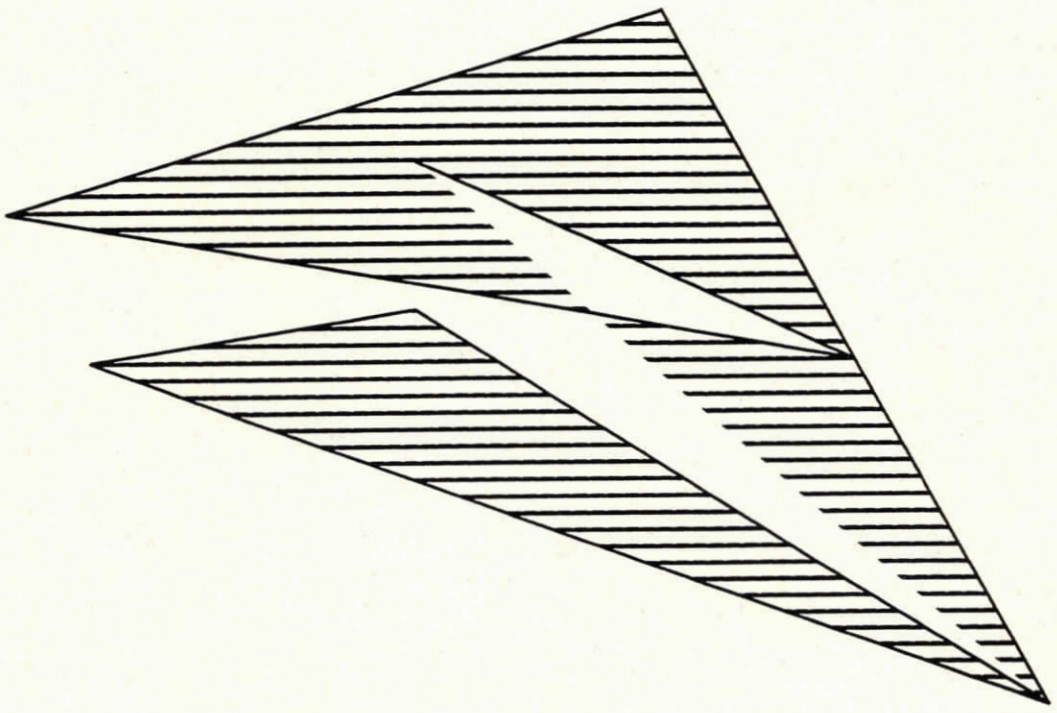
New Games for INFORMATION SKILLS

Ready, Set, Go...



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Margaret R. Tassia

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READY, SET, GO...

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Castle Rock, Colorado
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* DEDICATION *

To my husband Jack, my children, my grandchildren -
they make my world beautiful.

E.B.K.

To all my Library Science students -
may they continue to reach for success in this information world.

M.R.T.

* CONTENTS *

* PREFACE *

The purpose of this book is to present a variety of games, simulations, and projects for integrating information literacy skills with classroom curriculum. It is the authors' beliefs that integrating information skills is an educationally sound approach for teaching the information literacy process. With the gaming providing the *interest*, and information skills integrated with the curriculum providing the *substance* of the game, students can begin to experience the real life application of information literacy. This book is a completely rethought and rewritten extension of the former title *Games for Information Skills* authored by Margaret R. Tassia.

Most games and simulations in this book were designed by the authors and used with children in an urban environment. In an effort to include a wider variety of ideas, the authors asked several other persons to contribute games or projects and these have been identified with the library media specialists' names and school district.

The tools, skills, and curricular areas were a part of the authors' educational programs. However, since students' abilities, ages, and educational programs vary, games and activities should be adapted to accommodate these variables. This process will insure success and stimulate positive self esteem when participating in the activities.

In most cases, the games and activities are used as reinforcement or application of information processing skills presented after initial instruction. But games and simulations as teaching strategies can be used to introduce skills, as well as assess whether students have mastered skills. The purpose for which one wishes to use a game will direct the manner in which it is utilized.

The design of the games and projects included here vary from the previous book because of the emphasis beyond simple location of information. The five information skills listed on pages 3-4 provide a comprehensive model for information literacy. Each game or activity presented in this book follows the model which includes the objectives, grade and skill levels, techniques for construction, approximate time required to play, player's, rules or procedures, and debriefing followed by a discussion and possible extensions. Sample game boards, as well as sample questions are provided, and where applicable, there are patterns for making game parts. No games were created for skill one: What do I need to know?

With the sample instructions given, it should be possible for library media specialist or teachers to modify the games and activities to their particular educational program. Some suggestions for variations are provided. In many instances, simply changing the rules can adapt a game or activity from a small group to full class participation, or to meet various student ages and abilities. A change in subject content will require altering the questions, but usually the generic game board can be used.

* PART 1 *

INTRODUCTION TO EDUCATIONAL GAMING

INTRODUCTION TO EDUCATIONAL GAMING

It's a brand new game in education today! Preparing students to function in the next century necessitates educational strategies and methodologies that will prepare students to become independent life-long learners. Information literacy has been identified as one of five competencies required for job performance in future employment. Education must retool to accommodate the type of skills essential in the twenty first century work force.

Library media specialists and teachers are partners in restructuring education. In restructuring, the emphasis changes from resource based teaching to resource based learning. Resource based learning puts the focus on students utilizing resources to facilitate their own learning. Multiple resources are needed that will require the students to effectively utilize them regardless of format. This is certainly not a new concept to many library media specialists, but it does change their approach to the job. The recent emphasis on information literacy is changing not only the way the library media specialist administers the library media program, and selects resources to support that program, but also, the methods employed for teaching information literacy skills. School library media specialists and teachers must recognize that when preparing students to become independent learners, they need to insure that students have access to multiple resources in a variety of technologies, and that they are able to effectively utilize the information retrieved.

Most of today's students belong to a generation raised with TV, computers, and instant response to their wants and needs. For individuals raised in a computer society, video games have become a cultural factor in their approach to thinking about and solving various problems. Educators need to challenge students to think , analyze, solve problems and produce. Students need opportunities to interact with all resources in order to locate, interpret, analyze, synthesize, evaluate and communicate the information across a variety of subjects. This is where the library media specialist proves to be a valuable asset in restructuring the curriculum. Students must develop the skills that will encourage analyzing and utilizing information - in other words, information literacy skills. In order to achieve this, it is essential for library media specialists to design opportunities for students to engage in all steps of the information problem solving process.

By working with teachers to plan integration of information processing skills within the existing curriculum, library media specialists will move away from the traditional role of teaching skills in isolation and move towards providing an integral approach to mastering skills needed for life-long learning.

INFORMATION LITERACY

In a recent AASL position paper on Information Literacy it is stated: "Information Literacy is the term being applied to the skills of information problem-solving. One can claim to be information literate if one can identify an information need, access, evaluate and use information and internalize the process for future applications."

Colorado's *Information Literacy Guidelines* state that information literate students are competent independent learners. The guidelines suggest that information literate students know their information needs, actively engage in the world of ideas, and use information to solve problems. These guidelines also suggest students operate in situations where there are multiple answers, and that these students are flexible and adapt to change.

Colorado's *Information Literacy Guidelines* provide a process for learning that is applicable to all content areas and from school to real life. The efficient use of these skills is necessary for successful living in the next century. The Guidelines as identified are:

The student:

Constructs meaning from information,
Creates a quality product,
Learns independently,
Participates effectively, and
Uses information and information technologies responsibly and ethically.

A variety of information literacy models can be found in today's literature. All appear to address the same skills, but vary the steps involved in reaching the same goal - that of independent learner. For the purpose of this title, several models dealing with information literacy were reviewed. Information literacy skills were categorized into five information skills. Games and activities were classified by the information literacy skills emphasized in the games. or activities. These skills are identified as follows:

SKILL 1: WHAT DO I NEED TO KNOW? (Identify Information Need)

Determines what information is necessary
Identifies key words
Identifies content appropriate for question

SKILL 2: WHERE DO I LOOK? (Access and Locate Information).

Develops plan for search process
Identifies potential sources
Locates print, non-print, computerize resources
Uses organizers within item to locate information (i.e. index, table of contents, glossary, spell check, thesaurus); Navigation of an information source
Practices citizenship in the information world

SKILL 3: WHAT DO I USE? (Analysis of Information)

Skims for relevant information in single and multiple sources
Assesses information for accuracy, currentness, reliability and cites source
Differentiates fact from opinion, bias, point of view

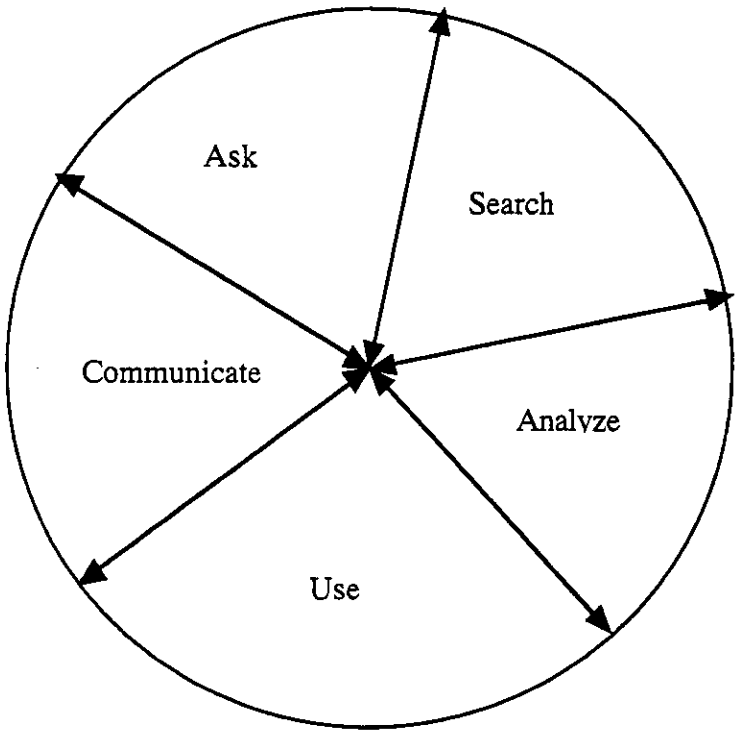
SKILL 4: HOW DO I USE? (Utilization of Information)

Summarizes information in own words
Organizes and analyzes information in new way
Integrates information from variety of sources
Makes inferences, draw conclusions, constructs meaning

SKILL 5: WHAT IS MY PRODUCT? (Synthesis)

Uses information to solve problems
Communicates information effectively in a new product
Uses information to create/produce a quality product
Provides appropriate documentation
Complies with copyright laws
Assesses if product has reached audience

Rather than think of the model as linear and that one skill is more difficult than the one that precedes it, a circular view might help. Think of a continuum within each of the skills from simple to complex and that thinkers hop back and forth among the skills as they confront projects and problems.



EDUCATIONAL GAMING

Throughout history, gaming and simulation have been used as methodologies for learning by measuring and comparing degrees of skill. Various aspects of society, business and military have used the game or simulation format for instructional purposes. Gradually educators have adopted gaming and some simulation as instructional devices. Research supports "superior performance on those skills required to utilize in playing games." This would indicate a strong reason for library media specialists and teachers to design and implement games and simulation activities that require students to actually use information problem solving skills.

What constitutes an educational game? Alice Gordon defines a game as "any simulated contest (play) among adversaries (players) operating under constraints (rules) for an objective (winning)." An educational or serious game has two basic features:

1) it simulates real life situations;
2) it seldom has pure competition where winner takes all and everyone else loses.

In other words, games represent a slice of reality, a structure that represents a real world process, and the game is the vehicle to test that process.

Gordon differentiates between games and simulations, although she notes that the distinction is neither firm, nor universal. She states that the basic difference between games and simulations is that in a simulation it is not necessary to have a winner as it is in a game. The principal purpose of simulation is to encourage students to express different sides of an issue. The principal purpose of a game is to get students to make more intelligent decisions as they learn the process represented. What both methodologies provide are opportunities to deal with complex issues in a concrete manner. Thus, students are actively engaged in their own learning. Underlying both educational games and simulations is a model of a process students are expected to transfer to a real world situation.

Games and simulations provide motivation, structured interactions with resources, and when integrated with classroom curriculum, involvement in an information problem solving process that represents reality. Library media specialists and teachers are able to create educational games or simulations that integrate classroom and information problem solving objectives that demonstrate to their students how information skills fit into real life situations. Educational games and simulations allow students to experiment with a particular skill in a full system context. Now the activity takes on new meaning and students can relate the process to a real life situation. Educational games motivate students in a way no other method can.

Games and simulations require students to become actively involved by bargaining, debating, manipulating and making decisions in a structured process. Students are physically and mentally involved, thus having some control over their situation. Immediate results of their actions are known, with reasons for their success or failure. Students know they alone are responsible for their actions and are forced to live with the results or consequences of their actions in a non-

threatening situation. The structured environment allows students to learn from their experience and improve their self image.

Educational games fall into three categories:

1) Board games graphically represent the process under study, and most action takes place around the game board.
2) Role play simulations require players to operate a model process representing reality; to emphasize processes such as persuasion, power, planning and strategy, decision making, bargaining, negotiation.
3) Drills require players to operate a model process representing reality.

There does not appear to be a consensus of opinion which game format is most desirable. Each category is used for its own specific purpose. Educators must decide which fits their objectives and the needs of the students.

All games are somewhat competitive. By introducing competition, students are motivated to use whatever process the game is designed to teach. While some educators steer clear of any competition, in educational games, competition can be designed to be an advantage. Games can reflect one of two types of competition. With zero-sum base games, winning is determined on a fixed number of points, and one player's gain is another player's loss. Tennis, Chess, and Tic-Tac-Toe are examples of zero-sum games. This type of game is most likely to express power motivation. Non-zero-sum games yield as many points as each player can gain through personal skill or luck. This type of game offers each player a personal responsibility and opportunity to achieve the optimum score without having to defeat his opponent point by point. In this situation, winning is relative. Examples of non-zero-sum games are Bowling and Cribbage. These games usually represent achievement motivation. The game designer controls the amount of competition, by creating rules which limit the type of competition. In other words, the cooperative aspect of life situations is built into the game and winning is relative. The winner simply has the greatest success in relation to the other players.

In an educational game, winning is not the most crucial element. The process used in attempting to win is far more important. Underlying all educational games is a model of a process students are meant to simulate in the real world. The most critical stage of gaming is debriefing, where actions used are assessed for effectiveness. Students are challenged to exercise what worked, what needs to be changed. The best advice on competition in educational gaming would be to use it in moderation.

Games can have an enormous impact on education. In the restructuring of schools and the changing role for teachers and library media specialists as guides and facilitators in learning, educational gaming and simulation will become increasingly more popular as a teaching strategy. However, many educators are turned off by the sheer mechanics of gaming in a classroom. The time element involved in the construction of games or simulations, the time required to play the

game, the logistics of large versus small groups of students, meeting students' needs when they are ready to learn, and scheduled instruction all impact on the methodologies used by library media specialists. These are legitimate concerns. Teachers and library media specialists will find that after initial planning, games and simulation formats can be easily adapted to accommodate a variety of abilities and ages as well as subject content. While some objections may be legitimate, with careful design, these objections can be eliminated.

Some teachers have indicated that the students view the game as fun, or they tune in on techniques which allow winning at all costs, and do not perceive the educational objectives. To be successful, educational games and simulations must be fun, but students must also sense the educational purpose of the game. Debriefing becomes an important element in discussing what students learned, and how the process used in play relates to the real world applications. Do not overlook the importance of this step and NEVER eliminate it. If time is insufficient, it would be better to design various stopping points in game play to allow students to participate in a debriefing session. These sessions guide students to think about what they were doing and to see how it relates to future and real life situations.

Another concern is the teacher's role. In gaming, this role becomes one of helper or coach. Students are learning from each other, with the teacher on the sidelines. The teacher's role consists primarily in designing and administering the educational game, and in guiding the post-game discussion. These professional activities are crucial to stimulate learning, not just take up time.

Some operational procedures have also caused concerns with the use of educational games. The novelty of gaming may cause some behavior problems in the beginning, but as students become accustomed to gaming as an instructional method, along with careful design of the game structure, these problems should be eliminated. Noise level is one area that can be addressed. Almost all games and simulations require students to interact with other players. One of the benefits of gaming and simulation is that students are learning from each other, interacting in a structured manner for specific educational objectives. Games and simulations provide an outlet for student energy and satisfy their need to communicate, redirecting what would be distractions into educational goals. By carefully designing the game activities and the amount and type of communication permitted in the game, these distractions can be channeled to productive ends. There is no reason to tolerate rowdy behavior in any educational setting.

The length of time required to play a game is noted as a concern. Not all games need to be elaborate or extensive. When creating a board game it would be more useful to design the board so that students could finish in a minimum amount of time and replay the game to see what other possible outcomes there may be, rather than to continue one game for a long period of time. Some simulations will require more time, but when the informational literacy objectives are integrated with classroom objectives and support the time investment, this concern will disappear.

Proponents of educational gaming and simulation state the advantages gained far outweigh the concerns. Educational games and simulations, because of their inherent benefits of motivation, opportunities for social interaction, peer communication, individual pacing, and goal orientation, have a definite place in the learning environment. Educational games and simulations do not have to be elaborate or expensive. It is better to design a simple game that meets a specific educational need, and can be played in a relatively short period of time rather than purchase an expensive, complicated game which may not meet your specific educational need, or is out of context with your curriculum. It is for the teacher or library media specialist, as a professional decision-maker, to determine when and how an educational game or simulation should be utilized to enhance the learning objective.

Designing an effective educational game is not easy and will require some effort initially. There are a few basic models of educational games and simulations which can be adapted to meet specific educational objectives in a variety of situations. Some basic elements which should be included when designing an educational game or simulation are:

- Fun
- Replication of some real life situation/application
- Reward. (This reward can be as simple as earning a few points to win the game).

A model used by the authors in developing games and simulation activities included in this book is provided for your convenience. Working in teams in the initial development of activities proved to be beneficial when analyzing the format of game or simulation to meet an educational objective and in designing strategies to analyze and utilize information. The games and simulations provided are samples that worked for the particular educational program they were designed for. The authors recommend teachers and library media specialists work in teams to design games and simulation activities to meet their specific educational objectives.

MODEL FOR DESIGNING EDUCATIONAL GAMES AND ACTIVITIES

1. TITLE:

The game title can motivate and identify the main focus of the learning experience.

2. TOOLS / SKILLS / CURRICULAR AREA:

It is essential that the game/activity reflects real world application. This area identifies the information tool(s), skills, and probable curricular areas. Adaptation to other tools, skills, and curricular areas should be recommended.

3. OBJECTIVES:

State in a clear manner, the exact concepts, skills, processes that will be developed by the student participating in the game. The information skills should include problem solving such as analyzing and evaluating the information to answer a specific need, selecting the appropriate source, and utilizing the information in some fashion. Classroom curricular objectives should also be included. The primary objective of gaming is not the acquisition of facts; rather the objectives should emphasize the development of problem solving abilities and understanding the process.

4. GRADE LEVEL:

Approximate levels are suggested. These levels can be adapted to meet individual requirements of students and curriculum.

5. SKILL LEVEL:

Levels are based on information literacy skills as outlined in the introduction. Some games indicate multiple skill levels when more than one skill is required to play the game.

6. MATERIALS:

A list of materials necessary to play the game, including locally produced items and library media center resources is included in this section. The game/activity format which best meets the

objectives of the game is included in this section. Do not let the complexity of the game format overshadow the learning objectives.

7. MATERIALS DESIGN:

This section provides suggestions for constructing the materials that will be needed in the game. The actual game or activity equipment should be attractive, usable, and durable, but construction need not be so time consuming it prevents one from making the game.

Relating the materials to the theme is desirable, but sometimes generic game boards allow more flexibility, especially on a race/chase board. Illustrations and chance spaces on the game board could represent subject content. Materials like oak tag and file folders can be laminated for durability, yet folded for ease of storage. File cards are popular for question cards and and can be produced neatly on a computer or typewriter, thus providing a professional appearance. Spinners can be constructed from a variety of materials including popsicle sticks mounted onto margarine tubs. This allows the spinner to move freely.

Chance is introduced to the game in a variety of ways, by using dice, shuffling cards, spinners, flipping cards. Chance has a definite function in a learning game. It is used to create uncertainty by randomizing the challenges presented to the players. Chance is an equalizer for unskilled players. Therefore, it relieves the fear of failure, or, at least, minimizes it.

8. SAMPLE QUESTIONS:

Sample questions have been provided for games described in this book, but exact questions will relate to the objectives, curricular areas and abilities of your students. It may be desirable to develop several sets of questions for each game depending on your students. Students can play the game several times, and recognize the application of the information problem solving process across several disciplines.

9. TIME OF PLAY:

As in any instructional method, the time required to play a game or activity is necessary for planning purposes. In some instances, the time of play can vary according to your specific objectives or design of the game. We have provided an idea of the time involved based on our objectives and students. In most instances, it will be possible to modify the time element when constructing your game.

10. PLAYERS:

State at the outset the number of players required to play the game (a minimum of 2 players are needed for a social game, unless the player is comparing score to a previous score).

State if the game is to be played individually or in teams. If teams, is a leader necessary? Who will serve as game monitor or referee? How will the answers be checked?

The purpose of the game must be known to the student. The players must know exactly what is expected of them if they are to invest in the activities. By stating the player's roles, game designers visualize what players will be doing during play, how they will be involved, what type of communication is necessary, and what skills they will be practicing.

Some questions that need to be addressed include: how much activity a player must engage in, and whether they can all be engaged in some activity.

11. RULES/PROCEDURES:

Rules/procedures can make or break a game. Effective learning takes place when students are actively involved in the process. Therefore, avoid long explanations of rules. Keep them simple, yet clear and inclusive. Gillespie's research identifies seven classes of procedural rules to be used in designing games:

1) Initiation and Termination: Determine when a game begins and ends, including the duration either in prescribed time period or predetermined conditions of winning or losing. For example, the player wins on a game board when home is reached, or the the winner is the first to lay down all cards held.

2) Deployment and Disposition: Indicate who, when, where, and how a player can move. Rules should state who can initiate and who controls movement.

3) Communication: Decide if communication is permitted, restricted or free. For example, in "Go Fish" can you ask any player for a card, or only the individual to your left?

4) Arbitration: Establish how disputes will be handled.

5) Intervention: Introduce any chance involved in the game. Be sure that players understand the elements of chance.

6) Enforcement: State at the beginning of play how infractions of the rules will be handled. Infractions such as moving out of turn, improper communication, etc. have penalties.

7) Rules of Outcome: State the conditions that have to be met to win, whether they will be paid off at the end of each game or end of a series of games. Are participants competing for the highest score, or are they competing against others? For example, does the person with the highest score or the person who finishes first, win the game?

12. DEBRIEFING:

This is one of the most important elements of an educational game. Debriefing is a time when students discuss what they have learned, and how the game relates to real life situations. Planning this debriefing session is necessary to determine if the game is emphasizing the original objectives. Use the following questions as a guide in planning the discussions:

- What skills were needed to play the game?
- What new skills were acquired while playing this game?
- When might you use these skills in the future?

It is here that the educational objective of the game is realized. This step should never be omitted. If time is short, stop the game at an appropriate place in order to complete the debriefing session. This session guides students to think about what they were doing and see how it applies to future use.

13. VARIATIONS:

Games and activities can be changed with slight alterations in several areas:

- Curriculum
- Methodologies
- Resources

Once the game is designed and developed, it can be customized to suit a variety of curricular needs, resources or methodologies. You are limited only by your imagination.

14. DISCUSSIONS AND EXTENSIONS:

Discussion of the game focuses on the essential information literacy elements of the game. An essential question is posed here: What is this game trying to do? Based on the answer, adaptations or modifications to increase learning are developed and recommended.

FORM FOR DESIGNING EDUCATIONAL GAMES AND ACTIVITIES

TITLE:

TOOLS / SKILLS / CURRICULAR AREA:

OBJECTIVES:

GRADE LEVEL: SKILL LEVEL:

MATERIALS:

MATERIALS DESIGN:

TIME OF PLAY:

PLAYERS:

SAMPLE QUESTIONS:

RULES/PROCEDURES:

DEBRIEFING:

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* PART 2 *

SKILL 2 GAMES
WHERE DO I LOOK?
(ACCESS AND LOCATE INFORMATION)

BEE A GOOD LMC USER

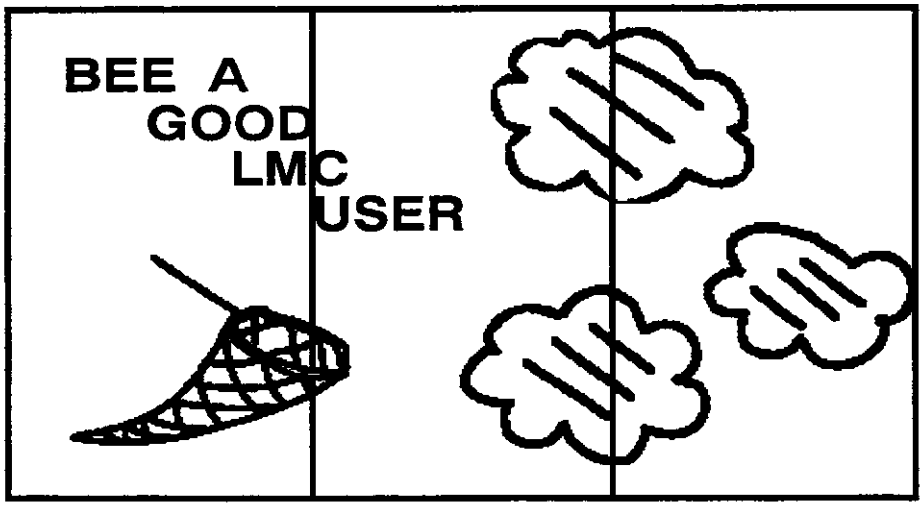
TOOLS / SKILLS / CURRICULAR AREA: Various technologies and systems / Book care, Technology care, and Citizenship in the information world / Social studies

OBJECTIVES: The students will demonstrate a general knowledge of book care, technology care and library citizenship.

GRADE LEVEL: 2 - 3 SKILL LEVEL: 2

MATERIALS:

- Tri-fold poster board with sky scene and 3-D butterfly net. See illustration below.
- 40 laminated bees.



MATERIALS DESIGN:

1. On three poster board panels, draw the sky scene and letter the game name. You may prefer to paste cut-out letters and clouds on the panels. After the panels are completed, laminate each one.

2. The butterfly net is made of a double thickness of laminating film and cut to the correct shape. Use a black marker for detailing and secure the net to the first panel with tape.

3. Place several strips of double-faced tape to each cloud to hold the bees.

4. Tape the three panels together securely with book mending tape.

5. Laminate construction paper and cut out the bees.

6. Using a permanent marker, print statements on each bee along with a point value between 1-5 based on degree of difficulty.

SAMPLE STATEMENTS (for bees by category):

General Behavior

Run in the library.
Wait your turn.
Pick up unwanted paper to put in trash.

Storytime

Being a noisy story listener.
Sitting quietly at storytime.
Leaving your chair in the middle of the floor.

Use of Books

Keeping the book shelves neat.
Keeping your book in a safe place.
Remembering to return your library book on time.
Losing your library card.
Protecting your book from the weather.
Eating while reading your book.
Replacing books with spines out.
Wetting your finger to turn pages.
Forgetting to return your book.
Writing in your book.
Turning pages carefully.
Mixing the books on the shelf.

Use of Audiovisual Materials

Operating machines properly.
Cooling lamps in projector after use.
Proper use of software in machines.
Forcing a part until it breaks.
Pausing a film for more than 10 seconds.

Computer Time

Pounding on keys.
Inserting disks properly.
Powering up and down correctly.

Handling CDs on the edge.
Using the network properly.
Backing up your work.
Logging out completely before turning computer off.
Respecting other student's work.
Being a good network citizen.
Copying copyrighted computer programs.

Internet/Network Time

Using the network properly.
Staying on task.
Exploring only educational places.
Exploring anything I want when I am at home.
Flaming on e-mail.
Being polite on the Internet.

Research Time

Leaving research materials out after use.
Cooperating with a group in research.
Working hard.
Returning encyclopedias in ABC or number order.
Making "Works Cited" notes before replacing materials.
Following cross reference directions in sources.
Asking for help at the right time.
Helping others in their research problems.
Plagiarizing.

Instruction Time

Listening carefully.
Doing the assignment.
Participating.

Independent Use

Knowing what I should be doing.
Doing what I should be doing.
Respecting other groups and individuals.
Asking for help only when I am really stuck.

Helping Time

Doing every task given me correctly.
If I find a problem, I report it.
Hurrying through the job and not doing it right.

Book Exchange Time

Respecting others.
Asking others for recommendations.
Reading a few pages or blurbs before selecting a book.
Finding things I'm really interested in.

Local Production Time

Cleaning up my mess.
Working carefully with the equipment.
Following safety rules.
Using materials sparingly.

Bee pattern which can be enlarged:

TIME OF PLAY: 20 MINUTES

PLAYERS: 3 teams of 6 - 8 players each

RULES:

1. The class is divided into teams of 6 -8 players.

2. The first player on each team draws a bee from the pile and, in turn, reads the statement and decodes whether the bee should be caught in the net or allowed to fly free.

3. The scorekeeper (teacher) records the points received for each correct answer.

4. The play continues until all the bee cards are used. The team with the highest number of points is the winner.

DEBRIEFING:

1. What is citizenship?

2. How can you be a good citizen in your school?

3. How can you be a good citizen in your library media center?

4. How can you be a good citizen on information networks?

Discussion and Extensions

Citizenship in the information society and being ethical are important concepts as the world of information and multimedia opens up to students. Use whatever technologies are available for this game and discussion.

GO TO THE HEAD OF THE LIBRARY MEDIA CENTER

TOOLS / SKILLS / CURRICULAR AREA: Library catalog / Organizers in an information system / Language arts

OBJECTIVES: The students will be able to assess the various types of information on a catalog card or computer screen. The students will be able to analyze the type of information "see" and "see also" cards or references provide. The students will be able to utilize information in the library media center to locate materials.

GRADE LEVEL: 3 - 5 SKILL LEVEL: 2

MATERIALS:

- Rule cards
- Answer key
- Game board
- Question cards

MATERIALS DESIGN:

The game board is made using an 11" x 14" file folder. These game boards can be illustrated with photos from the school or by cutting out classroom scenes from magazines. Include some chance squares on the game board - i. e. "For using the library catalog to locate a CD ROM, jump ahead 3 spaces." Laminate the game board.

50 - 60 Question Cards should be made by using discarded catalog cards or photocopies of catalog cards or catalog screens as game question cards. Number these question cards to correspond with the answer key. Type specific question the student is to answer on the back of the card. Limit subject content to information found in the elementary library media center.

SAMPLE QUESTIONS:

1. Identify the illustrator on this card (screen). (3 points)

2. In what year was this title published? (2 points)

3. How many pages are included in this edition of *Tom Sawyer*? (3 points)

4. If you had a card or screen message that said, "Puppies - see Dogs," what term would you look up? (4 points)

5. If you had a card or screen message that said, "Dogs - see also Puppies, Hounds, Collies, German shepherds," what term(s) would you look up for additional information? (4 points)

TIME OF PLAY: 25 - 30 minutes (approximately)

PLAYERS: 2 - 5 players

RULES:

1. Shuffle the cards.

2. Begin the game by one player drawing a card from the stack and reading it aloud.

3. The player answers the question aloud.

4. Check the answer with the answer key. If correct, move the number of spaces indicated. If incorrect, the players stay where they are. Do NOT return the question card to the pile. After the game, check with the library media specialist to determine what was wrong.

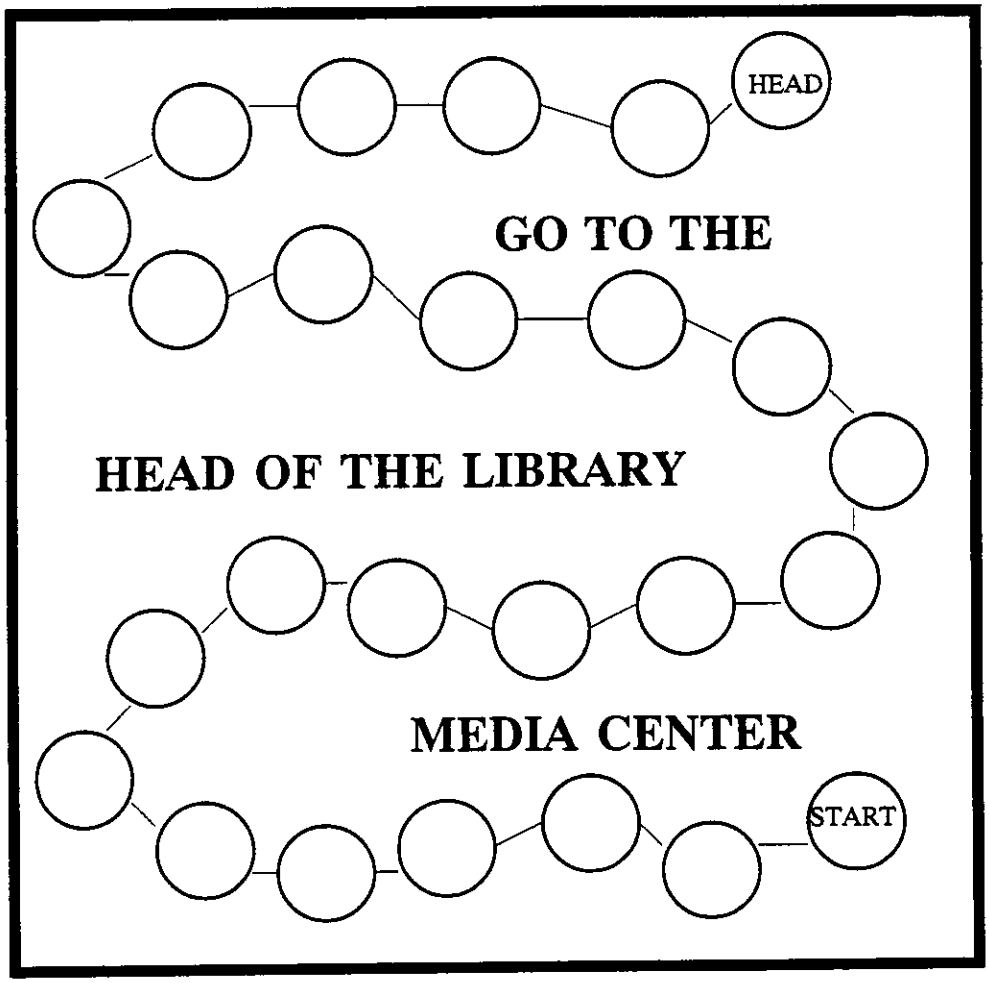
5. The first player to reach the head of the class wins the game.

DEBRIEFING:

1. What skills did you use in this game?

2. When would you need to use the skills of this game?

3. Demonstrate how you would use a "see" or "see also" card or screen message.



Discussion and Extensions

Catalog cards and information screens have been designed to communicate information to the user of the LMC, yet many times, the users do not recognize the information or interpret it properly. Students need to have in their vocabulary the various functions of authorship, illustrator, editor, compiler, subject heading, title, etc. and be able to recognize these terms when they are encountered in the information system.

This game should be designed around your system for first play. As an extension, create a game around the catalog at the public library if different than the one in the school LMC. This is particularly important when various catalogs in the community, state, and nation can be accessed from a network installed in the LMC. A second extension is to create the game around various information products, whether online or on CD-ROM that present "library catalog-like" problems for the students. There are often so many different search engines, that students must have the patience to read screens carefully to discern how the information system encountered can be searched.

GUIDE WORDS

TOOLS / SKILLS / CURRICULAR AREA: Dictionary / Dictionary usage, Guide words as an information system organizer / Language arts

OBJECTIVES: The students will use guide words in locating information. The students will interpret the type of information located in a dictionary.

GRADE LEVEL: 4 - 6 SKILL LEVEL: 2, 3

MATERIALS:

- 26 game boards.
- Instruction cards.
- Answer key.
- Washable felt tip pen.
- Game monitor (library media specialist, parent volunteer, or older student)
- A dictionary that provides guide words, main entry, phonetic spelling, parts of speech, synonyms, and definitions.

MATERIALS DESIGN:

The 26 game boards, one for each letter of the alphabet, are constructed as illustrated on an 8 1/2" x 10" file folder. On the left hand side of the game board, print four or less sets of guide words from the dictionary to be used in the game. Then divide the rest of the board into six columns. Laminate the game board. Instruction cards are made from oak tag. The instruction cards should be typed as follows:

Find 5th Main Entry 5 points

Find 3rd Main Entry 3 points

TIME OF PLAY: Approximately 30 minutes

PLAYERS: 1-26 players. Each player completes one game board, independent or in a group.

RULES:

1. Each player draws an instruction chance card from the pile.

2. Using the guide words on the left side of the game board, locate the main entry indicated on the instruction chance card.

3. Write all the information on the game board with the washable felt tip marker.

4. In column 1, write the main entry and guide words. In column 2, write the phonetic spelling of the word. In column 3, write the number of syllables. In column 4, write the part of speech. In column 5, write any synonyms given. In column 6, write the definition.

5. Check the answers with the game monitor when the round is completed.

6. If all the answers are correct, use the number of points indicated on the instruction chance card and multiply by 6; 5 correct, multiply by 5; 4 correct, multiply by 4; 3 correct, multiply by 3; 2 correct, multiply by 2; 1 correct, multiply by 1.

7. Begin round 2. Play as before.

8. The winner is the player with the highest score at the end of the game.

DEBRIEFING:

1. What type of information does a dictionary provide?

2. When might you use this tool in the future?

3. How did using the guide words help you to use the dictionary?

	GUIDE WORDS					
	Main entry & Guide words	Phonetic spelling	Number of syllables	Part of Speech	Synonyms	Definition

Board P	GUIDE WORDS					
	Main entry & Guide words	Phonetic spelling	Number of syllables	Part of Speech	Synonyms	Definition
paddock						
print						
panic						
pantry						
peace						
peddle						
penny						
perfect						

Discussion and Extensions

A number of printed reference tools use the concept of guide words to help the user find information more quickly. As these tools transfer over to electronic sources, the necessity of guide words diminishes, but students will need to understand the function of guide words in the foreseeable future. Start first with the dictionary for this game, then transfer to other types of sources that use guide words such as telephone books, biographical dictionaries, subject dictionaries, or printed encyclopedias. Change column headings on the game boards to reflect the type of information found in the source. Once students can recognize the function of guide words in a single source, they should be able to use this knowledge across other tools.

MELVIL'S MAGIC CARPET

TOOLS / SKILLS / CURRICULAR AREA: A classified group of materials / Dewey Decimal Classification System, Classification systems in a materials set / Language arts, Mathematics, and Science

OBJECTIVES: The students, through cooperative learning, will analyze and compare the variety of subjects found within each of the 10 major classes of the Dewey Decimal System.

GRADE LEVEL: 5 - 6 SKILL LEVEL: 2, 3

MATERIALS:

- A large supply of outdated magazines, publishers' catalogs, brochures, etc. suitable for cutting.
- 12" x 18" oak tag.
- Glue.
- Handout - Dewey Decimal Classification System with examples of the types of information found within each class (A copy for each student).

TIME OF PLAY: 30 minutes

PLAYERS: Teams of 3 - 4 students

RULES:

1. Present a brief review of the purpose of the Dewey Decimal Classification System and how Melvil Dewey divided all knowledge into 10 main categories.

2. Divide the students into teams and designate a Dewey category for each team.

3. Using the magazines, catalogs, and brochures, teams should locate a minimum of 15 pictures depicting subjects found within their category. Cover the most used Dewey categories; you may want to eliminate 100 and 400 for this game.

4. After all pictures are cut out and arranged on the oak tag, they are glued in a collage format. DO NOT GLUE BEFORE THE MINIMUM AMOUNT OF PICTURES ARE FOUND TO GUARANTEE THEY WILL ALL FIT ON THE PAPER.

5. The winning team is determined by the largest number of points. Points are assigned as follows:
   2 points for each correct picture
   10 point bonus for all 15 pictures

8 point bonus for 12 - 14 pictures
5 point bonus for 10 - 11 pictures
10 point bonus for neatness
Maximum points attainable - 50

DEBRIEFING:

1. Review with the class the purpose of the Dewey Decimal Classification System, and why it is necessary. Through discussion and questions and answers, bring the students to the conclusion that the purpose of the Dewey System is to place the materials on the same topic together on the shelf.

2. Articulate why we did what we did today.

THE DEWEY DECIMAL CLASSIFICATION SYSTEM

Ten major classes make up the Dewey Decimal Classification System. Included under each class heading listed below are some of the kinds of information to be found within each class.

000 GENERAL WORKS
- Bibliographies
- General Encyclopedias

100 PHILOSOPHY
- Psychology
- Ethics
- Ancient and Modern Philosophy

200 RELIGION
- Bible
- Church History
- Christian Religion
- Other Religions
- Greek and Roman Mythology

300 SOCIAL SCIENCES
- Government
- Community Life
- Conservation
- Transportation
- Costumes
- Manners
- Law
- United Nations
- Holidays
- Folk Tales and Fairy Tales
- Legends

400 LANGUAGE
- English Language
- Study of Words
- Dictionaries
- Foreign Languages
- Alphabet

500 PURE SCIENCE
- Mathematics
- Astronomy
- Physics
- Chemistry
- Geology
- Prehistoric Life
- Living Things
- Plants and Animals

600 USEFUL ARTS - TECHNOLOGY - APPLIED SCIENCE
- Hygiene and Safety
- Inventions and Machines
- Aeronautics and Space
- Farming
- Food
- Clothing
- Tools
- Engineering
- Building
- Manufacturing

700 FINE ARTS AND RECREATION
- Architecture
- Coins
- Pottery
- Drawing
- Handicrafts
- Painting
- Photography
- Music
- Recreation
- Hobbies
- Games and Sports
- Magic

800 LITERATURE
- Poetry
- Plays
- Short Stories

900 HISTORY - GEOGRAPHY - BIOGRAPHY
- History
- Travel
- Geography
- Atlases
- Biography

Discussion and Extensions

The concept of classification begins in very early childhood and increases in complexity throughout the school years. Classifying ideas, objects, and life forms are familiar to children when they come to school through visits to stores, the composition of neighborhoods, and in the home (these are Sarah's things, these are Danny's things). The Dewey Decimal System is useful to children first as a locational device, but also as a browsing tool. Children may be confused because picture books and fiction in a library are classified by author, but non-fiction is classified by subject. If they go to a college library, a different form of classification is used, but with the same function of Dewey to bring like things together. Some automated catalogs (Kids Catalog is one example sold by Ameritec) requires students to classify their needs before they can look up a specific title. They must first know that they want something about animals, adventure, mystery, people, or other topics and then click on the appropriate icon to enter the system. Such catalogs duplicate the idea of 18th and 19th century classified catalogs in libraries before the Dewey Decimal System became popular.

This game asks students to get an idea of groupings of materials by topical area so that they can become effective browsers and locators. As set up, the sample game is very general; i.e., it asks students to place a wide variety of topics in their general Dewey categories. Other extensions are recommended as students begin the study of a topic in the classroom and are confronted with locating and browsing for information on their topic.

For example, recreate the game showing where various materials might be located under a single subject.

Sample subject: Dinosaurs

Reference materials will be in the 000s or reference section
How to draw dinosaurs will be in the 700s
Many dinosaur books will be in the 500s
Fiction about dinosaurs will be in the picture book and fiction sections (but an author's name will be needed).
Topical atlases of different eras when dinosaurs lived will be in the 900s.
Mythological animals connected to the idea of dinosaurs are in the 200s.

You may also have to go to a section first, then to the topical location. For example, you get on the Internet first, then go to a dinosaur address, or you get on a CD-ROM first and then access dinosaurs either through a classified search in which you can browse or a direct one that requires knowing exact terminology.

If students have access to banks of clip art on CD-ROM, you might wish them to use these graphics to generate pictures for their collages.

A good time to teach classification is when it is being taught in the classroom no matter what the topical area. By the end of the lesson, students should know the main area for dinosaur materials in the 500s but they should also know that there are many other places in the collections where the topic may be located. If there is a college library nearby that older students are starting to access, then the same game could be played first placing pictures on the Dewey scheme and then transferring the same pictures to the Library of Congress Classification System.

LIBRARY CATALOG KEYS

TOOLS / SKILLS / CURRICULAR AREA: Library catalog / Organizers in an information system / Social studies, Language arts

OBJECTIVES: The students will utilize the library catalog to locate resources on a given subject.

GRADE LEVEL: 4 -6 SKILL LEVEL: 2

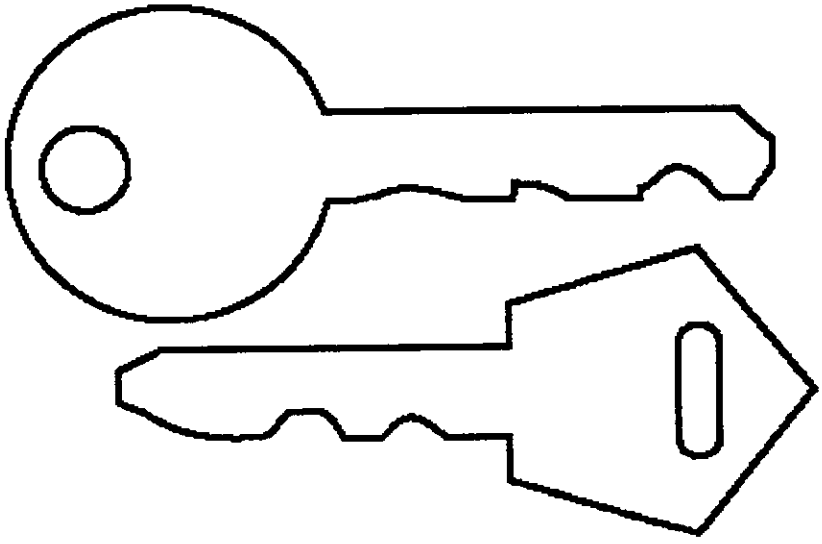
MATERIALS:

- Mission cards.
- Access to the library catalog.
- Handout containing directions and space to record title and call number for each mission.

MATERIALS DESIGN:

1. Make mission cards with points assigned to each according to the degree of difficulty. Suggestion: Mission cards can be 4" x 6" file cards, or they can be made from oak tag keys as illustrated.

2. Samples of mission card instructions and handout containing directions are listed under RULES.



SAMPLE QUESTIONS (for mission cards):

1. Your library catalog mission is to find a book about Arizona. (Clue: The author's last name is a person who works with a hammer.) CARPENTER

2. Your library catalog mission is to find a book about basketball. (Clue: The author of the book is the name of a part of a book.) PAIGE

TIME OF PLAY:

A. If played by individuals, locate the answers to mission cards, working in a 15 minute time frame.

B. If played by teams, spend 20-30 minutes.

C. The time may need to be adjusted depending on the number of terminals for the automated catalog.

PLAYERS: Individuals or teams

RULES:

A: Individuals

1. Set the timer for 15 minutes.
2. Draw a mission card from the shuffled deck. Take a mission instruction sheet to record answers.
3. Analyze the mission card to determine a key word to look for in the library catalog.
4. Follow the directions to locate an item on the shelf and record the answer.
5. Select the next mission card and continue until the timer rings.
6. Count the number of correct answers or total points.
7. Try to beat the previous individual record.
8. The next player attempts to beat other player's total points (File folder can be attached to record all records).

B. Teams

1. Divide the class into three teams.
2. Set the timer for 20 - 30 minutes.
3. An individual from each team draws a mission card and a mission instruction sheet.
4. Each player analyzes the question to determine a key word to look up in the catalog.
5. Follow the directions and locate the item on the shelf; show the item to the library media specialist as stated in the directions for verification. This step is optional depending on the amount of time for the game.
6. Return to your seat to record answer or verify with the library media specialist that the correct item was located.
7. When the first team member returns to his/her seat to record answer, the next team member draws a mission card and proceeds to the catalog.
8. The team with the most points wins.

SUBJECT TREASURE HUNT

The library catalog is a treasure chest of knowledge, and you possess the keys to unlocking its riches. These include all the books, videos, CD ROMs, audio tapes, maps, and micro-computer programs that belong to your school library media center collection.

Your mission is to find some of these treasures.

1. Analyze your mission card for the "key" subject word.
2. Look in the library catalog for this "key" word, and determine which item you are going to look for on the shelf.
3. Record the title and call number on your record sheet.
4. Optional (follow the instructions of the library media specialist) Go to the shelves and bring the item to the library media specialist for checking.

CALL NUMBER:

TITLE: _____

AUTHOR: _____

DEBRIEFING:

1. What is a library catalog?

2. What is the difference between author, title, and subject cards? Discuss this if students have access to a card catalog only, or if students must be tested over this concept.

Discussion and Extension

Students must learn early that the library catalog, whether in card form, or electronic form is one of the major keys to unlocking the location of LMC materials. This game concentrates on location skills first in the catalog, and then on the shelves if there is enough time to do the physical location. Preceding the playing of the game, the library media specialist should have taught students how to navigate through the catalog. To make these lessons more generic, students may have to learn how to navigate an automated catalog and a card catalog at the same time since many national tests have not switched from card catalogs to automated ones. Another complication is the type of catalogs available to students in the community, whether at other schools, public libraries, or academic libraries.

Teach students that they will confront a variety of automated systems and that each system has its own set of searching procedures and quirks. The next skill of actually locating an item on the shelf once the address has been determined, continues to be a barrier to many students. Automated catalogs may indicate whether the item is on the shelf, but students must be able to follow signage, whether poor or excellent, to be able to find the actual item. Students will need to know that there may be many subsections of the library and that a call number may just be a first step in finding materials.

If field trips are planned to other libraries and schools, a modified version of this game might be used in an unfamiliar location to test the tenacity of the students in figuring out how to use systems and different signage.

As with other games in this volume, it is far superior to have students locate materials on a topic that is being studied in the classroom rather than to locate materials at random. A game centered around the Civil War might take students to many sections of the LMC where materials on that topic are located. At debriefing time, students can discuss why materials on the same topic might not be stored in the same place. This would serve as a good transfer game; i.e., after a previous unit where catalog skills were important, the library media specialist plays the game as an introduction to a new unit of instruction. This reinforces the catalog skills and points students to location of materials on the new topic.

PARTS AND WHOLES

TOOLS / SKILLS / CURRICULAR AREA: Books or other type of information technology / Parts of the book, Parts of an information tool / Language arts

OBJECTIVES: The students will be able to access information through recognizing the parts of a book.

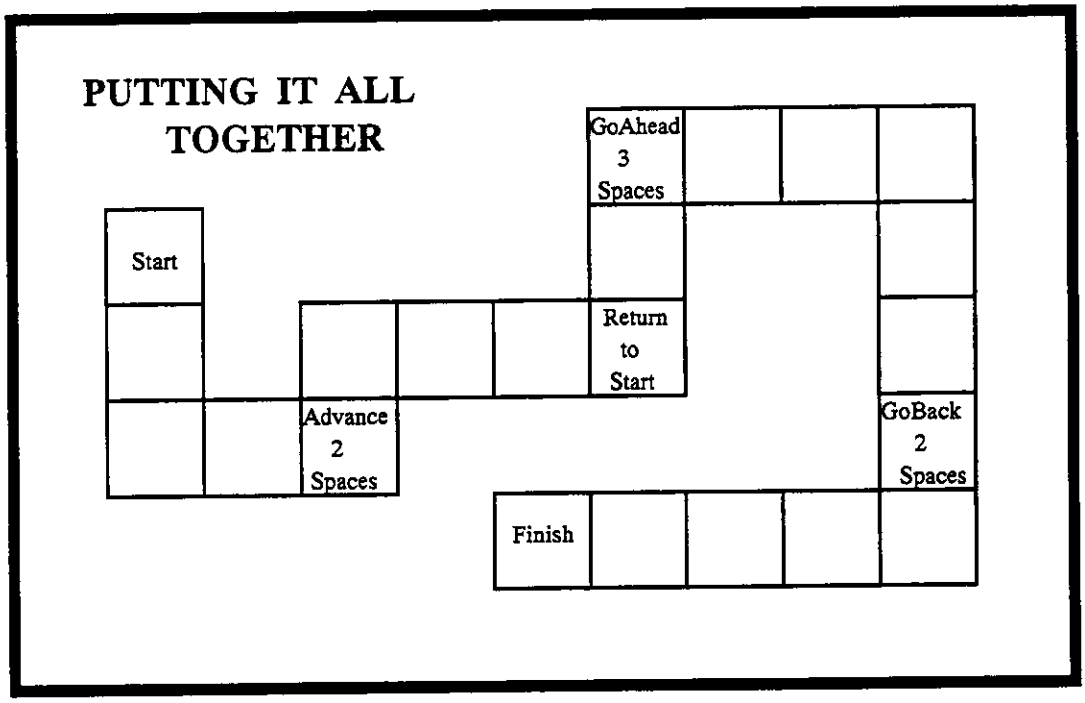
GRADE LEVEL: 3 - 4 SKILL LEVEL: 2

MATERIALS:

- Game board with 22 spaces.
- Pack of cards with questions pertaining to the parts of a book and giving directions for movement on the game board.
- A single die.
- Chips or buttons to be used as markers for each player.
- Copy of book used to formulate specific questions.

MATERIALS DESIGN:

1. The game board is constructed on 11" x 18" oak tag. The 22 spaces are arranged as illustrated, marking several spaces for advancement.



2. There are several spaces that instruct the player to either go back spaces or return to START.

3. The question cards are 3" x 5" file cards.

4. The game cards with the questions also have instructions on them. For a correct answer, the player advances the number of spaces indicated, and for an incorrect answer, the player is told to move back 1 space. The correct answer is on the back of the card.

SAMPLE QUESTIONS:

1. What is the outside of the book called?
   Advance 1 space

2. What is the part of the book that protects the pages?
   Advance 2 spaces

3. What part of the book do you see when it is placed properly on the shelf?
   Advance 2 spaces

4. What part of the book holds the pages together?
   Advance 1 space

5. Where are the story and pictures located?
   Advance 1 space

6. What is the inside of the book called?
   Advance 1 space

7. What is the list of chapters called?
   Advance 3 spaces

8. What is a list of new words used in the book with their meanings called?
   Advance 4 spaces

9. What is another name for a mini dictionary in a book?
   Advance 4 spaces

10. What is the name of the page that has the title of the book and the author's name on it?
    Advance 4 spaces

11. What is the alphabetical list of subjects found in the book called?
    Advance 3 spaces

12. What is the date when the book was published?
    Advance 3 spaces

13. Who wrote the book?
    Advance 1 space

14. Who drew the pictures in the book?
    Advance 1 space

15. Who prepared the book for sale?
    Advance 2 space

TIME OF PLAY: This is a board game, therefore it runs until one player completes the course.

PLAYERS: 2-4 players

RULES:

1. After each player chooses a marker, shuffle the question cards and place them FACE UP.

2. The first player has his opponent draw a card and reads the question on it, being careful not to reveal the answer on the back.

3. If the player answers the question correctly, advance the number of spaces indicated on the card; if the player answers incorrectly, stay in place.

4. The game is over when a player reaches FINISH first.

DEBRIEFING:

1. What is a table of contents?

2. What is an index?

3. What is a glossary?

4. What is the spine, and what is its job?

5. What is the cover, and what is its job?

6. What are the pages, and what are their jobs?

7. What is the title page, and what kinds of information does it contain?

8. As an on-going activity, have students create an original story and convert it to book form incorporating all the parts of the book used in this game.

Discussion and Extensions

Studying the parts of a book is one of the oldest and most useful information skills. It is a perfect example of a generic information skill rather than a specific one. It is generic because the knowledge transfers to most published books even though you have studied only a few.

The game can be made easy or challenging depending on the types of books chosen and whether they have the same parts consistently across titles. The wider variety of books brought into the game, the more challenging and the better the game. Adding book oddities such as the title page at the back of the book or indexes in various parts of the book rather than all at the back create a challenge for students and a discussion point that while books are patterned by publishing rules, oddities exist.

This is a good game to use at the beginning of a topical unit when you want to introduce a variety of books that might be used by the students to research animals or some other topic. The time spent in reviewing the parts of the book will also introduce useful topical volumes at the same time.

There are other materials in the LMC that have parts - not just books. Any medium that the library media specialist would like to introduce, can be formulated into a game using this same design. Consider creating games for:

Multiple volume sets of books
CD-ROM products
Databases
Newspapers
Magazines
Printed indexes (some will be integrated, others have sections)

READ ALL ABOUT IT

TOOLS / SKILLS / CURRICULAR AREA: Newspapers / Potential information in a source / Language arts, Social studies

OBJECTIVES: The students will utilize the newspaper as a source of current information.

GRADE LEVEL: 4 - 6 SKILL LEVEL: 2,3

MATERIALS:

- A list of items to be found in the newspaper.
- Composition book, oak tag, or construction paper. (Optional)
- Glue. (Optional)
- Scissors.
- Old newspapers for cutting. Several large-city newspapers are preferable to small community ones that lack many of the features listed below.

MATERIALS DESIGN:

Create a list of items that are in the newspapers of your community. This should include such components as:

1. International news story
2. National news story
3. Local news story
4. Syndicated editorial
5. Locally written editorial
6. Editorial cartoon
7. Letter to the editor
8. Sports story of a recent game or event
9. Team standings
10. Personal advice column
11. Birth announcement
12. Wedding or engagement
13. Obituary
14. Weather map
15. Classified advertisement (help wanted)
16. Crossword puzzle
17. Comic strip
18. Movie advertisement
19. TV listing
20. Stock market report

21. Human interest story
22. Lost and found
23. House for sale
24. Garage sale
25. Special section for kids

TIME OF PLAY: 20-30 minutes or as determined by the teacher according to number of items on the list and the grade level.

PLAYERS: Unlimited

RULES:

1. This scavenger hunt game can be played individually or as a team. Each player or team receives a list of items to be located in the newspaper.

2. A time limit is set by the teacher and each player/team begins to peruse the newspapers to locate items from the list. Students may use the newspaper index (usually on the front page) to help speed up their search.

3. As they are found, the items are cut out and numbered according to the list.

4. The player/team with the most items at the end of the allotted time is declared the winner.

5. The items can be glued into a composition book or on oak tag or construction paper if it is desired to preserve them for reference and review.

6. The items should be categorized under appropriate headings, such as:
   News stories
   Editorials
   Daily log
   Sports
   Entertainment
   Classifieds

DEBRIEFING:

1. Review with the students why the newspaper is the most current printed reference source available to them.

2. How could you utilize the information found in the newspaper?

Discussion and Extensions

This game helps students recognize the types of information contained in newspapers and would be good to play before any unit of instruction that concentrates on current information. The game is also a good lead-in to searching electronic newspapers since electronic forms will have a number of the features of the printed source, but not all.

As students become familiar with the types of information that newspapers may contain, they can be taught to search electronic news data banks such as NEWSBANK. Game extensions could include:

1. Concentrating on using search engines quickly to come up with facts.
2. Printing out articles on a particular event over time and placing them in order chronologically.
3. Comparing the same news story from various newspapers to note similarities and differences (many articles based on a single original article; opinion articles vs. straightforward reporting)
4. Comparing facts about the same event from different newspapers.
5. Comparing opinions about the same event from different newspapers.
6. Comparing newspaper information with news magazines.

Using the topic of a unit for the above extensions would be the most effective learning experience.

READ PERIODICALLY

TOOLS / SKILLS / CURRICULAR AREA: Periodical index, / Using indexes, Indexing as an information searching tool / Language arts, Social studies, Science

OBJECTIVES: The students will be able to use *Children's Magazine Guide* or other periodical index to locate information on a specific subject.

GRADE LEVEL: 5 - 6 SKILL LEVEL: 2

MATERIALS:

- Answer boards.
- Question sheets.
- Washable markers.
- Multiple copies of a specific page from *Children's Magazine Guide* (CMG) or other periodical index. Use screen dumps of online periodical indexes.
- Answer key.

MATERIALS DESIGN:

1. Construct answer boards similar to illustration.

2. Create 10 questions, all of which can be answered from a specific page from CMG, typed on a sheet of paper suitable for multiple reproduction. Make one copy per player.
   Sample questions:
   1. What is the title of the article on Pandas found in *National Geographic Magazine*?
   2. Name the page where you can find an article on endangered animals in *Ranger Rick* magazine.
   3. Your subject to research is endangered animals. How many articles on this subject can you find?

3. Reproduce as many copies of a specific page from CMG as needed - one per player.

4. Fill in one question sheet to be used as the answer key.

5. Laminate the answer boards, questions sheets, CMG pages, and the answer key.

TIME OF PLAY: 15 minutes (Subject content limited to one page of CMG)

PLAYERS: Individuals or groups

RULES:

1. Each player receives an answer board, a question sheet, a copy of a specific page from CMG, and a washable marker.

2. Players are on their own to answer questions and record answers on the answer board.

3. When completed, the teacher will check for accuracy and assign points as follows:
   1 point for questions 1 & 2
   2 points for questions 3 & 4
   3 points for questions 5 & 6
   4 points for questions 7 & 8
   5 points for questions 9 & 10
   10 point bonus if all answers correct and player finishes in under 15 minutes
   20 point bonus if all answers are correct and player finishes in under 10 minutes
   30 point bonus if all answers are correct and player finishes in under 5 minutes

DEBRIEFING:

1. When might you consult *Children's Magazine Guide*? (or other periodical index)

2. What does "periodical" mean when we think of magazines? (Issues published at regular intervals of time.)

"READ PERIODICALLY" ANSWERS

1. _____ 6. _____

2. _____ 7. _____

3. _____ 8. _____

4. _____ 9. _____

5. _____ 10. _____

NAME _____

Discussion and Extensions

There are a growing number of periodical indexes that can be used by children both in print and electronic form. As with the library catalog, students need to have in their vocabulary the various terms associated with periodicals and then recognize these functions when they encounter the index. These terms include author, editor, issue number, volume number, paging, etc.

Whatever periodical index you have in the LMC, children should know how to access, interpret, and pull actual articles successfully. Start with indexes owned by the LMC, then move to others that your students will encounter at the public library or over networks.

This game could be extended by requiring students to actually find the article in the magazine or in the newspaper whether in print form or electronic form.

* PART 3 *

SKILL 3 GAMES
WHAT DO I USE?
(ANALYSIS OF INFORMATION)

CATEGORIES

Contributed by:
Catherine Fuhrman, Hempfield School District, Landisville, PA

TOOLS / SKILLS / CURRICULAR AREA: Database / Speed searching for relevance and accuracy / Inter-disciplinary

OBJECTIVES: The student will be able to:

- access information from several CD-ROM databases when time is the essence.
- create search questions and answers.
- evaluate which software to best answer the questions.

GRADE LEVEL: 1-8 SKILL LEVEL: 2, 3

MATERIALS:

- Computer Reference Center Network:
  Workstations networked with CD-ROM.
  Full-text databases: Infotrac, Grolier's Multimedia Encyclopedia, SIRS Researcher.
  A variety of databases can be substituted, as long as they offer different types of resource information.
- Game board.
- Assignment sheets.

MATERIALS DESIGN:

Board: Make a free standing board constructed from foam board. Place answers by categories on the game board in rows and columns. Write answers so that they can be read by the entire class. Cover answers with squares containing dollar amounts. The board can be constructed from a variety of materials, such as foam board, chalkboard etc.

Assignment Sheet: One per student. Includes category, software used, answer, question, bibliographic citation, and grading rubric. Assignment sheet is used for checking correct responses during game play.

SAMPLE QUESTIONS:

- Category: Eskimos (Reading)
  Answer: The diagnosis of the cause of death of an 800 year old Eskimo mummy.
  Question: What is emphysema?

Answer: One of two types of boats once used by the Eskimos for transportation.
Question: What is a kayak or umiak?

• Category: Ancient Greece (World Cultures)
Answer: The first archaeologist to dig in the ancient Greek city of Knossos in 1900.
Question: Who is Arthur Evans?

Answer: The first date of the Ancient Olympics in Greece.
Question: What is 776 B.C.?

• Category: Reptiles (Life Science)
Answer: The type of sound alligators use for hearing.
Question: What is infrasound?

Answer: The scientific name for the painted turtle.
Question: What is chrysemys picta?

• Category: Women Authors (English)
Answer: The year that Louisa May Alcott's book *Little Women* was first published.
Question: What is 1868?

Answer: Author of *Silent Spring*.
Question: Who is Rachel Carson?

• Category: Mathematicians (Math)
Answer: The famous female mathematician from Germany known for her work in abstract algebra.
Question: Who is Emmy Noether?

Answer: The mathematician from ancient times who wrote the *Elements of Geometry*.
Question: Who was Euclid?

TIME OF PLAY: 5 40-minute class periods

PLAYERS: 10 students per team - 2-3 teams

RULES:

1. Each team is assigned five different categories.

2. Team members choose a partner and a category to create two game questions and answers relating to that category.

3. Partners will work together on the computer network to search and create game questions/answers.

4. The object is to create an answer that can have a question such as "Who is..?" or "What is...?." The answer needs to be able to be searched by the computer, and, if possible, searched from more than one of the databases.

5. Each student submits a game question/answer on the assignment sheet.

6. Assignment sheets should be corrected and used to create the categories board before the final three class periods for game play.

7. The three teams will play each other in a round robin. Team A and Team B will play on Day 1 with Team C's 10 answers/questions. Team C will monitor the game and keep score during the game. Team B and Team C will play on Day 2 with Team A monitoring. Team A and Team C will play on Day 3 with Team B monitoring.

8. Team C or the game monitor chooses the first category and dollar amount to be revealed.

9. Each team elects one member to go to the computers to search for the category revealed.

10. Each of these two students selects the appropriate software and search the computer to locate the correct response.

11. Each team will have a sounding device to indicate they have located the correct question. Their response must be phrased as a question. Students from Team C will also check to make sure the student answering has the correct information on the screen.

12. The first student to answer correctly earns the dollar amount for their team.

13. The team who correctly answered the previous question gets to choose the category and dollar amount for the next round.

14. Other team members from the playing teams (Team A and B on Day 1) will brainstorm possible keywords and search strategies while other students are playing at the computers.

15. Each team member will search for at least one question during play of the game.

16. The winning team is the one with the highest dollar amount.

DEBRIEFING:

1. For specific questions, which type of searching was faster, keyword or subject searching?

2. What observations can be made about deciding which of the software programs to use?

3. Were most keywords to be searched actually found in the answer or did you need to come up with synonyms or related words?

4. Would your searches have been better if you had been given the answers and if you would have had time to write keywords and searches?

VARIATIONS: Computer databases can be easily substituted with various print sources, such as: encyclopedias, almanac, Facts on File, etc.

CATEGORIES ASSIGNMENT SHEET

NAME _____ DATE DUE _____
PERIOD _____
TEAM _____

CATEGORY _____

SOFTWARE: INFOTRAC GROLIER'S SIRS (Circle All Used)

ANSWER:

QUESTION:

CITATION:

GRADE:

_____	Research Participation	10 points
_____	Question & Answer	15 points
	• Difficulty	
	• Ability to be searched	
	• Accuracy	
	• On time	
_____	Citation	5 points
_____	Game play	10 points
_____	TOTAL	40 POINTS

Categories Game Board

Eskimos	Ancient Greece	Reptiles	Women Authors	Charts& Graphs
$100	$100	The scientific name for the painted turtle	$100	$100
$200	$200	$200	Author of *Silent Spring*	$200

Discussion and Extensions

This game, a takeoff on the popular television game, Jeopardy, requires students to navigate an electronic information source quickly to find factual answers. Such skills are increasingly essential as electronic sources proliferate, each with their own search engines. Students can be taught the characteristics of a single database and that familiarity plus practice will create a comfort zone that students will use as a crutch - they will be tempted to use a friendly source even though the possibility of finding the correct fact is remote. The opposite scenario is that students may not be able to locate a fact in a database because they use the search engine improperly or they use only surface features when in-depth navigational knowledge will provide superior results. Students, indeed all of us, need to know when we have exploited an information source and when to ask for expert assistance to explore more.

This game can be designed to help students in two ways, and to do both simultaneously, is a more powerful learning experience. The first technique is the subject matter that students use for the game. If the library media specialist connects students with a topic being studied as part of the curriculum, this game can build breadth of factual knowledge.

The second technique is to select the electronic source carefully and with a purpose. Students might be taught how to exploit a particular source through in-depth knowledge of the search engine. Such a source would be chosen because it might be basic. However, at some point, students must be able to confront an unfamiliar database with an unfamiliar search engine and be expected to learn the ropes quickly, using persistence, and knowing when to consult a professional should failure be encountered.

As the game is designed, try various levels of difficulty:

1. Subjects familiar to the students in a familiar database.
2. Subjects familiar to students in a familiar database and in a companion unfamiliar database.
3. Subjects familiar to students in a wide variety of unfamiliar databases.
4. Subjects unfamiliar to students in a familiar database.
5. Subjects unfamiliar to students in a variety of databases, both familiar and unfamiliar.
6. Subjects unfamiliar in a wide variety of unfamiliar databases.

As the various experiences happen in the games, ask students to design their own search strategy to beat a search engine. Each collaborative group can design a group strategy and defend it as difficulty increases. Large group discussion of such strategies can increase everyone's competence.

This game rewards students for speedy searching techniques. Such a skill is an essential tool in the information society because the need for quick information is often a requirement. Some careers depend on a person's ability to navigate an information source quickly, for example,

telephone information operators, telephone reference librarians, parts inventory order clerks, etc. A telephone information operator must be able to navigate a single database with ease and know every angle to cut search time. A telephone reference librarian, however, has a more complex job because quick searching needs to be done across a number of databases in the least amount of time. Students may wish to find persons in their community who have various information jobs and invite them to discussions of information attack strategies.

DOUBLE "A" SCRABBLE™ GAME

TOOLS / SKILLS / CURRICULAR AREA: Dictionary / Dictionary Usage / Language Arts

OBJECTIVE: The students will utilize the dictionary to locate acronyms and abbreviations.

GRADE LEVEL: 6 SKILL LEVEL: 2,3

MATERIALS:

- Game board.
- *American Heritage Dictionary* or other dictionary that include acronyms and abbreviations.
- Letter squares.
- Score card for each player.

MATERIALS DESIGN:

1. Construct a scrabble board on 11" x 14" file folder.

2. Acronyms and abbreviations are lettered on the board as illustrated in the sample.

3. Letter squares, made from 1" oak tag squares, should be lettered and numbered. (i. e. B-4, C-1, etc.)

4. Laminate the game board and letter squares.

TIME OF PLAY: 20 minutes

PLAYERS: 2 -4 players

RULES:

1. Turn all letters upside down.

2. Each player selects five letters to begin play.

3. First player places two letter squares on the matching letter squares on the game board (i. e. letter square B would cover letter square B on the game board). Both letter squares DO NOT have to be placed next to each other.

4. The second player places two letter squares on the game board.

5. Play continues with each player placing two squares at a time on the game board until a player completes an acronym or abbreviation.

6. A player may complete an acronym or abbreviation only if the item can be located in the dictionary and the meaning translated.

7. If the player successfully finds the acronym or abbreviation in the dictionary, the player can add the number value of the letter squares in that acronym or abbreviation. Write that total point value on the score card.

8. If incorrect, the next player may try to locate the acronym or abbreviation in the dictionary. If successful, the students may add the points to their own score.

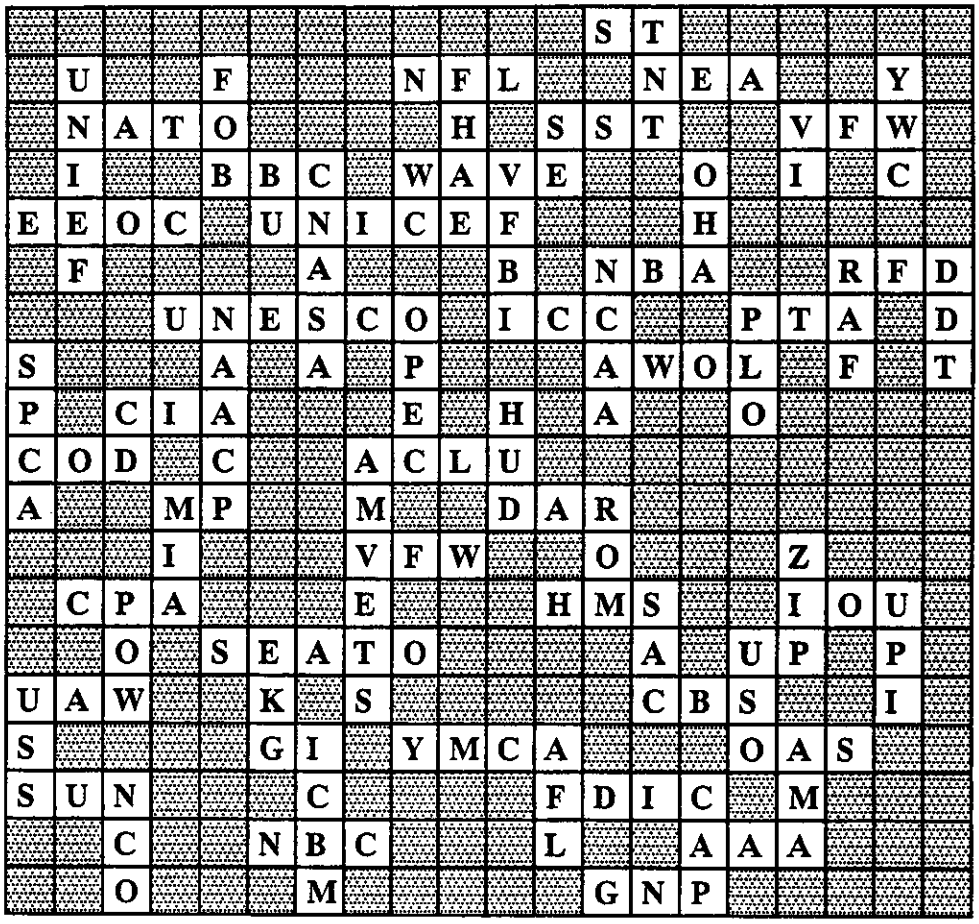
DEBRIEFING:

1. Review the steps used to locate acronyms and abbreviations in the dictionary.

2. What skills did you need to know in order to play this game?

3. When might you use this skill in the future?

4. Why do some professions, particularly the military, use so many acronyms?



Discussion and Extensions

Students will encounter thousands and thousands of abbreviations and acronyms throughout their lives. This game teaches them that a common dictionary is a good place to start. Extend the game by using multiple dictionaries plus acronym dictionaries. Have students bring acronyms from their parent's professions and discuss them and the profession from which the acronym comes. Also, explore the Internet for specialized acronym dictionaries. The sample acronyms used in the game board are quite common and should become common knowledge, but the game could be tailored to correspond with a unit of study since almost any topical area has its own set of acronyms and abbreviations. In this case, double scores for acronyms related to a subject field could be given.

ENCYCLOPEDIA QUEST

TOOLS / SKILLS / CURRICULAR AREA: Encyclopedia / Accessing information and citation / Social studies, Science, Language arts

OBJECTIVES: The students will use the encyclopedia independently to analyze questions for key word(s). They will skim to select and reject material.

GRADE LEVEL: 4 - 6 SKILL LEVEL: 3

MATERIALS:

- Laminated file cards with trivia questions - a minimum of 50.
- Access to several different sets of print encyclopedias or an electronic encyclopedia.
- Data record sheets - one per player.

MATERIALS DESIGN: Sample record sheet: (Note that the sheet will have to be modified for an electronic encyclopedia.)

SAMPLE QUESTIONS:

What is an oboe?
What is steeple chasing?
Where does vanilla come from?
The Statue of Liberty is made from what metal?
What is the patella?
Who was John Greenleaf Whittier?
Where is the Niger River located?
What is indigo?
What is the state bird of Pennsylvania?
How long was the Santa Fe Trail?
Where is Yale University located?
What is the nickname of the state of Missouri?
How did Saturday get its name?
In what year did Colorado become a state?
For what country did Jacques Cartier sail?
Where is Big Ben located?
What is hematology?

TIME OF PLAY: 20 minutes

PLAYERS: Individuals

RULES:

1. Individual players draw a card from a central location.

2. The player analyzes the question for a key word or words to consult in the encyclopedia. (Stress use of index, guide words, see, and see also)

3. When an article is located, skim to select and reject material until a correct answer to question is determined.

4. Record the data on a record sheet. Sample record sheet:

? No.	Answer	Name of Encycl.	Year of Pub	Vol.	Page

5. The individual with the highest number of correct answers at the end of the 20 minute time frame is the winner.

DEBRIEFING:

1. What is an encyclopedia?

2. What kinds of questions does it answer?

3. What helpful tools are included in the encyclopedia for locating answers?

4. Why isn't all information on a single topic together in a single encyclopedia article? (assuming the questions of play centered around a single topic)

5. How is searching in a print encyclopedia different than searching an electronic one? Which format do you prefer? Why?

Discussion and Extensions

The encyclopedia is a basic research tool that students will use for the foreseeable future. Since the print encyclopedias are still with us, it is a sound idea to continue to teach the use of these tools. The above game uses a wide variety of trivia to check how well students understand the basics of searching. Use questions centered on a single topic, particularly if you could create them so that students go to a number of volumes rather than a single article. The game would be a good introduction to a unit of study prior to actual student research.

This game centers only on information location. It does not reward students for the use of that information, nor does it encourage them to think about the information they have found.

FABULOUS FACTS

TOOLS / SKILLS / CURRICULAR AREA: Specialized reference books / Multiple source searching / Language arts, Social studies

OBJECTIVE: The students will use specialized reference books to locate information.

GRADE LEVEL: 5 - 6 SKILL LEVEL: 2,3

MATERIALS:

- Game board.
- Question cards.
- Markers.
- Answer key.
- Copy (or copies) of the 3 reference books, electronic reference tools, or a combination to be utilized with this game. (*Famous First Facts, Facts About the States,* and *Facts About the Presidents* are used here.)

MATERIALS DESIGN:

1. Make a game board on 11" x 18" oak tag according to the diagram. Two shortcut squares have been marked. You may add some chance squares; i.e., advance 1 space, go ahead 3 spaces, etc.

2. The questions are written on 3" x 5" file cards. Sample questions are:
   Where was the first macadam road?
   What is the nickname of the state of Maine?
   Who was Rutherford B. Hayes' Secretary of State?

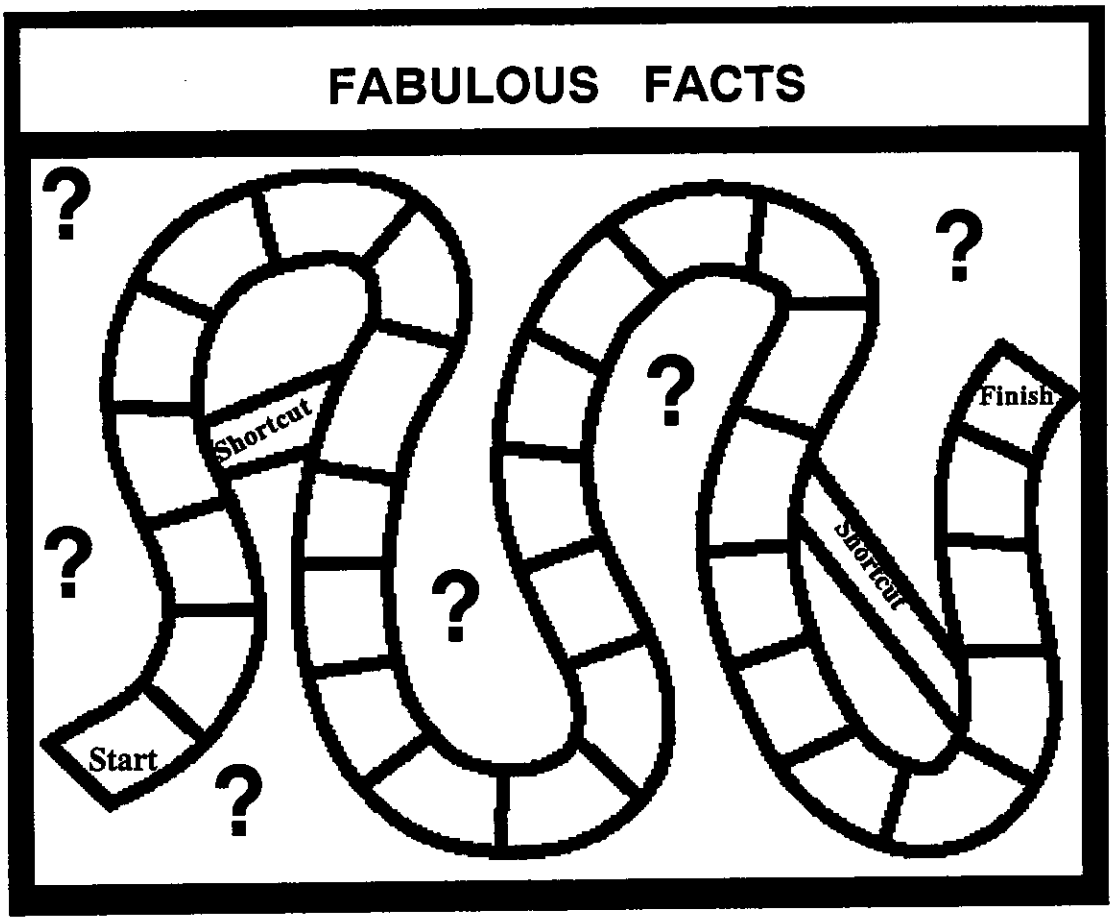
   Be sure to number the questions to correspond with the answer key.

3. Answer key. List question number and correct source with page number where answer can be found.

4. Laminate the game board, question cards, and answer key.

TIME OF PLAY: Approximately 30 minutes

PLAYERS: 2 - 4 players



RULES:

1. After each player chooses a marker, shuffle the question cards and place them face down.

2. The first player draws the top card and, after reading the question, decides which source to use to find the answer. If the player has consulted the correct source and located the answer (after checking the answer key), move ahead the number of spaces indicated on the question card. If the player chose an incorrect source, move back one space. The player has only one opportunity to choose a book. If the player is at the beginning of the board, remain there until the next turn. If the player lands on a square next to the shortcut, take the shortcut.

3. The game is over when a player reaches FINISH first.

DEBRIEFING:

1. What kinds of information are found in *Famous First Facts, Facts About the States,* and *Facts About the Presidents?* (substitute titles you used, whether print or electronic)

2. When might you use these reference sources?

3. What was the proper procedure for using each of these sources?

4. What are the differences in using print or electronic sources? Which do you prefer? Why?

Discussion and Extensions

After single reference sources are used, this game provides the next step up where a few reference sources familiar to the students are combined and used simultaneously. The step beyond would be to use a wide variety of reference sources. There is no magic in the use of three reference sources and you might use any number you deem appropriate or that the students have learned so far. Using questions on a topic being studied in the classroom is preferable, of course.

This game might also be used as a quazi-test to see if the students have the navigational tools at their disposal to attack information sources you feel you have covered through instruction at the beginning of a unit or across several units. Observation should reveal which sources have been mastered and which need reteaching.

KNOW YOUR LITERATURE

(MEDAL WINNING MEMORY)

SKILL/CURRICULAR AREA: Literature and non-fiction / Association, Pairing of information elements / Any curricular area

OBJECTIVE: The students will develop a recognition of quality children's literature or other body of knowledge by identification of central characteristics such as author and title, characters of the story, events, etc.

SAMPLE GAME GIVEN HERE: Newbery Winners

GRADE LEVEL: 5 - 6 SKILL LEVEL: 3

MATERIALS:

- A set of cards depicting Newbery Award winning books

MATERIALS DESIGN:

The set consists of a pair of cards for each title selected, and there should be a minimum of 25 pairs. The card pairs could have authors on one card, titles on the other card; one main character on the first card and another main character on the second card (names or pictures); a brief plot event on one card and a book title on a second card. There are many variations to the card pairs. Have students or adults who have read the books produce the card pairs. These cards can be produced by securing Newbery posters, cutting out the pictures, using photocopies from the book, gluing them to oak tag, and laminating (if you wish to retain the game). If posters are unavailable, an appropriate picture and title can be drawn on 3" x 4" oak tag cards and then laminated.

TIME OF PLAY: Unlimited

PLAYERS: 2

RULES:

1. The cards are shuffled and dealt out, face down, in neat rows between the two players.
2. Each player, in turn, turns up two cards attempting to make a match.
3. When a match is achieved, that player retains the pair and turns up two additional cards.
4. The same player continues as long as a successfully match is made.
5. After all cards have been matched, the player with the most pairs is declared the winner.

DEBRIEFING: Discuss the Newbery medal and the children's favorites. Why do some books get the award when they are not very popular with young people?

VARIATION: The game creator can make the matching pairs easy to extremely difficult depending on the facts chosen to pair. Students might create several versions of the game for the same books labeled Easy, Intermediate, Tough.

Discussion and Extension

This game requires that children know a body of literature well enough to match various characteristics within each story. Thus any body of literature would be a target for this type of game. Consider:

- Medal winners of any type: Caldecott, Coretta Scott King Award Winners, state children's choice award books.

- Groups of books that match a topic being studied in the classroom:
  Multicultural holiday stories.
  Black History Month good reads.
  Current titles vying for the state children's choice award.
  The works of a single author that children have been studying.
  Your own "Newbery Award" project.
  Indian legends.
  Folk and fairy tales.
  Civil War stories.
  Historical fiction of a particular period.
  Great picture book artists.
  Various versions of a single fairy tale from different countries.
  Myths.

- Using the curriculum as a framework, students can create matching cards of any topical area where association is a key factor. Such games could be created as part of a LMC research project and could be on any grade level. Some ideas include:
  Adult animals and their babies.
  Civil War generals and the names of their battles.
  Famous artists and their works.
  Presidents and events during their presidency.
  Countries and their most famous products.
  Countries and their most identifiable costumes.
  Animals and what they eat.
  Animal names and their habitats.
  Plant names and their seeds.
  Tree names and their leaf shapes.
  Dinosaur names and their body skeletons

- You could draw ideas to build breath of knowledge from textbooks, curriculum guides, or books such as E.D. Hirsh's *What Every ___ Grader Needs to Know.*

- Have students or adults create the game in various versions: easy, intermediate, and tough. The games would be excellent items to box or bag up (decorate the container), and circulate to the homes for children and parents to play together. The LMC staff need not try to preserve the games over long periods of time since they can be recreated by students constantly. Older students can create this game for younger students and thus need to read a body of literature they would not normally read. You need not limit the game to books only. Electronic books or material from Internet web sites might be fair game.

MARKET BASKET RESEARCH: FOODS OF THE WORLD

TOOLS / SKILLS / CURRICULAR AREA: Specialized reference sources / Multiple source relevant fact location / Nutrition, Multicultural studies

OBJECTIVES: The students will be able to select an appropriate source for locating information concerning food. The students will be able to analyze a sentence for key words. The students will be able to skim and interpret information to select an answer to a definitive question.

GRADE LEVEL: 6 SKILL LEVEL: 3

MATERIALS:

- Market Basket.
- Question cards (3x5 file cards, laminated).
- Answer Form - see apple pattern.
- Progress Chart - Poster Board.
- *Webster's Geographical Dictionary.*
- *Children's Magazine Guide.*
- Encyclopedias.
- Almanacs.
- Atlas (for product maps).
- Card catalog or Online catalog.
- Cook books and nonfiction books on countries.

MATERIALS DESIGN: For the market basket pantry, cover box with red & white checkered paper or any kitchen wall paper patterns.

SAMPLE QUESTIONS:

1. Find a Native American legend on how corn originated in this country. (2 points)

2. Where does licorice come from? What part of the plant is used in flavoring candy? (3 points)

3. What is the origin of pita bread? (3 points)

4. What edible fruit bears the same name as a flightless bird from new Zealand? (5 points)

5. What Hawaiian food is made from the taro root? (4 points)

6. Name three countries that produce coffee. (6 points)

TIME OF PLAY: Approximately two weeks (15 minutes minimum per question)

PLAYERS: Divide class into five teams, no more than six members to a team. Each team picks their own name.

RULES:

1. Initially, the game is introduced to the entire group. The process and rules are explained. Teams are established, and scoring and record keeping are reviewed.

2. Questions are rated by degree of difficulty.

3. Teams come to the library media center as the time allows, generally for 15 minute minimums per question.

4. Students pick a question from the Market Basket and proceed to locate the answer. When the answer is found, they record the question number, source used, student's name and team number on the answer form. Players clip the question and answer together and return to the "Market Basket Pantry."

5. Answers are checked for accuracy by the library media specialist daily and are recorded on the progress chart for each team.

6. Each morning, each team's progress is announced via the PA system to the entire school.

7. The winning team is the team with the most points at the end of the game period. The winning team is honored at a pizza party attended by all who participated in the game. A chocolate medal is presented to the members of the winning team.

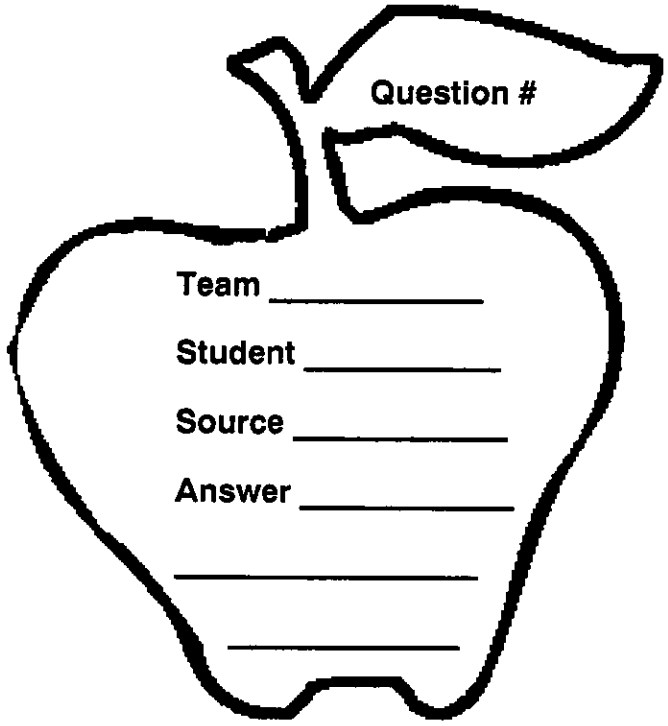
DEBRIEFING:

1. What was the strategy used to determine the correct answer?

2. What type of resource was the most helpful?

Market Basket Progress Chart

Date	Team Names				
Totals					



Discussion and Extensions

While the Market Basket game asks students to locate facts that need little thinking or synthesis, the game does require students to use a variety of sources to find their answers rather than a single source. Thus, the game is best played after students have been introduced to single-source searching. It would provide a good review of a number of sources that had been introduced previously.

The sample questions of the game do have a subject thread, but the game would be better constructed around a particular country or region of the U.S. that students are studying in the classroom. A good culminating activity for the unit would be a cultural fair where food of the country would be served. If the game were played fairly early in the unit, students would naturally be led to information sources that they would be using later.

The questions of the game can be tailored to grade level and expertise. Create questions easy-to-answer from an obvious source. Difficulty can be introduced by having the answer be a product of several sources that must be analyzed and data combined to produce an answer. This technique, often used in graduate reference courses is known as "bridging among sources." The deduction involved is a higher level thinking skill and should be experimented with as early as the library media specialist thinks students are ready.

RAH! RAH! FOR RESEARCH

TOOLS / SKILLS / CURRICULAR AREA: Multiple reference sources / Multiple source relevant fact location / Social studies, Science, Language arts

OBJECTIVES: Students will analyze an information request to determine appropriate resource to be consulted

GRADE LEVEL: 5 - 6 SKILL LEVEL: 1,2,3

MATERIALS:

- Game board.
- 50 question cards.
- Football markers.
- Answer key.
- Access to the reference section of the library media center (or a display of a variety of reference books).

MATERIALS DESIGN:

1. Construct a game on poster board as illustrated on the next page.

2. Question cards written on oak tag cut in a football shape. Number cards to correspond with the answer key and mark yardage value clearly. Laminate.

3. Make a football-shaped marker to place on the board to indicate the position of the ball.

4. Make answer card. Laminate.

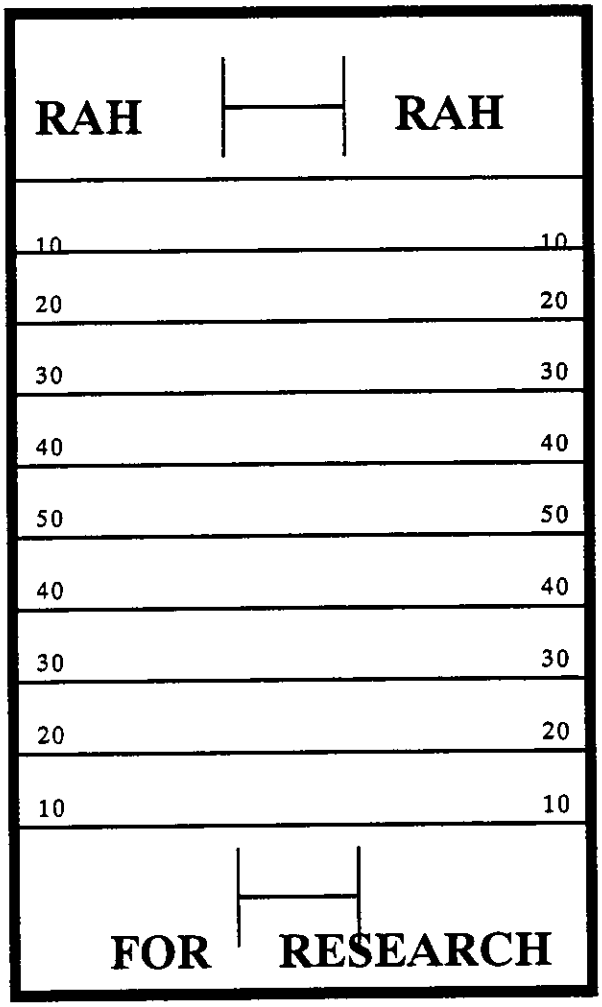
SAMPLE QUESTIONS for football cards: (put answers on answer key)

- Who won the Kentucky Derby in 1948? - Almanac
- When was the first umbrella made? - *Famous First Facts*
- How many children did Franklin D. Roosevelt have? - *Facts About the Presidents*
- Who said "The poetry of earth is never dead?" - *Bartlett's Familiar Quotations*
- What is the population of Cologne, Germany? - Almanac, Encyclopedia, *Webster's Geographical Dictionary*
- Where is the island of Corfu located? - Encyclopedia, *Webster's Geographical Dictionary*
- What was Wesley Merritt's occupation? - *Webster's Biographical Dictionary*
- June 6 is well known in American history for what event? - *American Book of Days*
- Where was the children's author, Eleanor Estes, born? - *Junior Book of Authors*

- What is the name and where is the largest private home located? - *Guinness Book of World Records*

TIME OF PLAY: 20 - 30 minutes

PLAYERS: A class divided into two teams



RULES:

1. Divide the class into two teams.

2. Flip a coin to see which team receives the ball first.

3. Place the ball on the 20 yard line facing the opponent's goal.

4. The first team member draws a question card and decides which reference source to consult for the answer. Check the answer key.

5. If correct, advance the football the number of yards indicated on the card. Play continues with this team until four incorrect answers are given. In this event, the opposing team takes over the football and advances in the opposite direction.

6. When either team reaches the opponent's goal post, six points are scored. After a touchdown is made, the team has the opportunity to answer the next question for the extra point after the touchdown. A total of 7 points is possible each time a team reaches the opponent's goal post.

7. After a touchdown, the ball is placed on the 20 yard line by the other team facing the opponent's goal and play resumes.

8. The game continues for the time allotted by the teacher.

DEBRIEFING:

1. When might you need to consult these reference tools?
   Any almanac
   Guinness Book of World Records
   Famous First Facts
   Webster's Geographical Dictionary
   Webster's Biographical Dictionary
   Bartlett's Familiar Quotations
   Junior Book of Authors
   American Book of Days

Discussion and Extensions

This game is a variation of the game: Market Basket Research. See that game for its discussion and extensions.

THESAURUS PUZZLE

TOOLS / SKILLS / CURRICULAR AREA: Thesaurus / Word analysis / Language arts

OBJECTIVES: The student will be able to understand the thesaurus as a source of information. The student will analyze entries to select appropriate synonyms and antonyms.

GRADE LEVEL: 4 - 5 SKILL LEVEL: 3

MATERIALS

- Game boards.
- Answer sheet: A miniature game board with answers.
- Printed or electronic thesaurus.
- Washable felt tip pens - 1 per game board.

MATERIALS DESIGN:

Several games boards are constructed on 8 1/2"x 11" file folders, each with unique clues and answers. Letter these game boards with several of the letters found in the answers (see illustration). Type and mount the clues next to the crossword puzzle. Underline the words to be looked up in the thesaurus. Include the number of points for each correct answer. Subject content is limited to synonyms and antonyms located in an elementary thesaurus. Laminate the game boards.

SAMPLE QUESTIONS/CLUES:

Select a word to replace the one underlined:

1. A four letter noun that is the opposite of <u>hate</u>. (1 point) Answer: love

2. A type of <u>hat</u> usually worn by an English gentleman. (3 points) Answer: derby

3. Three slang words that mean to <u>divulge</u>. (2 points) Answer: spill the beans

4. The young man <u>bristled</u> at the sound of the trumpets. (3 points) Answer: stiffened

TIME OF PLAY: 15 - 20 minutes

PLAYERS: 1 student per game board

RULES:

1. Each student is given a game board and a washable felt tip pen to record the answer.

2. The player reads the clues from the game board.

3. The player looks up the underlined word in the thesaurus. Some letters have been printed on the game board to help. The player uses them when looking for the answer.

4. The player writes the answer on the game board with the washable felt tip pen.

5. When the puzzle is completed, check the answers with the answer sheet.

6. The winner is the student who completes the puzzle correctly AND has the highest number of points.

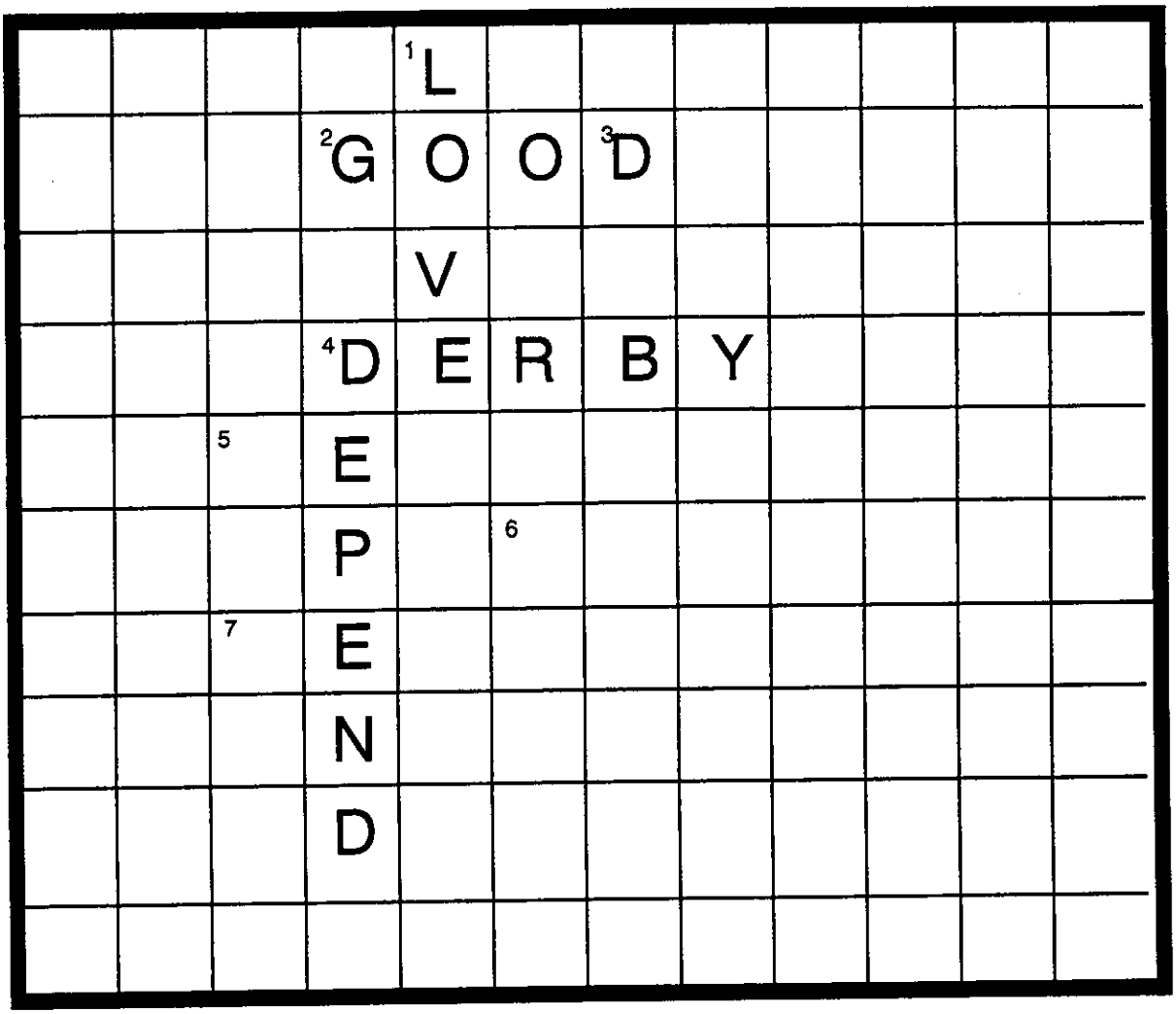
7. To erase the answers, wash boards with a damp cloth.

DEBRIEFING:

1. What information processing skills did you need to complete this puzzle?

2. What helps did you use to find the information in this book?

3. When will you use this reference tool in the future?



THESAURUS PUZZLE CLUES

Across

2. A 4-letter word that means the same as beneficial.
4. A type of hat usually worn by an English gentleman.

Down

1. A 4-letter word that means the opposite of hate.
4. A verb that means rely.

Discussion and Extensions

This game introduces the students to an essential tool beyond the dictionary. As the function of a thesaurus unfolds so does the excitement of words and nuance of meaning. Thus this game is a good one to play as a subject is being studied - it can be used to develop vocabulary in a topical

area and to learn to write about a topic to convey deep meaning rather than surface understanding. Try a variety of ideas using the thesaurus:

1. Groups of words centering on a single topic.
2. Arranging words according to nuance:
   Cold- luke warm - warm - hot.
3. Use a variety of print and electronic thesauri and discuss the difference.
4. Words that have utilitarian value:
   a. words that provoke vs. words that sooth.
   b. words of respect vs. expressions of disrespect.
   c. politically correct words vs. sexist/offensive words.
   d. street language words and their proper English equivalents.

WHO'S WHO IN THE WORLD

TOOLS / SKILLS / CURRICULAR AREA: Biographical reference sources / Single source information analysis / Social studies, Multicultural studies

GRADE LEVEL: 4 - 6 SKILL LEVEL: 2,3

MATERIALS:

- Game board.
- Question Cards.
- Answer key.
- *Webster's Biographical Dictionary* (several copies), also, *Something About the Author* or any other biographical source, print or electronic.
- Egg timer.

MATERIALS DESIGN:

A game board is constructed from an 11" x 14" file folder with many chance squares such as "for using guide words, move ahead 1 space." Laminate the game board.

Question Cards - These cards are constructed from 3" x 4" oak tag strips. The question is placed on one side of the card, along with the number of spaces to move. The questions can be rated by the level of difficulty, with the harder questions moving more spaces. Each question should be numbered, and an answer key is needed to check the accuracy of answers. Subject content is limited to individuals from various cultures who have made significant contributions to the world.

SAMPLE QUESTIONS:

1. Who was Chief Seattle? When and where did he live? Move 2 spaces

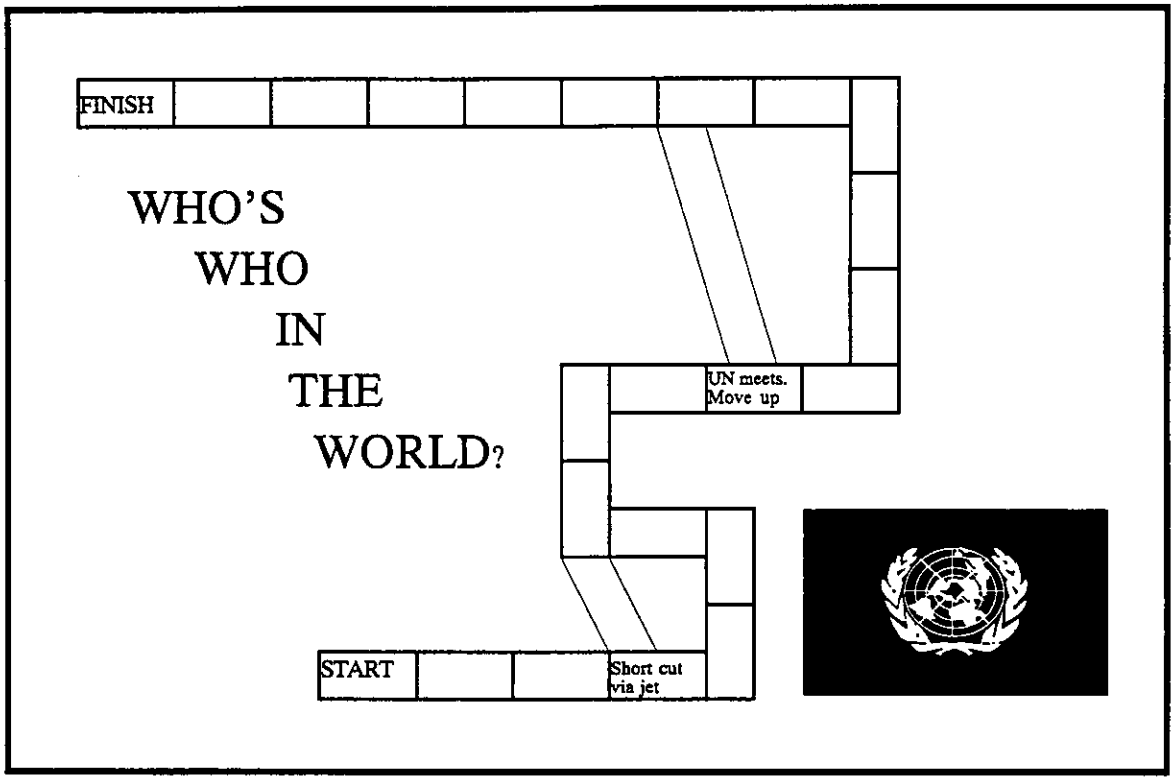
2. What is Martin Luther King's most notable speech called? Move 3 spaces

3. What was Mahatma Gandhi's most significant contribution? Move 5 spaces

4. What was James Wendell Johnson's career? Move 3 spaces

Other individuals to include:

Anwar Sadat	Dag Hammarskjold
Nat Love	W. E. B. DuBois
Golda Meir	Matthew Hensen
David Ben Gurion	Paul Laurence Dunbar



TIME OF PLAY: Approximately 30 minutes

PLAYERS: 2 - 4 players

RULES:

1. Shuffle the question cards and place them face up beside the game board.

2. Draw the top card and read the question aloud.

3. Start the egg timer.

4. Use *Webster's Biographical Dictionary* or CD biographical tool to find the answer before all the sand in the egg timer moves to the bottom. State the answer aloud.

5. The player to the left checks answer sheet to verify the answer. If correct, move the number of spaces indicated on the question card. If incorrect, don't move.

6. The player on the right takes the next turn.

7. If a player lands on one of the shortcuts, do not draw a card, but do as directed on the shortcut block.

8. The first player to reach FINISH is the winner.

DEBRIEFING:

1. What type of information is located in *Webster's Biographical Dictionary* (or other source)?

2. Identify some notable African Americans and their contributions to the world.

3. Identify some notable individuals from the Middle East? Why are they important?

VARIATION:

TOOLS / SKILLS / CURRICULAR AREA: Biographical reference sources / Science

OBJECTIVES: The students will investigate famous scientists and their contributions to the world

MATERIALS DESIGN: Follow the previous instructions, however the question cards should reflect a variety of scientific areas, and include individuals from around the globe who have made significant contributions in science.

SAMPLE QUESTIONS:

1. What was George Washington Carver's contribution to science? Move 2 spaces

2. Benjamin Banneker is well known for what accomplishment? Move 3 spaces

Discussion and Extensions

Being able to find accurate and useful biographical information is an essential information skill. The game here with its variation suggests the location of general biographical information about a wide variety of popular figures or centering the biographies in a particular field or topical area. As a part of a unit of instruction, students could assemble a mini-biographical encyclopedia of generals of the Civil War, plant scientists, great women inventors, early African American leaders, etc.

At some point, students need to be introduced to a wide variety of biographical sources and the probability of locating a person of interest in a certain source and the type of information about the

person likely to be found. Living persons will be found in certain types of sources, dead persons in others. The profession of a person will often determine the type of source to be searched. Discussion of biographical sources can lead students to search sources where the probability of success is high.

More important to the young student, is whether the information found can be used for the purpose needed. If, after playing the game, students will be doing in-depth research on a person, then the discussion and instruction must move beyond mere location of information to location of the most useful information.

Where useful or quality information is the focus of the quest and the game, tailor the questions so that a team must make a judgment about the source discovered and maximize their points if they can defend their choices. In this case, make questions that fall into the following categories:

1. Quick, accurate facts about a person:
    a. if the person is still alive (currency and quality will be an important factor)
    b. if the person is dead (quality is the most important factor)

2. A "good read" about the person:
    a. reading level
    b. interest (writing style, presentation style)
    c. fictional or well-written non-fiction

3. Enough information to help write a simple report:
    a. facts easy to find
    b. not too lengthy
    c. good text structure to help locate specifics.

4. In-depth information about various aspects of a person's life, career, or issues faced:
    a. longer but readable
    b. understandable discussions of issues faced
    c. opinion vs. reporting obvious

5. Material to enhance reporting:
    a. pictorial sources
    b. good clips of video/audio events for extraction
    c. original documents by or about the person

* PART 4 *

SKILL 4 GAMES
HOW DO I USE?
(UTILIZATION OF INFORMATION)

ALL AROUND THE BARNYARD

TOOLS / SKILLS / CURRICULAR AREA: Data problem / Graphing / Mathematics

OBJECTIVE: The students will be able to analyze bar graphs for information

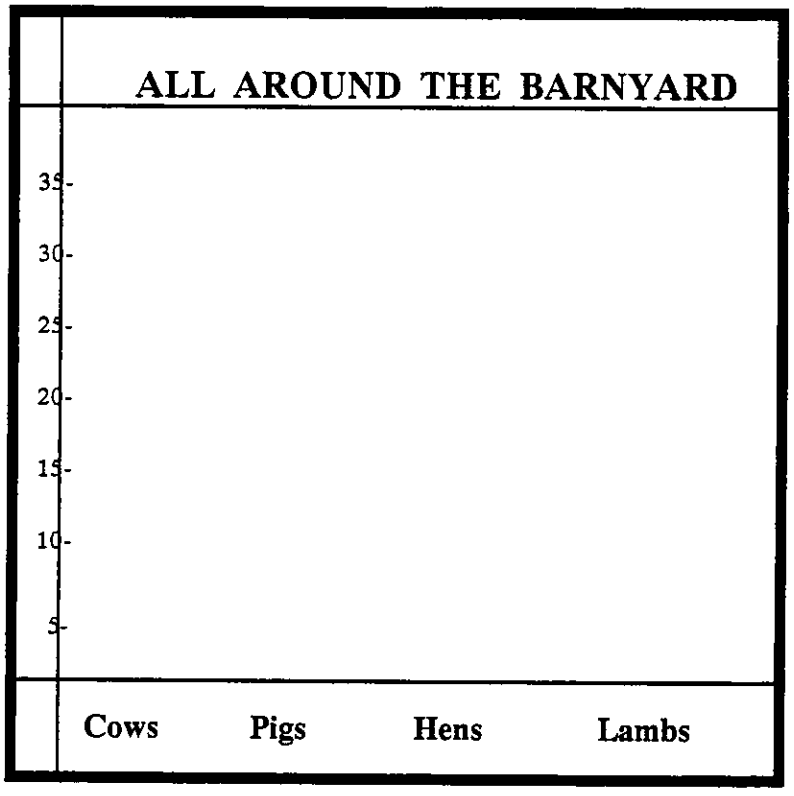
GRADE LEVEL: 1 SKILL LEVEL: 4

MATERIALS:

- Individual game boards for each player.
- Washable markers.
- Tally sheets.

MATERIALS DESIGN:

1. Use 8 1/2" x 11" oak tag to make game boards according to diagram:



2. Tally sheets can be reproduced from a master on a copier and include the following:

1. How many cows? _____

2. How many pigs? _____

3. How many hens? _____

4. How many lambs? _____

5. How many pigs and lambs? _____

6. How many animals altogether? _____

7. How many less lambs than hens? _____

Name _____

3. Laminate the game boards so they can be wiped off with a damp cloth and reused.

4. Make a black line master of the tally sheet from which many copies can be made.

TIME OF PLAY: Approximately 30 minutes

PLAYERS: 1-26 players

RULES/ PROCEDURES:

1.The teacher reads the following short story to the class and allows time for each student to chart his graph.

> Joey was spending a day in the country at his grandfather's farm. He enjoyed watching the animals in the barnyard, and he wanted to tell his friends in the city all about them. Joey was afraid he would not remember how many of each animal he had seen. So he decided to make a graph to keep the information until he went home. This is what Joey counted as he sat on the fence that day.

He saw 5 black and white cows waiting to be milked. Then he counted 25 hens pecking seeds from the ground. On the other side of the barnyard there were 10 lazy pigs lying in the sun. The last animals Joey counted were a flock of 15 baby lambs nibbling grass by the barn door. Please help Joey tally all his information on your tally sheets after your bar graph is completed.

2. The players make a bar graph and complete the tally sheet.

3. Scoring is as follows:

2 points for each correct bar in the graph
2 points for each correct answer to questions 1 - 4 on the tally sheet
5 points for each correct answer for questions 5 & 6 on the tally sheet
10 points for a correct answer for question 7 on the tally sheet
Total possible points - 36

DEBRIEFING:

1. Why are graphs valuable sources of information?

2. Where have you seen graphs before?

3. When might you use graphs to illustrate and compare information?

Discussion and Extensions

Graphing is an integral part of the normal curriculum for a young student. Check on when it is taught in the regular curriculum and plan to extend that instruction. Teachers will provide clues about what students find difficult. Modify this game as needed to fit those needs.

The graphing of data from the LMC collection should be a normal LMC experience. Various excellent computer software packages are available to assist students in graphing. Most standard spreadsheets provide students with graphing capabilities on beyond the bar graph. Many computer teachers may teach this software as they do word processing so that students will have this as a basic tool skill. If this isn't happening, then shoulder the responsibility to teach graphing using technology. Of course, students can learn to graph on simple graph paper, but as data problems become more complex, the computer does to graphing what the computer did to the typewriter. Excellent projects can result from groups of students collecting various data and then combining these data into graphs. Create opportunities where graphs are used so often that they become second nature to the students.

CHART YOUR WAY ACROSS THE USA

TOOLS / SKILLS / CURRICULAR: Atlas / Atlas usage, Analyzing patterns in data / Social studies

OBJECTIVES: The students will be able to access and interpret information from an atlas. The students will be able to locate information in an atlas by using an index.

GRADE LEVEL: 4 SKILL LEVEL: 4

MATERIALS:

- Oak tag game cards.
- Blank maps of the United States indicating state boundary lines.
- Colored markers for each team to coincide with the colors used on the cards.
- Multiple copies of *Follett Student Atlas*.

MATERIALS DESIGN: 3" X 8" oak tag cards with list of 10 United States locations (cities, rivers, lakes, deserts, etc.) on each. Each card has a diverse list. Cards should be color coded, (each written in a different color), to determine teams and then laminated. See sample.

TIME OF PLAY: 30 minutes

PLAYERS: 7 teams each consisting of 3 - 4 students

RULES:

1. Each team receives the following materials at the beginning of the game:
   A laminated card with a list of 10 United States locations.
   A blank United States map with state boundaries including an inset of Hawaii and Alaska.
   A colored marker matching the color code of their list of locations.
   A copy of a student atlas for each team member.

2. The team uses decision-making skills to determine which member of the team will act as the recorder of the information. The recorder is responsible for carefully indicating on the blank map the position of each location from their list.

3. The 10 locations are divided among the team members and the students, using the index of the atlas to locate each on the map. This location is transferred to the blank map by the recorder.

4. The winning team is the team with the highest number of points. The points are assigned as follows:

   3 points for each correct location
   10 bonus points for all 10 correct locations
   10 bonus points for neatness
   Maximum attainable points - 50

5. The team is given extra points if they can see possible patterns in the data after it has been charted (this assumes that the game has been constructed with this in mind).

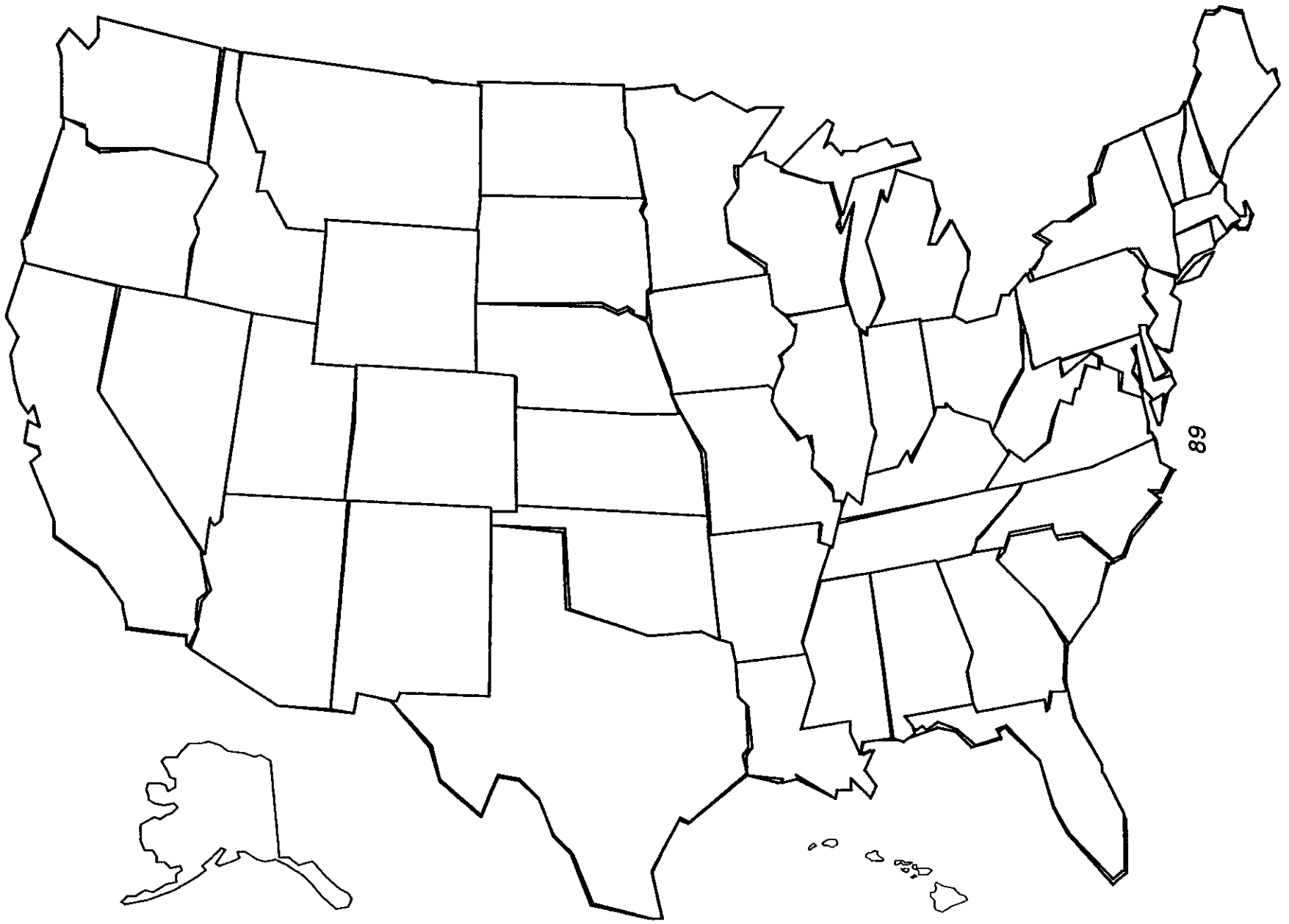
DEBRIEFING:

1. Define an atlas.
2. Define an index.
3. Articulate why and how the index helps the user locate information in the atlas
4. Identify several practical applications when you may need to consult an atlas.

SAMPLE LOCATION CARD TO BE LAMINATED:

State Capitals

Providence	**Carson City**
DesMoines	**Raleigh**
Atlanta	**Austin**
Carson City	**Pierre**
Salt Lake City	**Richmond**



Discussion and Extension

Students need to place things in spatial relationships as early as they can begin mapping skills. Rather than selecting places at random for students to place on the U.S. map, create thematic location games. The example used for this game example required the student to find out what state and the approximate location of the state capital within the state before the U.S. map could be used.

An even better example would be to have the game lead to an analysis of patterns after the data have been placed on the map. For example, if the list of cities were ones over 3,000 feet in elevation. The resulting map can be analyzed for patterns of elevation. They will see that all the cities are in the West where the Rocky Mountains are located. The analysis of patterns in data is a significant information literacy skill which can begin in the early grades and become more complex as the years pass. Geographical patterning is a good place to begin because a group of children may have come from varying places in the world and may travel extensively when on vacation.

Students who are studying a topic may be asked to identify locations where their topic is significant and then use these locations for the game and data pattern study. Topics that lend themselves to geographical settings might include:

- Where are oranges grown commercially? (apples, strawberries, any type of fruit or vegetable)
- What towns are located near large oil fields?
- What towns in Pennsylvania grew because of oil and coal fields in the 19th century? (where are oil vs. coal areas?)
- What towns grew because of precious metal mining?
- Where do rattlesnakes live?
- Where are towns located closest to the national parks?
- What towns have recorded the lowest temperatures below -30 degrees in the last 100 years?

From the census data available on CD-ROM or from the Internet, or from reference books, any ranking data work well with this game:

Largest cities.
Cities with the largest black populations; Hispanic populations; Caucasian populations.
Cities with the highest mean temperatures.
Cities with major league teams.
Cities along bird flyways having bird sanctuaries.

In all of the games above, a general student atlas may be sufficient, but students could be introduced to a wide range of thematic atlases that are so well done and are available in both print and electronic form. For some of the games, you may combine the idea of a gazetteer with an atlas to help the students when the atlas index may be categorized alphabetically within state or some other arrangement that does not lead immediately to a location. Students will need help on electronic sources when ten different cities all with the name Columbus are located. This game has concentrated on locations within the United States, but the same thing can be done with locations around the world, again looking for patterns across the continents.

GETTING TO KNOW YOU (ONLINE)

Contributed by
David Calender
School District of Lancaster, PA

TOOLS / SKILLS / CURRICULAR AREA: Access to e-mail / Amassing evidence, Fact vs. opinion, Detecting bias, Drawing conclusions / Social studies, Language arts

OBJECTIVES: The students will assess online information for accuracy; opinion vs. fact, and bias. The students will compare the diversity of people on the Internet. The students will use reference sources to verify facts received as well as developed for online clues.

GRADE LEVEL: 4-8 SKILL LEVEL: 2,3,4

MATERIALS:

- Microcomputer and modem.
- Connection to a chat area via the Internet or a commercial online vendor such as America Online, CompuServe, etc.
- Timer.
- Scavenger Hunt Questions. (Teacher generated or brain stormed by students)
- Scoring Form. (see attached)
- Specialized reference sources, atlases, encyclopedias

SAMPLE CLUES:

1. Our city is in the central part of the state.
2. We have dinosaur bones in a ridge just west of the city.
3. Gold was discovered in our city over a century ago.
4. Our city is named for a person.
5. Our biggest industry is tourists coming to do one special thing.
6. Our elevation is 5,280 feet.
7. Our city has a new airport.

TIME OF PLAY: several weeks, a few minutes each day.

PLAYERS: Small groups of 2-4 players. Student Typist - gives and receives clues at the keyboard. Recorder-records clues and gives them to the class or small group.

RULES:

1. An adult, not part of the game, establishes contact with a group of students in another location who want to play the game.

2. All groups playing create seven clues about their locality before the session begins. The sample clues above are all true facts, but some could be facts, some could be opinion, some could be false. The hardest clues must be given first, progressing to easier and easier clues. All clues must be able to be identified in common reference sources such as encyclopedias and gazetteers. If a group lives in a small place very difficult to locate in common reference sources, they should choose a location they "would like to be from."

3. Each day, the groups on either end send one clue about their location via e-mail.

4. Each day, each group playing may send one guess of the location to the other team complete with the evidence. LMC reference sources can be used to make the guess. The group guessing must provide not only the location but also a list of reference sources they used to verify their guess.

5. The winner is not determined until after the 7th day. Groups continue to support their guess through documented reference sources.

6. On the 7th day, the group that has guessed correctly with the proper evidence on the earliest day wins.

DEBRIEFING:

1. Discuss the results. What reference sources were the best ones to help identify facts about places?

2. How do we know our partners were actually at the location they said they were? Are there questions we could ask them after the game to determine this?

3. What other things would we like to know about our electronic pen pals?

CURRICULAR VARIATIONS: Have e-mail pals give clues about an animal or plant that is unique to their location, historical facts, people facts, environmental facts, etc.

NOTE: Online chats are fun, but can quickly become inappropriate to an educational setting. If the online vendor has a parental control function, invoke it. If you are using the Internet, seek a monitored chat area. (Monitored means that someone is watching the conversation for inappropriate content.)

Discussion and Extensions

Introducing the Internet to young people through chat rooms or e-mail allows them to understand the concept that they can chat with persons in many parts of the world. This game provides a little substance for the early exchanges and allows students to use their skills in searching reference sources. The content of the communication, as a research guessing game, can be varied and can be agreed upon by the adult who first contacts the partner group. Spreading the clues out over time allows for some research time, and even after the place is guessed correctly, additional evidence must be sought to substantiate the guess.

If two groups wish to continue their association, have them each choose a place other than their own to use in the game. These places, animals, plants, etc. could correlate with something both groups are studying and could be a perfect lead-in and get acquainted session for a joint project to be researched by both groups.

Another variation is at the conclusion of the first get-acquainted game, have each group participating submit 10 statements about their location to the other group each to be verified in reference sources as:

True - currently
Used to be true
False
Opinion
Bias

For example, using the Denver example in the sample clues:

1. Denver is the largest city in Colorado or in any state bordering Colorado. (True, currently)
2. Gold was discovered in Denver before gold was discovered in California. (False)
3. Denver has a Hispanic mayor. (Used to be true)
4. Denver has louder football fans than any other professional football city. (Opinion)
5. Denver has more professional sports teams than any other U.S. city. (Probably true: football, baseball, basketball, and hockey).
6. The Denver Broncos have lost in more Superbowls than any other single team. (Probably true: where is that sports encyclopedia?)
7. Denver is the home of one of the longest terms for a female member of the U.S. House of Representatives. (True)

8. Denver's mint is the oldest federal mint still in operation. (False)
9. Denver's famous polar bear twins now live in Florida. (True)
10. The Colorado Rockies Baseball Team is the very best new major league team in the country. (Bias; Opinion)

Each of the answers to the questions would have to be answered and documented from reference sources. In some cases, the Internet might be used to find the answers to the above questions if reference sources in the school LMC were too limited. This variation requires students to start judging information.

Team:

SCAVENGER HUNT
Scoring Sheet

_____Score

Statement:

❑ True at this time ❑ Used to be true ❑ False ❑ Opinion ❑ Bias

Evidence and Source:

Statement:

❑ True at this time ❑ Used to be true ❑ False ❑ Opinion ❑ Bias

Evidence and Source:

Statement:

❑ True at this time ❑ Used to be true ❑ False ❑ Opinion ❑ Bias

Evidence and Source:

Statement:

❑ True at this time ❑ Used to be true ❑ False ❑ Opinion ❑ Bias

Evidence and Source:

Statement:

❑ True at this time ❑ Used to be true ❑ False ❑ Opinion ❑ Bias

Evidence and Source:

ON YOUR MARK, GET SET, ALPHABETIZE

TOOLS / SKILLS / CURRICULAR AREA: Items to alphabetize / Alphabetical arrangement / Language arts

OBJECTIVES: The student will be able to arrange words in proper alphabetical order.

GRADE LEVEL: 1 - 6 SKILL LEVEL: 4

MATERIALS:
- word cards.
- magnetic tape.
- permanent markers.

MATERIALS DESIGN:
1. 3" X 8" cards are cut from poster board, about 40 for each team.

2. Use a black permanent marker to print words appropriate for the reading level of the students on each card.

3. Laminate cards (optional).

4. Attach magnetic tape to the back of each card if using a magnetic blackboard. Double-faced tape can be used on a conventional blackboard.

TIME OF PLAY: approximately 20 minutes

PLAYERS: 3 teams of 8 members each or any fair division of class

RULES:
1. After the teams are formed, the first member of each team is given a packet of five word cards. The player goes to the board and arranges the cards in proper alphabetical order.

2. After the words are arranged, the team member picks up an new packet of words and returns to the team and gives the packet to the next team member.

3. The game progresses until one team has arranged all of their words on the board. This team is the winning team, if they have accumulated the most points.

4. There is a penalty for words incorrectly placed. Two points are given for each correct word (40 cards - 80 possible points).

5. If words are arranged out of order, 2 points are deducted for each error. Therefore, a team with only 35 words on the board could tie the game if there were no mistakes, while the first team finished could have 10 points deducted for 5 errors. Accuracy is as important as speed.

DEBRIEFING:

1. Discuss places in the library media center where alphabetical arrangement is used.

2. Discuss where alphabetical arrangement is used in your classroom.

3. Discuss where alphabetical arrangement is used in your home.

Discussion and Extension

Alphabetical sequencing begins in first grade and continues throughout the grade levels. It is particularly important in printed reference works arranged in alphabetical order. It is not as important in the digital information world when the computer does the searching. The selection of words for this game is the important thing. Rather than select words at random, select them for a purpose. The words may have significance in the library media center. For example, they may be guide words the students will be using for searching printed indexes or encyclopedias or in the card catalog. They may be words the children are learning in a unit of instruction collaboratively taught by the library media specialist and the teacher.

Try using this game just before children will be attempting to look up words in indexes or printed reference tools for an assigned project. If you create the word lists cleverly, students could be led to correct terms to look up in the alphabetical sequence once they are put on their own. For example, if the students are looking up materials on the Civil War, the terms might be a mixture of subject headings for searching such as:

UNITED STATES - HISTORY - CIVIL WAR, 1860-1865
SLAVERY
GRANT, ULYSSES S.
LINCOLN, ABRAHAM

Such terms can be easy to difficult using one word terms or several word phrases. Start with words using first letter sequence and moving on to second letter alphabetizing, third letter, etc. Then move to simple phrases and then more complex. In the LMC, beginning articles may need to be ignored so these could be printed on the cards to provide practice. Also, what happens in

alphabetizing phrases? Is it word-by-word alphabetical sequence or letter by letter? In the debriefing session, you might also discuss with children why we would alphabetize names such as Grant and Lincoln under the surname. Why do we look in the U section for materials on the Civil War in some indexes and in the C section in other tools? Here you have a chance to discuss with students indexing vocabulary and to warn them about the need to be flexible in looking up synonyms as they tackle alphabetical order. They can also be taught about SEE and SEE ALSO references. If vocabulary words are used, the student might have to give the proper definition of the word in addition to placing it in alphabetical sequence to gain full points.

* PART 5 *

PROJECTS AND SIMULATIONS (ALL SKILL LEVELS)

BIOGRAPHY INFO CUBES
Project

TOOLS / SKILLS / CURRICULAR AREA: Biographical sources / Biographical searching, Non-fiction usage / Product creation / Social studies

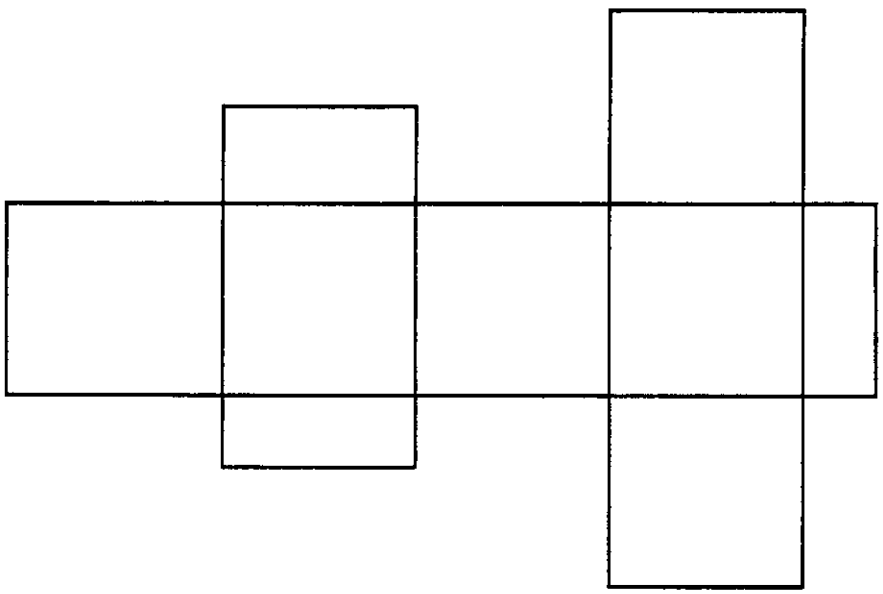
OBJECTIVES: The students will be able to use the encyclopedia, appropriate specialized reference sources, and nonfiction materials to locate biographical data.

GRADE LEVEL: 4 - 6 SKILL LEVEL: 1,2,3,4,5

MATERIALS:

- Laminated file cards, each with the name of a real person. These names can be customized to the curriculum, such as:
  - Famous musicians, artists, writers
  - Famous scientists and inventors
  - Presidents of the United States
  - Entertainers and sports figures
- Access to the Media Center
- Large sheets of oak tag on which to draw the cube pattern. See sample.
- Glue.
- Markers.
- Access to photocopier.

MATERIALS DESIGN (sample cube):



TIME OF PLAY: Research time: 30-45 min.; Construction time: 45 min. (can be variable). Adequate time for research should be scheduled with the media specialist and the classroom teacher, and then time for the construction of the cubes.

PLAYERS: 1-26 students

PROCEDURE:

1. Each student is given a laminated card with a name on it.

2. Students then use the resources in the library media center to access information on their assigned person.

3. The students cut out the cubes from the oak tag and, using the colored markers, write an interesting fact about their person on 5 sides of the cube. The 6th side is for the person's name and a copy of the person's picture.

4. Cut, fold, and glue the cube together, leaving the top flap open for inserting a surprise message.

5. The surprise message could be anything that pertains to the biographical subject.
   A copy of a poem by a poet
   A copy of a picture by an artist
   A replica of an award won (Oscar, MVP Trophy, Olympic Medal)

6. The picture for the top of the cube can be obtained from any source available and enlarged on the photocopier to fit.

7. The completed biography cubes can be displayed in the Media Center along with biography books on the person researched. This display usually stimulates others to read this genre.

DEBRIEFING:

1. What is a biography?

2. Where are biography books and biography reference sources located in the LMC?

3. Did you find conflicting information about your person in the various sources? Why would this happen?

VARIATION: This activity can be expanded to include the use of an electronic encyclopedia as a reference source.

Discussion and Extensions

This activity provides a simple but effective project for students studying persons and using multiple sources for their information. It is best conducted after several biographical sources have been taught so that students can be "tested" on the effective use of a wide variety of LMC materials and information sources.

GLOBAL GRAPHICS:
DESIGN YOUR OWN COUNTRY
Simulation

This simulation was designed to complement the School District of Lancaster, Pennsylvania information literacy skills sequence.

TOOLS / SKILLS / CURRICULAR AREA: Multiple information sources / Integration of information, Product creation / Social studies, Language arts

OBJECTIVES: The students will be able to utilize appropriate research strategies and organize information into an enlightening and instructional product. (Specific library media skills are addressed in a list within the packet.) The classroom teacher and the library media specialist, working as a team, will analyze the students' abilities to perform the stated task.

GRADE LEVEL: 6 SKILL LEVEL: 1,2,3,4,5

MATERIALS:
- Multiple copies of the reproducible packet
- Access to the library media center

TIME OF PLAY: 1 semester or a minimum of 15 class sessions in the Media Center of 1 hour duration each

PLAYERS: Individual or groups of 2 students

RULES: Outlined in the packet

DEBRIEFING:

1. Articulate the benefits of this simulation.

GLOBAL  GRAPHICS

DESIGN-YOUR-OWN COUNTRY

You have been given the power to design a new country of the world. Your country, after you have named it, can be anywhere on the globe. You have full authority to form its industries, holidays, population diversity, etc. All your choices must be consistent with the global area where you have placed your country. To do this correctly, you will need to research thoroughly that area of the world. Your presentation must include the following information:

Population
Language
Monetary unit
Major cities (including a capital city)
Government
Area
Land forms
Climate
Chief Products (Agricultural, Manufactured, Natural Resources)
Holidays
Religion
Education
Food
Customs
Sports
History

The conclusion of your presentation should be a persuasive paragraph stating why someone would want to live in your country.

LIBRARY MEDIA SKILLS ADDRESSED THROUGH THIS PROJECT

1. Use encyclopedia independently.

2. Use specialized reference books to locate information.

3. Use the library catalog to locate resources on a given subject.

4. Use nonprint media to locate information.

5. Use primary and secondary sources to locate information.

6. Locate information through electronic searching.

7. Appropriate use of comprehension and study skills. (skimming; interpreting charts, graphs, diagrams, subheadings, and cross-references)

8. Construct a simple outline.

9. List all resources, print and nonprint, on a "Works Cited" page.

STUDENT CHECKLIST

To complete your project, you should follow these steps:

1. ENCYCLOPEDIAS
   - A. Use the index to locate information (printed encyclopedia). ____
   - B. Search properly in an electronic encyclopedia (if available). ____
   - C. Take notes in your own words. ____
   - D. Copy "Works Cited" information. ____

2. SPECIALIZED REFERENCE BOOKS
   - A. Use the index to locate information. ____
   - B. Take notes in your own words. ____
   - C. Copy "Works Cited" information. ____

3. LIBRARY CATALOG
   - A. Look up your topic(s) and related topic(s). ____
   - B. Locate print and nonprint materials on your topic(s). ____
   - C. Check out materials you need to use outside the LMC and return them. ____

4. ELECTRONIC SEARCHING
   - A. Search for your topic(s) in an appropriate database/source. ____
   - B. Use and cite each source you use. ____
   - C. Request materials on interlibrary loan if you need them. ____
   - D. Use interlibrary loan materials carefully and return them promptly. ____

5. PREPARATION OF PRESENTATION
   - A. Read over your notes and select material you intend to use. ____
   - B. Prepare an outline or storyboard from your notes. ____
   - C. Select the type of media you will use for your presentation. (research paper, video, computer program, diorama, etc.). ____
   - D. Write a rough draft. ____
   - E. Prepare a "Works Cited" page, listing all materials consulted. ____
   - F. Conference with classroom teacher and library media specialist. ____
   - G. Write your final paper or produce your project. ____
   - H. Design and produce all visuals. ____

ASSESSMENT RUBRIC EVALUATION FORM

	STUDENT	TEACHER
1. Brainstorm to determine process		
2. Use library catalog to locate resources		
a. List of sources with call numbers - print		
b. List of sources with call numbers - nonprint		
3. Use electronic searching to locate resources		
a. List of in-house and online sources used		
b. List of interlibrary loan materials requested		
4. Include a "Works Cited" list for all materials used		
5. Ask for assistance when needed		
6. Include all required information:	xxx	xxx
a. Population		
b. Language		
c. Monetary Unit		
d. Major cities		
e. Government		
f. Area		
g. Land forms		
h. Climate		
i. Holidays		
j. Chief products	xxx	xxx
i. Agricultural		
ii. Manufactured		
iii. Natural resources		
k. Religion		
l. Education		
m. Food		
n. Customs		
o. Sports		
p. History		
7. Write 3 or more reasons to live in your country		
8. Conference with teacher and LMS on rough draft		
a. Grammar		
b. Usage		
c. Spelling		
d. Punctuation		
e. Capitalization		
f. Format		
9. Hand in completed project		
10. Presentation of project to class/group		
11. Other special considerations		

Evaluation Ratings

3 - OUTSTANDING: The student has surpassed the basic requirements of the project by exhibiting a notable understanding of the research process and the organization of information into an enlightening and instructional product. The content of the project is accurate, all points are addressed and presented in an informative and creative style. The "Works Cited" page is prepared according to the guide given you.

2 - PROFICIENT: The student has a definite grasp of the research process and has presented an admirable production which includes all required components. Self-direction and responsibility are evident.

1 - SUCCESSFUL: The student has a favorable understanding of the research process and has presented the information gathered in a product that reflects organization and accuracy. A "Works Cited" page is included.

A TASTE OF THE WORLD
Project

Contributed by:
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TOOLS / SKILLS / CURRICULAR AREA: Multiple information sources / Integration of information, Product creation / Health, Social studies, Language arts

OBJECTIVES: The students will develop and use various research strategies for the retrieval of information. The students will identify and use a variety of resources to meet specific information needs. The students will apply information management skills that will enable students to organize, analyze, evaluate and utilize data from a variety of resources.

GRADE LEVEL: 4-8 SKILL LEVEL: 1,2,3,4,5

MATERIALS:
- Linkway (IBM) or Hypercard (Mac) or other authoring software.
- Multiple copies of Task Checklist.
- Access to the resources in the library media center.

TIME OF PLAY: 8-10 weeks with a minimum of three 1 hour periods per week.

PLAYERS: Individuals or pairs of students

PROCEDURES:

1. Brainstorm to determine geographical places to research nutrition or other topics of interest.

2. Using resources in the library media center, research the geographical region for basic information such as climate, population, agriculture, industries, religions, and holidays. What is the impact of this information on the nutritional habits of this area of the world?

3. Attend lessons on how to use the authoring software to create a multimedia presentation for the region.

4. Synthesize the information to create a multimedia presentation with the authoring software - consider visual images, sound and text format.

5. Evaluate the product using the checklist.

6. Have a peer evaluate the project before submitting it to the instructor.

DEBRIEFING:

1. Did you enjoy using the authoring software to create your report? Why or why not?

2. Would you use this program again?

3. What were the advantages and disadvantages of using this program to create a report?

TRAVELING ON THE ELECTRONIC HIGHWAY
Project

TOOLS / SKILLS / CURRICULAR AREA: Electronic encyclopedia / Integration of information, Product creation / Social studies

OBJECTIVE: The students will be able to access information from the electronic encyclopedia and utilize this data to produce an informative product.

GRADE LEVEL: 6 SKILL LEVEL: 1,2,3,4,5

MATERIALS:

- Laminate file cards, each with the name of a country of the world. This activity can be customized to the curriculum for a lower grade using states of the United States.
- Access to the electronic encyclopedia.
- Sheets of oak tag for posters and sheets of computer paper for brochures.
- Markers, colored pencils, typewriter.

TIME OF PLAY: This activity has no definite time limit. Each student will need adequate time to search the electronic encyclopedia, to analyze the information, and to design and complete his/her travel poster or brochure. Here are our estimates: 10-15 min. computer time; 15-20 min. to select and organize information for project; 60 min. to produce project.

PLAYERS: Can vary from a few to an entire class.

PROCEDURE:

1. Each student is given a laminated card with a name of a country on it.

2. Students search the electronic encyclopedia for information on their subject, and recover a hard copy of the data.

3. Students read and analyze the information obtained and choose the relevant information to be included in their product.

4. Each student make a travel poster showing highlights of the country such as:

Tourist attractions	Products	Flag
Landmarks	Map	

5. Students could choose to make a travel brochure with drawings and written information:

Area	Currency	Government
Climate	Major cities	Religions
Terrain	Language	Products

6. The completed travel posters and brochures can be displayed in the library media center under the banner " (School Name) Worldwide Travel Agency."

DEBRIEFING:

1. What are the benefits of electronic searching?

2. What is the procedure for searching a topic on the electric encyclopedia?

* INFORMATION LITERACY *
* SKILL INDEX *