or perhaps remained the same? Most importantly, does allowing students to research topics at an earlier age benefit their projects in later years?

A second longitudinal study may be to follow one student's research progress from first grade until eighth grade. How has the student changed? Does the child have the same interests now as in the past? Does the child have confidence in him/herself? Is the child a self-learner?

A third possible study would be to compare students in junior high who are assigned a research project or paper in the traditional manner to students who have been given the freedom to choose research topics of their own throughout their grade school years.

Conclusions

Integrating the research process in the early primary curriculum allows students in grades first through third to research topics, work with peers, create projects, and share projects with classmates, parents, and the community. Students will be using life-long skills of inquiry, reading for information and details, application of knowledge, analysis of information gathered, and evaluation of method and techniques used in the research process.

Teachers are given the opportunity to assist students in the learning process. Teachers have more freedom to observe their students and to evaluate their progress. Teachers will also have fewer discipline problems to handle, because the students are actively involved in the learning process.

The third benefit of integrating the research process in the early primary curriculum encourages parents to become a part of the learning process. They are able to see first hand what gifts and talents their children possess and are able to share in their childrens' success.

Integrating the research process into the early primary curriculum is an exciting way to challenge and stimulate students. All children benefit, regardless of skill level. No longer should students in early primary grades be considered too young to research information or too young to produce a quality research project. It can and has been done. First through third grade students can produce research projects that may change the way we view primary curricula in today's education.

REFERENCES

- Chapin, L., & Flegenheimer-Riggle, E. (1992). Hopping into Literature and primary research. Carthage, IL: Good Apple.
- Brewer, J. (1995). Introduction to early childhood education preschool through primary grades. Needham Heights, MA: Simon & Schuster Company.
- Fisher, Julie. (1996). Starting from the child. Buckingham: Open University Press.
- Ford, J. E. (1995). Teaching the research paper. Metuchen: The Scarecrow Press Inc.
- Hartman, J., DeCicco, E., & Griffin, G. (1994). Urban students thrive as independent researchers. Educational Leadership, 52(3), 46-47.
- Polette, N. (1984). First research projects. O'Fallon, MO: Book Lures Inc.
- Polette, N. (1984). The research book for gifted programs. O'Fallon, MO: Book Lures Inc.
- Polette, N. (1986). The research project book. O'Fallon, MO: Book Lures Inc.
- Polette, N. (1988). Research without coping. O'Fallon, MO: Book Lures Inc.
- Sharp, J. & Howard, K. (1996). The management of a student research project. Brookfield, VT: Gower.

Winebrenner, S. (1992). Teaching gifted kids in the regular classroom.

Minneapolis, MN: Free Spirit Publishing Inc.

Wolk, S. (1994). Project-based learning: Pursuits with a purpose.

Educational Leadership, 52 (3), 42-45.

**INTEGRATING THE RESEARCH PROCESS IN THE EARLY
PRIMARY CURRICULUM**

Research Rationale

Research Readiness

Research Artistry

Research Rewards

RESEARCH RATIONALE

RESEARCH RATIONALE

Teachers have often assigned research projects to upper primary students, junior high students, high school students, and college students. Projects are usually assigned as a culminating activity to assess skills in writing, library research, speaking, analysis and synthesis. Project topics may be assigned or chosen by the individual students. However, lower primary students rarely have been given the opportunity to formally explore new areas of interest to them. First and second grade students are regarded as too young to be able to do research. Lower primary age students should be encouraged to develop research skills as a method of acquiring new information that is of a specific interest to them.

“Integrating the Research Process in the Early Primary Curriculum”, the attached project developed by the author, is a program designed for first through third grades. The curriculum is a step - by - step program that enables elementary teachers to engage early primary students in the research process. Students are given opportunities to investigate, document, and report on research projects. Students may work individually or with a group of peers as they research topics they have chosen. The program consists of cooperative group activities, lesson plans, learning center ideas, a list of materials needed, and student/teacher/parent evaluation forms.

Students will have the opportunity to explore research topics and information during classroom time, under teacher supervision, on a weekly basis. Depending on time constraints and students’ ability levels, some students may produce up to five research projects a semester. This is a

remarkable difference from the one traditional research project or paper often assigned to upper grade level students.

Research projects can foster the following objectives for students of all ages:

- * enhance any language arts program
- * expose students to fiction and non-fiction materials
- * introduce students to a variety of research materials
- * develop of research skills and techniques
- * encourage and expand students' creativity
- * promote independent study
- * enhance students' higher level thinking skills
- * promote a cooperative classroom environment
- * provide opportunities for parent/student/teacher communication
- * encourage alternative assessment opportunities

When primary students are allowed to choose topics of interest to them they are intrinsically motivated to learn. They become an active part of the learning process by becoming the 'curriculum planners". Knowing that the teacher is there in the capacity of a facilitator, they have the freedom to use their own unique learning styles to search for answers, learn new material, and experience success.

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If children are viewed as competent young learners, then it follows that they have predispositions to learn from their earliest days and, as such, are ready for learning from birth (and, some would say, before). The consequence of this view is that children are never not ready to learn and the notion of children 'emerging' into literacy, numeracy, and so on, assumes engagement in concepts which at one time would have been deemed inappropriate for young minds (Hall,

1987, & Hughes, 1986: as cited in Fisher, 1996).

There seems to be evidence that young children have the capability to learn, understand, and apply higher level thinking skills and processes to material that in earlier educational history were deemed inappropriate. This sets a good foundation for allowing students as young as primary grades to explore and research topics through a guided research process.

RESEARCH READINESS

SECTION ONE-OBJECTIVES

SECTION TWO-REFERENCE MATERIALS

SECTION THREE -ROUTINE

SECTION FOUR-PROJECT DEVELOPMENT

SECTION FIVE-TIMELINE

SECTION FIVE-COOPERATIVE LEARNING

- A. DEFINITION OF COOPERATIVE LEARNING
- B. GROUP SELECTION SUGGESTIONS
- C. COOPERATIVE LEARNING INTRODUCTORY ACTIVITIES
- D. COOPERATIVE LEARNING IN LANGUAGE ARTS
- E. COOPERATIVE LEARNING IN GUIDANCE
- F. COOPERATIVE LEARNING IN SCIENCE
- G. COOPERATIVE LEARNING IN MATH

SECTION SIX-RESEARCH LEARNING CENTERS

SECTION ONE
OBJECTIVES

OBJECTIVES

Primary research will benefit your curriculum by:

- * enhancing your language arts program**
- * exposing students to fiction and non-fiction materials**
- * exploring learning centers**
- * introducing students to a variety of research materials**
- * developing student's primary research skills**
- * enhancing higher level thinking skills**
- * encouraging and expanding creativity**
- * promoting a cooperative classroom**
- * actively involving students in the learning process**
- * promoting independent study**
- * providing opportunities for parent/student/teacher communication**
- * providing opportunities for parental involvement in the learning process**
- * promoting the use of alternative assessment**
- * providing the teacher with quality/class discussion time and one on one observation time**

SECTION TWO
REFERENCE MATERIALS

REFERENCE MATERIALS

There are many resources available for young researchers. Here are some possibilities for your classroom.

1. A class set of encyclopedias. Picture encyclopedias work best for the younger grades. If you do not have a set of encyclopedias, talk with your library/specialist or contact parents/grandparents to see if they have an old set to donate to the school.
2. A globe.
3. An atlas.
4. Maps.
5. Children's cookbooks.
6. Boxes of theme books (space, dinosaurs, plants, animals, weather).
7. Charts/graphs/posters
8. Computer
9. Internet
10. Dictionaries/Picture Dictionaries.
11. School and local libraries.
12. Parents/grandparents.
13. Faculty members.
14. Old textbooks.
15. Magazines.
16. Newspapers.
17. Telephone Books.
18. Community people.
19. Videos.

SECTION THREE
ROUTINE

ROUTINE

These are the steps or stages the students and I went through to prepare ourselves for research projects. These steps are easily adaptable to any classroom or grade level.

Collect

Begin sorting and collecting books by themes or topics. Then box them up for future use. For example, I went through all my books I have collected over the past 11 years. I sorted them by the following topics: Stars and Planets, Plants, Animals, Dinosaurs, Native Americans, Drugs, Human Body, Health, Rocks, Weather, Sports, Pioneers, Bears, Poetry, and Sports books. I was surprised how many books I really had on each subject. The books were fiction and non-fiction alike. I also placed any posters, toys, bulletin board materials, graphs, worksheets, pictures, and lesson plans in my respective theme boxes. Everything I would need or the kids would need was placed in the box according to its corresponding theme.

What to buy?

I really concentrated on looking through school book orders for books that would interest my students and adding to the theme boxes I had already started. I also looked for books that went along with the themes in our whole language series. Some companies are beginning to put theme books together for you. Use your bonus points to receive these great buys. Often books are donated: ask the librarian to send you copies of books that will not be used in the library or are multiple copies. I have received over fifty books using this method.

Other Materials

Begin collecting magazines, newspapers, tag board, and cardboard for future projects.

Library

If you are not familiar with your school library or the local public library, visit it often to see what is available to you. Look for books on themes you already have and new themes or ideas that may be suggested by your students.

Research Your Students

Find out all you can about your student' interests and hobbies. September is a great month to work on "Me Booklets". Utilize one bulletin board for a "Student of the Week". Interview your students or give them an interests/hobbies checklist to fill out.

Read! Read! Read!

Introduce your students to all types of literature.

Have a special book nook from which children may choose books .

Invite grandparents/parents in to read to the class.

Let children read to the class.

Have children work on oral and written book reports.

Allow a weekly or daily sharing time.

Compare and contrast collected works of a single author.

Keep literature on hand for all subject areas. (math, science, social studies, art)

Write! Write! Write!

Children need time to write every day. It could be a story, journal writing, a letter, a card or at a learning center. Every piece of writing helps prepare students for research writing.

Personal Dictionaries

If at all possible buy or create on your own personal dictionaries for each student to use. They can add words that are important to them.

Invite Speakers into the Classroom

Invite speakers into the classroom. Encourage them to discuss their jobs, hobbies, and interests.

Model

Share with the students your favorite hobbies and interests. Share your favorite books during book report time.

Graphs/Charts

Introduce children to different forms of charts, posters, and graphs. Give children plenty of practice in using these resource items.

Internet

Keep up to date on what is new and exciting in our world. Find out what resources are available through the Internet.

SECTION FOUR
PROJECT DEVELOPMENT

Project Development

The project was developed to expand the knowledge and talents of first through third grade students using research techniques and skills. Listed below are the steps or stages the students and the author went through to prepare themselves for research projects. These steps are easily adaptable to any classroom and to any grade level.

1. Children should be exposed to all kinds of literature, fiction and non-fiction.
2. Children should be given opportunities to browse through reference materials early in the Fall semester, such as dictionaries, encyclopedias, cookbooks, maps, atlas, and charts.
3. Creative writing should be encouraged daily. Individual dictionaries should be used.
4. Cooperative group activities should be planned in all subject areas.
5. Oral and written book reports should be assigned.
6. Show and Tell time can give positive opportunities for speaking in front of the class.
7. Create simple learning centers that require students to use research skills to answer four or five questions on a certain topic.

After the students have had ample time to practice the first seven skills, then the following procedures can be accomplished:

1. The teacher/facilitator demonstrates how reference books can be used in various subjects and in a variety of ways.
2. Students brainstorm possible topics for research.
3. The teacher/facilitator and the students brainstorm possible ways to present information to their classmates and parents.
4. The teacher/facilitator models for the students what a good research project would look like in comparison to an unsatisfactory project.
5. Students may then choose their top three choices of projects from the list created during the brainstorming session. The teacher/facilitator groups the students according to their top choices.
6. The teacher/facilitator gathers books, posters, magazines, computer software, and tag board for the student's projects.
7. The students begin to gather information, review the information, build a project around the information, and then present the information to peers, parents, and teacher.
8. The teacher's role is that of a facilitator.

SECTION FOUR
TIME LINE

September

Get to know your students. Start ground rules and guidelines. Begin the writing process. Read many types of literature to the students. Create interest or learning centers, see section six page, 59. Allow free reading time for the students. Send out letters to the parents/grandparents requesting volunteer readers for the class. Schedule weekly or daily sharing times.

October/November

Introduce children to collected works of a single author. Invite guest speakers in. Begin working on cooperative group work in all subject areas (see section six- cooperative learning part D, page 42).

Pass out individual dictionaries. Have children type stories on the computer. Create interest or learning centers. Introduce new books for the book nook. Begin book reports.

December

Encourage the students to work on written and oral reports. Continue working on cooperative group work, daily writing, oral reporting, and free reading time.

January

I like to begin research projects after Christmas break. Look at your individual class to see if they are ready. Possible indicators: class seems ready for a challenge in reading, students are choosing a variety of books during free reading time, etc. Some classes may be ready sooner or later than others.

February/March/April/May

Children are working on research projects on a weekly basis. Children will present finished projects to classmates, teachers, parents, etc. Use the teacher and student evaluation forms at the end of the project.

SECTION SIX
COOPERATIVE LEARNING

Definition of Cooperative Learning

Cooperative learning is an effective method used in education today. It is a tool that can be used at all grade levels and in all subject areas. When the method is used correctly, cooperative learning can accelerate student learning.

The cooperative learning method is a model for helping teachers implement and work with groups so that students will consistently: learn the subject matter, work on necessary skills, complete tasks, solve problems with minimal teacher assistance, and enjoy the process of working together.

There are many benefits of cooperative learning. Students gain greater self-esteem, attention skills, responsibility, speaking and listening skills, and problem solving skills.

Cooperative learning can have its drawbacks. Teachers must have a good knowledge base about cooperative learning and the roles they will play in implementing the technique. Teachers must also be careful not to begin group work without first preparing the students for the necessary social skills and group role skills needed in successful group work. Careful preplanning plus careful implementation increases the possibility of positive group experiences for the students.

What is cooperative learning?

Cooperative learning is a form of instruction used in a variety of ways to promote group interaction and collaboration in the classroom. Cooperative learning helps children build on and strengthen the interpersonal skills necessary to work and communicate effectively with others.

Group Selection Suggestions

Who should work with whom?

Children can work in groups of two to six, depending on the activity. Students can be grouped randomly or deliberately so they can interact with materials and with classmates as they learn.

How can students be divided?

There are many ways to divide students up into different groups. Here are a few creative suggestions:

1. Students may be divided by the colors of the shirts or blouses they are wearing. If groups are too large, divide further by short sleeve/long sleeve.
2. Randomly pass out wrapped hard candies. Students match candies to form their groups.
3. Randomly pass out prepared cards that have previously learned skills programmed on them. Examples: Upper case with lower case letters, number words with corresponding numbers or number sets, time, money, place value, etc.
4. Use a sociogram to assign groups of students who want to work together.
5. Save old greeting cards and cut the front/picture part half into five or six random puzzle shapes. Mix pieces from as many groups as you need to form. Children put the puzzle pieces together to form their group.

Cooperative Learning Introductory Activities

Before students can successfully work cooperatively, they need to be given the opportunity to practice group skills and roles. Here are some introductory activities to do to help students to work together in small groups. As a teacher, you must decide which of these activities or lessons will need to be taught or reviewed depending on the amount of experience and background the students have in cooperative learning.

1. Speaking
2. Listening
3. Group Roles
4. Cooperative Rules

TOO MUCH NOISE!!!

The students think of their favorite game to play. They also take a few minutes to think about how the game is played. After they have had sufficient time to think, the teacher counts to three outloud. On three, everyone begins to talk about their favorite game at once. After a few minutes, discuss with the students what happened. Was the noise level too high? Could you hear what the person next to you was saying? Did you understand them? What could we do to change the noise level.

TOO LOUD! TOO SOFT! JUST RIGHT!

Retell or remind the students of the story of **GOLDILOCKS AND THE THREE LITTLE BEARS**. Note that Goldilocks always says Too Hot or Too Cold or Just Right. Practice making voice sounds that are too loud, too soft, and just right. Practice as a group then practice in pairs.

LISTEN AND YOU WILL SEE!

Pair the students up. Each child takes a turn describing his/her favorite sport, but doesn't share what the sport is called. The second child listens carefully, then draws what the sport or sport equipment would look like. Share the drawing, then switch roles.

TELEPHONE LINE

Use this favorite game to practice speaking and listening skills. The students sit in a circle. The first person whispers a phrase to the person next to him/her. The receiver of the message must listen carefully. If he or she does not understand the message, he/she may say "Operator, please". The sender may repeat the message one more time. Have the students see if the original message makes it all the way around the circle.

YOU NEVER LISTEN TO ME!

Have the students recall memories of times they were frustrated when no one seemed to be listening to them. Discuss how they handled the problem. Are there good solutions to the problem? Can we use the same solutions in our classroom?

WORKING IN GROUPS

Many cooperative group books on the market recommend teaching the student's group roles. The group roles may have different names, but their functions are quite similar. Some teachers make name tags or signs for the children to wear, to remind them of their role. Roles should switch with every cooperative group lesson. Practice is needed for every group role.

Group Member/Praiser: Everyone is a group member. Each member needs to listen and share. This person also praises the other group members for good ideas and for following the rules.

Collector: This person gets the materials the group needs and puts the materials away when the activity is over.

Recorder: This person asks the group for their ideas. They also write down the group's ideas.

Reporter: Tells the class what his or her group thinks and shows the class any projects the group has made.

Leader: The leader makes sure that all members of the group have a chance to speak. He/she makes sure the group members are following the group rules.

DEVELOP COOPERATIVE GROUP RULES

After the students have been provided with the opportunity to work in a few group situations ask them what they have observed. Discuss what has worked well and what has not worked. Brainstorm some rules or guidelines to help the groups work well.

MONKEY SEE, MONKEY DO !

The teacher chooses 12 students. Six of the students are told to not follow the rules in a small skit for the class. (Act out a situation where the group must vote on a new lunch menu item. Should they have it on the menu or not?) Have them perform their skit for the class. As a group discuss what was good and bad about their group's work. Then have the second group do the same thing, but all are told to follow the rules. Discuss what was good and bad about this skit.

Cooperative Learning in Language Arts

VOWEL SOUNDS

Arrange students into groups of three or four. Have children brainstorm short e words. Have the group recorder list the words the group produces. When the groups are done, reconvene as a large group. Have the reporters read the short e words list their group created. Record the words on the chalkboard or on a large chart sheet. Underline words that several groups reported. Circle words that only one group suggested.

This activity can be used with all vowels. It can also be used with blends, such as fr, bl, st, and sl.

VOCABULARY WORDS

Create five to six sets of vocabulary cards. (One for each group of students.) Divide the students into groups of three or four. Provide each group with a set of the vocabulary cards. Mix up the cards and put them face down. One child selects a card. He/She reads the word silently. Then he/she must give the other students in his/her group clues as to what the word is. For example: It rhymes with bee. It starts with s. Or the student can give a definition to the word as a clue. (It is an insect. It can sting you.) Each child should have two - four turns.

WHAT HAPPENS NEXT? SEQUENCE

Divide students into groups of two to four students. Have children work together to think of two events that would follow events such as these:

1. You put on your pajamas. (You get into bed. You go to sleep.)
2. You set the table for dinner. (You eat dinner. You clear the dishes of the table.)
3. You put on your socks. (You put on your shoes. You tie your shoes.)
4. The morning bell rings at school.
5. The dismissal bell rings at school.
6. The teacher announces it is reading time now.

CLASSIFYING

Have children work in groups. Provide them with pictures from magazines, newspapers, catalogs, old calendars, etc. Have children group their pictures together into categories. Glue them on tag board. When the groups are finished, have the reporter from each group display their poster. Have the other students guess the category chosen.

WHO, WHAT, WHERE, WHY AND WHEN? COMPREHENSION

After creative writing time, have students group themselves into groups of three to four students. One student reads his/her story orally to the group. The other group members listen carefully. After the story is read, the writer of the story gets to "play teacher". He or she asks the other students questions like: Who are the main characters of the story? Where did the story take place? This will not only improve comprehension but it will improve students' writing as well.

SIMILARITIES AND DIFFERENCES

Read to the students two books based a similar theme. students into groups of three or four. Have the groups create a lists explaining the similarities and differences between the two stories.

RETELL A CLASSIC FAIRY TALE

Rewrite a classic Fairy Tale story. For example: What would have happened if the three pigs would have worked cooperatively on their house? Rewrite this classic story with the three pigs building only one house together.

BEGINNING SOUNDS

Divide the students into groups of three or four . Pass out tag board and magazines. Have the students find pictures of the letter or letters you are currently working on in reading. ("T" pictures, turtle, toys, trees, etc.)

DETAILS

Draw a closed eyelid on a piece of construction paper to cover a magazine picture you have prepared ahead of time. Have children work in groups of three or four. Tell children that you are going to give them one minute to study a picture and to find the details in it. Expose the picture, and then cover it again. Give groups about three minutes to record all the details it it. Then display all the groups' lists for comparison. Highlight details that appear on all the papers. Point out that the details most children remember are the important details.

Cooperative Learning in Guidance

FEELINGS

Encourage children to use their own experiences or the experiences of others they know to create with a partner a booklet or poster on feelings. For example: I feel happy when I am singing. I feel sad when a friend moves away.

MORAL DECISIONS

Use the following stories or create your own situations on which the students reflect and make a decision as a group.

Story 1

There was a class going on a field trip to the museum. The teacher told the students that they would need a permission slip and 50 cents for milk. The museum would provide the milk. The children boarded the bus. When the bus arrived at the museum, the children began to get off the bus. One of the students was named Katie. Just as she was to get off the bus, she found a dollar bill on the bus floor. She picked it up. What should she do now? What would you do?

This situation will create many possible answers. Help the children to see that some problems have many solutions.

Story 2

You arrive home from school and realize you have lost your key. Your mom will not be home for another hour. What should you do?

Story 3

At school a bully is taking your lunch every day. He/she tells you that if you tell someone he/she will hurt you. What should you do?

Story 4

You and your best friend go shopping. Your friend takes you into the candy store. When the storekeeper turns her back, your friend puts a candy bar into his shirt pocket. He tells you to do the same. What should you do?

Story 5

It is time for your weekly spelling test. You did not study your spelling words this week. You notice that John is not covering up his paper. If you lean over you could see the words. Do you look at John's paper?

THANKFULNESS

During November we often remember our blessings and we give thanks for all that we have. Here are two activities to help children realize how much they have to be thankful for.

Divide students into groups of three or four. Pass out tag board and magazines. Have the children cut and paste pictures of things they are thankful for. Have the reporters share the groups' posters with the other groups in the room.

Lead the children into the discussion of the plight of the homeless. What are some things we can do to help solve this problem? Divide the students into groups to come up with possible solutions to the problem.

RULES

In groups of three or four students, have the students generate a list of safety rules for their classroom. The students should also have reasons to back up their lists.

GOOD MANNERS

After the class has had discussions and practice on good manners, divide the students into small cooperative groups. As a group they are to create a situation to role play. The situation should include the use of good manners. Have the children role play their situation to the rest of the class. The class should try and guess what good manner or manners they are depicting.

WHAT IS BUGGING YOU?

In small cooperative groups have children generate a list of things that "bug" them. What are some possible solutions to the problems? Choose one of them and role play it for the class.

FRIENDSHIP TRAITS

What makes a good friend? Draw, write, or cut out pictures of what a good friend might be. Report your friendship traits to the rest of the class.

DECISION MAKING

Have children work in cooperative groups to list decisions they can make and decisions that others have to make for them. (What should I wear to school today? How will I get to school? Who will I play with at recess?)

Cooperative Learning in Science

ANIMALS

In cooperative groups, classify animals into categories (reptile-mammal, forest animals-desert animals, wild animals- tame animals).

In cooperative groups, match pictures of baby animals with their parents.

In cooperative groups, research an animal. Create a presentation on the data your group collects. Use posters, books, charts, graphs, magazines, or drawings to back up your data.

MAGNETS

Divide the children into groups. Pass out the following materials: magnets, paper clips, hair pins, nickels, pennies, nails, metal bottle caps, metal spoons, metal thimbles, brass screws, foil paper, and paper to record information. Have groups of children try and pick up each object with their magnets. Record the results. Share the results.

BALANCE AND MOTION

As a group, create a paper airplane that will fly across the room.

With a partner, try balancing different things on parts of your body. Can you balance a toothbrush, a ball, a paper plate, a ruler? What can you balance on your feet? What can you balance on one finger?

SENSES

Divide students into cooperative groups of four. Give each group a sheet of paper to record observations. Take the students on a Sensory Walk. Record as many things as you see, hear, smell, taste, and touch. Gather again as a large group and discuss the results.

FLOAT AND SINK

Concept: Some objects float and some sink in water. Divide students into groups of four or five. Supply each group with the following materials: plastic tubs, water, corks, marbles, bits of wood, pencils, paper clips, plastic spoons, rocks, golf balls, foil, and paper for recording results. Have children experiment with the objects and the water. Record which objects floated and which objects sunk to the bottom of the tub. Discuss the results.

Cooperative Learning in Math

FINDING FAMILIES OF FACTS

Use the ends of computer paper (holes) to use as manipulatives. Divide the students into groups of three or four. Pass out strips from computer paper and a large piece of colored paper. Children create families of facts by cutting out holes to match their family fact. For example: $5+4=9$, $4+5=9$, $9-5=4$, and $9-4=5$. Glue the facts onto the colored paper. Create at least three families of facts.

NUMBERS BETWEEN FIVE AND TEN

Divide the students into cooperative groups. Tell the students that they are the co-owners of a new toy store in town. They must create a name for their toy store and decide what toys they will sell. Their toy selection is small because they are just starting their business. The shelves contain selections of toys in small quantities. These quantities are between five and ten. (For example: six dolls, eight toy airplanes.) Students can write or draw their selections of toys. Remember the numbers must be between five and ten.

WHAT AM I HIDING?

Pair students up. Hand them ten counters. One student begins by showing his/her partner the ten counters in his/her hand. Then the partner turns away. The student holding the counters hides some behind his/her back. Then asks their partner to look. The partner sees the remaining counters on the table. He/she must guess how many counters are hidden behind his/her partner's back.

FLASH CARD FUN

Partners take turns showing flash cards to each other. A good way to review and reinforce.

CALENDAR FUN

As a group, choose a month of the year. Answer the following questions about your month.

1. How many Fridays are in this month?
2. What day does the 14th fall on?
3. Are there any holidays in this month? What are they?
4. Do any of your classmates have birthdays in this month? Name the classmate and the birthday.
5. How many weekends are in this month?
6. Are we in school during this month?
7. Is your month in the Fall, Winter, Spring, or Summer?

GROUPING OBJECTS

Name three things you can do with marbles. Divide 12 marbles into two groups. How many are in the groups now? Divide 12 marbles into three groups. How many are in each group now? Can you think of any other way to group the marbles?

FRACTIONS

Give each cooperative group some paper. Have them create $\frac{1}{2}$, $\frac{1}{4}$, and $\frac{3}{4}$ sections with their paper.

SECTION SIX
RESEARCH LEARNING CENTERS

RESEARCH LEARNING CENTERS

COOKIES COOKIES COOKIES

Optional Materials:

cookie cutters

cookbooks for children

recipe cards

play-dough/clay

Children can look through cookbooks to find their favorite recipes. They can write down a recipe to take home. Then they can make their own cookies with the cookie cutters and the clay.

Resource books: *Give a Moose a Cookie* by Laura Joffe Numeroff

The Doorbell Rang by Pat Hutchins

INSECTS INSECTS INSECTS

Create a garden collage from a "bug's eye" view. Draw or display rocks, leaves, twigs, pictures of trees, plants, grass, and logs. Display sentence strips for research questions such as these: What lives under a rock? What lives under a leaf? What lives in the grass? What lives on a plant? Use pictures from books to compare the sizes of butterflies and moths. Have students practice using the words largest, smallest, fastest, slowest, longest, shortest, etc.

Resource books: *Quick as a Cricket* by

The Hungry Caterpillar by

The Grouchy Ladybug by Eric Carle

How to Hide a Butterfly: and Other Insects by Ruth Heller

WATERWAY WATERWAYS WATERWAYS

Optional Materials:

Water tub
Sand tub
measuring cups
measuring spoons
seashells

Children can explore the texture of sand and the seashells through the use of their senses.

Resources: *D.W. All Wet* by Marc Brown

The Seashore Noisy Book by Margaret Wise Brown

ROCKS ROCKS ROCKS

Optional Materials:

pebbles
rocks of all sizes, shapes, and colors
magnifying glasses

Display a variety of rocks for children to explore.

Resources:

Everybody Needs A Rock by Byrd Baylor

Rocks and Minerals by Alice Fitch Martin

Rock Collecting by Roma Gans

RESEARCH ARTISTRY

RESEARCH ARTISTRY

*****Days are approximations--do what feels comfortable to you*****

Day1/Week1

In a large group discussion, ask the students to define the term "research". Then ask them if they have done any projects that required the skills of research. Following this, have the students define the word "interests". What are ways people can develop their interests? Brainstorm possibilities. Then brainstorm possible topics in which the students may be interested. List these on the board. Childrens' interest will be high! Then have the students take out their journals and write down their top three choices for research projects. Use the topic graph (see sample) to indicate students' choices.

Day2/Week2

Decide on a time you would like students to conduct research assignments. I chose Thursdays. The time was during the language arts block. (9:00-10:00) You will need at least an hour. Then group the students together by their first choice if possible. Having children write their choices in their journals first avoids children only choosing their friends to do projects with. Groups will be a good mix of students. A situation may arise that a student wishes to work alone. That is just fine. Some students do work better that way. If one child picks a topic for a first choice that no one else chose, give the child a choice of working alone or going ahead with the second choice on his/her list. (This system worked very well for me. The child was part of the decision making process.) Announce the groups and the group members to the students. Then brainstorm possible projects that could be completed.

Here are examples of possibilities:

| | | | |
|-----------------|------------------|------------------|-------------------|
| advertisement | autobiography | banner | |
| booklet | bookreport | bulletin board | |
| calendar | cartoon | charade | |
| chart story | checklist | classification | |
| collage | collection | commercial | |
| construction | creative writing | crossword puzzle | dance |
| debate | demonstration | design | dictionary |
| diorama | discussion | display case | dramatization |
| drawing | experiment | finger puppets | flannel board |
| game | graph | handbook | information table |
| interview | invention | jingle | joke book |
| learning center | letter | lists | map |
| masks | mime | mobile | model |
| mosaic | mural | musical | newspaper |
| notebook | outline | painting | pamphlet |
| pantomime | paper mache | pattern | photograph |
| picture | play | poster | puppet |
| puzzle | radio show | recipes | record |
| report | research center | scrapbook | sculpture |
| skit | song | speech | story |
| table | tape recording | tv | video |

Then as a class set some guidelines for research projects:

1. The teacher is a facilitator. He/She will walk around and observe group work. He/She will gather materials for students and answer questions if needed.
2. Group members must work together to solve problems and to decide on the course of action they wish to take.
3. All projects must include **some** form of written documentation. Other creative forms of projects are encouraged as well. (This rule was necessary, in my experience, because a few groups wanted to do posters for every topic with little or no information presented.)
4. Groups that are ready to present must inform the teacher a week ahead of time. The teacher will send a note home to parents inviting them in for the presentation.
5. Groups cannot copy word for word out of a book. Read the information and record in your own words. **Students must be able to read and understand every word they record.**

Day 3/Week 3

Begin!! The students will immediately start discussing their topic and reading information on the subject. Don't worry if their reading level is low-You will be amazed at what they can still understand. **First graders can read and understand parts of the encyclopedia!** The teacher begins observing students and recording notes. The resulting documentation is wonderful to use at conference time.

Day 4 and 5/Week4 and 5

Continue projects and teacher observation. Some groups may be finishing up their projects. Encourage them to practice how they will present their topics to their parents. Model for them a good and a bad presentation. As a group, discuss good presentation rules:

1. Introduce yourself and group members to the audience.
2. Announce your topic.
3. Know exactly what each of the group members is going to say and when.
4. Make sure you understand all the words you are reading.
5. Use good voice control.
6. Use good eye contact.
7. After the presentation, ask the audience if they have any questions.
8. Thank the audience for their time and for listening.

Send out the parent invitations to attend the presentation. (Not all groups will be ready to present at the same time. It averaged out to three groups presenting each time.)

Day6/Week6

Presentations are given to parents, teacher, and classmates. After all the presentations are done, and the parents have left, have the children critique the presentations. What were some of the good things we saw happen today? What are some areas in which we could improve. Did they have good voice control? Did they have good eye contact?

RESEARCH REWARDS

EXCERPTS FROM TEACHER JOURNAL**Week 1-January 12**

I introduced the idea for research projects to the students. Everyone was so attentive! I demonstrated what a possible research project might look like. I showed the students the reference books available to them. As a class we brainstormed possible topics to research. The ideas were incredible! I don't know who was more excited the kids or me!

Week 2 January 18

The class has begun working. Their enthusiasm is inspiring! All students are involved. Here are some of their comments: Andy - We could make up cards to share. Emily - I want to look it up in the book. Cassie - Our group is going to make a poster. I'm going to ask my mom for some help too.

Week 3 January 25

The principal came in today. She was very impressed. The children answered all her questions. Ashley and Morgan were on the computer. Tom was looking at the encyclopedia. Tracy has brought books from home to share. Andrew and Keith were designing a board game about Eagles. Chris and Joe asked if they could miss recess and keep working!!!

Week4 February 1

A parent donated several books for us to use. I am amazed at how little I have to do. The students are doing it all. This is what education should be.

SAMPLE STUDENT RESPONSES TO END OF YEAR INTERVIEW

First and second graders

Chris: I feel happy. I like to share our reports. I like to because I want to learn about other reports too.

Ashley: I like it because I like drawing and because it is fun. I like it.

Jacob: When people give reports and explain them. I like stories, pictures and how they talk.

Justin: I like to do it because it is fun. And why did I pick dinosaurs? Because I like dinosaurs.

Gabe: I like to work on my report. It is fun.

Cassie: I like to do it. I like to watch the other people do it. It is fun.

Tyler: I am working my hardest. I wanted to do it. I like it. I like when people read.

Casey: I like doing them and I learn a lot.

Katelyn: I like doing the reports because we learn things we did not know.

Ryan: I like that I get to learn and know more about what the other kids are learning.

Morgan: My report is good.

Andy: I like reports because my parents get to see what I am doing.

Travis: I like how we get to choose our own topic. I like being in Tom's group because he has good ideas.

Holly: I wish we could do it every day!

EXCERPTS FROM PARENT QUESTIONNAIRE

What was your first reaction to hearing that your student would be working on research projects?

pleased and impressed

surprised and interested

I thought that it was a bit early to be introduced

surprised-I didn't think he would be able to do research

WOW

Has your reaction changed since the beginning of the research projects?

Yes, I forget how smart they are. We never did this kind of thing in second grade-more like junior high.

I still think it is great.

Yes, I didn't think they could and Chris proved that at his age, he can!

I still feel very positive about it.

Yes, the children are fully capable and they benefit from the material.

What positive changes have you seen in your child?

He is enthused and anxious to find out all the information he can.

She enjoys looking up information and writing it down. Seems to be able to verbalize what she's found out and put it on paper.

He enjoys working in a team atmosphere.

She is very interested in looking things up and learning about them.

FORMS USED IN RESEARCH PROJECT

TOPIC PLANNER

EXAMPLE OF TOPIC PLANNER

RESEARCH PLANNER

STUDENT EVALUATION (AFTER EVERY PROJECT)

TEACHER EVALUATION

PARENT LETTER 1

PARENT LETTER 2

SUBSTITUTE'S LESSON PLAN

Topic Planner

Topics - (1) indicates first choice (2) indicates second choice (3) third choice

Topic:

A.

B.

C.

D.

E.

F.

Topic:

A.

B.

C.

D.

E.

F.

Topic:

A.

B.

C.

D.

E.

F.

Topic Planner

Topics - (1) indicates first choice (2) indicates second choice (3) third choice

Example _____

Topic: Dinosaurs

- A. Philip (1)
- B. Beth (3)
- C. Mark (1)
- D. Dawn (2)
- E. Kay (1)
- F. Mike (3)

Topic: Flowers

- A. Kay (2)
- B. Beth (1)
- C. Doug (1)
- D. Philip (3)
- E. Dawn (1)
- F. Laurie (3)

Topic: Planets/Space

- A. Laurie (1)
- B. Gary (1)
- C. Doug (2)
- D. Marsha (2)
- E. Peter (3)

RESEARCH PLANNER

Student's Name _____

Date: _____ **Topic:** _____

Members of my group: _____

Questions I have about my topic: _____

Materials we will need: _____

Sources of information I used in my research. (books, posters, etc.)

What do I already know about my topic: _____

The most fascinating information I discovered was: _____

STUDENT EVALUATION

Please answer with: yes- - no - - needs more work.

1. I worked well with the people in my group. _____
2. I enjoyed the topic we studied. _____
3. I shared in my group. _____
4. I listened to others in my group. _____
5. I answered the questions I had about my topic. _____

6. I spoke loudly and clearly during the presentation. _____
7. I knew all the words presented. _____
8. I used good eye contact with my audience. _____
9. I am looking forward to the next research project. _____
10. My parents helped me with my project _____
11. My teacher helped me with my project _____

TEACHER EVALUATION

1. I was able to document student's work and progress. _____

2. I was able to supply the students with the materials they needed. _____

3. I informed the parents of the projects at hand. _____

4. Did the students have enough time for their projects? _____

5. Are there any changes I wish to make? _____

6. What were the positive things I observed? _____

7. What have I learned about my students? _____

Dear Parents/Guardians:

Your student will be participating in weekly research projects. These research projects will help the students to explore and investigate people, places, and things that are of special interest to them. Weekly research projects will involve students actively in the learning process and enhance our whole language arts program. Here are some of the objectives of the research program:

- *introduce students to a variety of research materials
- * develop research skills
- *enhance higher level thinking skills
- *encourage and expand creativity
- *promote parental involvement in the learning process

The research activities will be conducted on every Thursday morning from 9:00 to 10:00. The students may choose to work with a group or individually. When the students have completed their projects they will present them to their classmates and to you. I will send a letter (a week in advance) to let you know when your child will be presenting. You are invited to attend all the presentations. Your child will be doing a vast amount of research work in school but may need your help or additional resources at home. Please help in any way you can (trip to the library, using your home computer, the Internet, books from home, parent's expertise, etc.).

This is a very exciting project! If you have any questions or concerns, please contact me at school. Thank you for your support.

Teacher's signature

Dear Parents/Guardians:

Your child will be presenting his/her research project on Thursday,_____. The presentations will begin at _____. The presentations will end at approximately _____. You are welcome to join us. Other family members are also welcomed.

Thank you.

Teachers' name/signature

Dear Parents/Guardians:

Your child will be presenting his/her research project on Thursday,_____. The presentations will begin at _____. The presentations will end at approximately _____. You are welcome to join us. Other family members are also welcomed.

Thank you.

Teachers' name/signature

Dear Parents/Guardians:

Your child will be presenting his/her research project on Thursday,_____. The presentations will begin at _____. The presentations will end at approximately _____. You are welcome to join us. Other family members are also welcomed.

Thank you.

Teachers' name/signature

SUBSTITUTE'S LESSON PLAN

We are working on Research projects. We usually do group research work on _____. We work from _____ to _____.

The students know which groups they are in and what their assignments are. I would appreciate your help in keeping them on track and lending assistance only as requested or as needed for management purposes.

Please give me a brief evaluation or impression of the group sessions and especially any problems that might need to be addressed when I return.

Thank you for helping us out.

Group-----

Topic-----

Group----

Topic----

Group---

Topic---

Group-----

Topic----

Group---

Topic--