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ABSTRACT

The "Idea Place," a regular feature carried by the magazine "Learning," provides an assortment of practical teaching techniques selected from commercially available materials and from ideas submitted by readers. Games, puzzles, and other activities are given for the areas of language arts, reading, mathematics, science, social studies, cooking, and arts and crafts. Topics treated by this compilation are: (1) seeds; (2) world geography; (3) spool knitting; (4) story time; (5) puppets; (6) sand; and (7) cooking. (JH)

IDEA PLACE: EARLY GRADES

COMPILED FROM SEVEN ISSUES OF LEARNING MAGAZINE, SEPTEMBER TO NOVEMBER 1982 AND JANUARY TO APRIL-MAY 1983

Compiled by

The ERIC Clearinghouse on Teacher Education

Washington, DC

Idea Place

Early grade teachers should not overlook the many easy-to-adapt activities described in the Middle Grades section of Idea Place.

Reading

ABC'S WITH DIRECTION

Liven up alphabet drill with this whole-class body-movement activity that's as engaging as it is energetic. Use posterboard to make two sets of large alphabet cards—one set (12-by-12 inches) for capital letters, the other (9-by-12 inches) for lowercase letters. Then write out a series of directions such as the following to read aloud to the class:

—Go to the lowercase *b*. Hop around the card like a bunny.

—Find the small letter *q*. Then as quick as you can, find the small letter *g* as in *go*.

—Stand on the capital *A*. Pretend you are an acorn that grows into a great oak and sways in the wind.

Move desks or tables aside and place the alphabet cards in random order on the floor. Call out a child's name and instructions for the child to follow. Keep the game moving rapidly and continue until every child has had at least one turn. Then, for additional drill, call out a name and a letter until the students have brought you every alphabet card.

Idea by: Jessie Knight, Rocky Mount, N.C.

PUTTING TOGETHER THE READING PUZZLE

Your abundant supply of primary-level jigsaw puzzles comes to the fore in an activity (from "Primary Notebook," Sisters of St. Joseph) that develops children's reading skills as well as their visual perception.

Write easy-to-read sentences or stories that describe the completed puzzle pictures, then print the appropriate sentence or story on each puzzle's back. Students use a combination of word-context and contour clues to put the scrambled pieces in their proper places.

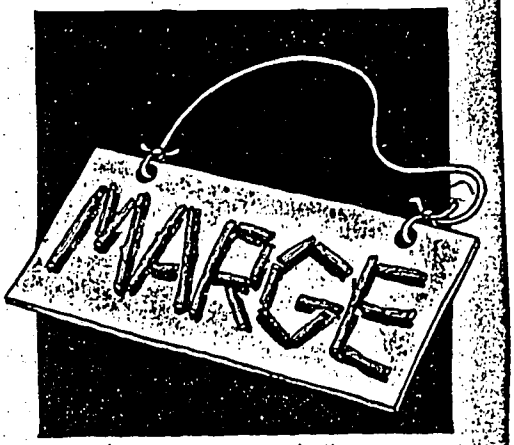
You can also provide your students with puzzles and have them write their own jigsaw stories. Copy the words onto the puzzle backs for classmates to piece together.

NAMES THAT STICK

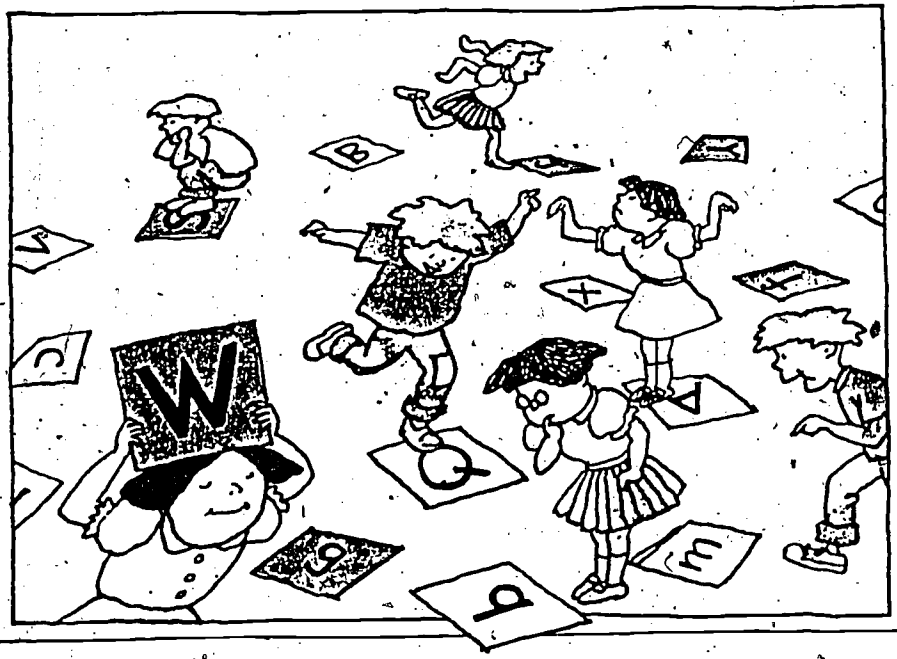
Name tags are passé, but you and your new group of youngsters need something to help sort out who is who until everyone's name becomes familiar. These unusual nameplates are fun to make and will attract the attention they deserve as they hang from students' desks. (From *Easy Woodstuff for Kids*, Gryphon House.)

Collect a good supply of sticks about a quarter inch in diameter, and cut them into lengths of 1½ and 3 inches. Provide each child with a 5-by-12-inch piece of cardboard, and write, or have the child write, his or her name on it in bold capital letters. (Note: letters that are rounded, such as *B*, *C*, *D*, *G*, etc., will need to be squared.)

Now ask the children to use the sticks to outline the letters in their names. Students do this by choosing the correct-size sticks, putting glue down on one side of each, and arranging them atop the lines on their cardboard nameplates. When the glue



is dry, punch two holes in the cardboard and loop through a piece of cord. Have the children hang their nameplates on their desks for all to see.



Art by Allen Say

Mathematics

KEEPING THINGS IN LINE

Keeping columns of figures in proper alignment is crucial to more than mere neatness. When children misalign the numbers in mathematical problems, the result is often incorrect answers and frustrated students.

To help them learn to keep numerical columns straight, provide students with quarter-inch-gauge graph paper on which to work their two- and three-digit math problems, having them fill in just one square per digit. Practice computing on graph paper should lead to students taking more care in keeping numbers aligned—even when they return to regular lined paper.

Idea by: Julie Dudek, Fort Collins, Colo.

WHAT'S IN A SHAPE?

Can a tall, thin container hold the same amount as a short, fat container? Students find out the answer —and explore the concepts of volume

and area—by doing this simple experiment from *Think Metric* (Level Blue, William H. Sadlier).

Provide students with construction paper, scissors, tape and table salt. Then give them these directions:

Cut out a 20-by-30-cm rectangle. Cut it in half lengthwise and label the halves A and B. Roll A to form a long tube, and tape the ends together without overlapping them. Roll B to form a short cylinder; tape ends together without overlapping. Have students consider the questions: Which holds more, A or B? Why?

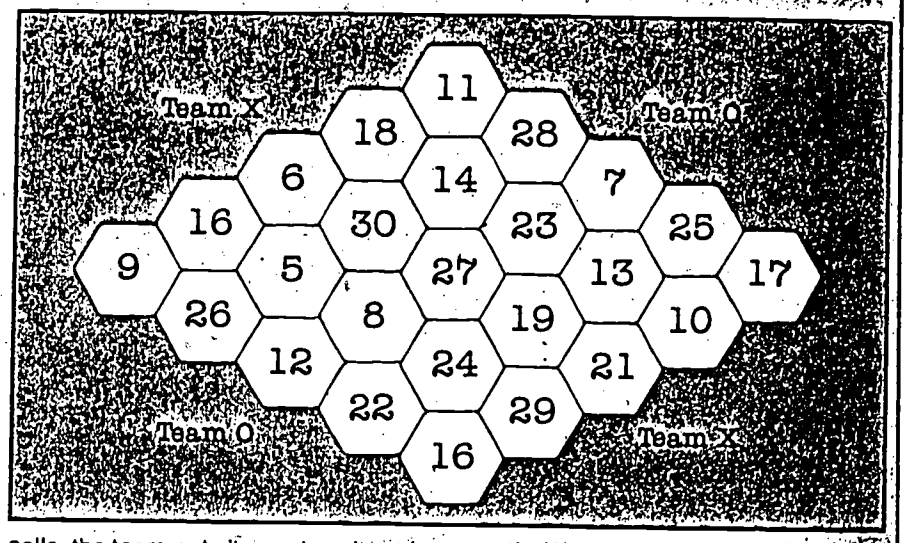
Students can then test the accuracy of their predictions by standing tube A in cylinder B; filling tube A with salt; and lifting tube A, letting the contents fall into cylinder B. For further exploration, have students try to find containers of different shapes that have equivalent volumes.

HAVE SUM FUN

The following activity (from *Ideas From the Arithmetic Teacher*, National Council of Teachers of Mathematics) provides practice in mental addition.

Make an overhead transparency of a gameboard similar to the one illustrated.

On the chalkboard, write the numerals 1 through 10, and the number 20. Divide the class into Team X and Team O. Teams take turns selecting two numbers from the chalkboard and adding them together. If the sum appears in one of the gameboard



cells, the team puts its mark on it (unless the cell belongs to either of the opposite team's sidelines; corners, however, are fair game for both teams). If a student's sum was marked in an earlier turn, no action is taken. The object of the game is for a team to make an unbroken path of marked cells connecting its two sides.

At first, students may pick random pairs of numbers. As they play, however, they will begin to develop strategies for winning cells that connect their team's path or that block their opponent's.

Idea Place presents an assortment of practical teaching techniques selected from two kinds of sources: commercially available materials and short ideas submitted by readers. Our purpose in printing ideas from commercial sources is not necessarily to recommend specific products but to make available excellent activities that might otherwise not come to the attention of our readers.

Learning magazine will pay $25 for original teaching ideas selected for publication in Swap Shop and $10 for original teaching ideas selected for use in Idea Place. Suggestions will not be returned; so you may wish to keep a copy of your idea for future use. Limit your item to 600 words and submit it, along with a self-addressed stamped response envelope, to: Swap Shop, *Learning*, 530 University Ave., Palo Alto, CA 94301.

Science

EDIBLE INITIALS

For this simple and enjoyable gardening activity (from *Self-Sufficiency for Children*, Pelham Books), you will need a large plot of dirt in a sunny part of the schoolyard, a collection of small sticks, and several packets each of cress and mustard seeds.

Mark off a section of earth about 2 feet long and 1 foot wide for each student. Have the children crumble the soil with their fingers so that it is very fine. Then each child prints his or her initials to fill the space (making the lines of the letters at least 1 inch thick) and marks the outline of the letters with small sticks to indicate where the seeds should be planted.

Sprinkle cress seeds in the letter shapes marked by the sticks, and cover them with a fine sprinkling of earth. Water the seeds. Three days later, sprinkle mustard seeds on top of the letters and press them down gently. Water again, and then water every few days, keeping the soil slightly moist but not soaking wet.

In about two weeks, children will find their initials "growing" in the garden. They'll be even more surprised to discover that their initials are edible. Cut the mustard and cress with sharp scissors, and wash well before serving.

REAPING FACTS AT HARVEST TIME

Fall is harvest time, and thus presents an ideal opportunity for students to learn some basic facts about the planting, growing and harvesting of various fruits and vegetables.

Collect an assortment of resource materials—books, charts, pamphlets, seed packets—that provide information about gardening and plant life. Then enlist the children's help in bringing to class a variety of fresh fruits and vegetables. Have the children examine each piece of produce carefully—the leaves, skin, pulp, seeds—and discuss observations. Use the resource materials to answer questions, explain concepts and provide "fact finds" about the various plants.

Following the class exploration, give students a chance to review and reinforce their new-found horticultural knowledge by setting up a "roadside stand" simulation. To make the stand, remove one side of a large cardboard carton and cut a window in the opposite side. Set the carton on a table on which baskets of fruit and vegetables are displayed. Have the children take

turns acting out the roles of farmer/seller and customer/buyer. Each customer asks the farmer one question relating to some aspect of planting, growing or harvesting. If the farmer is unable to answer the question, outside consultation or additional research may be called for.

To culminate the harvest-time activity, dice the fruit and vegetables and invite the class to enjoy a nutritious snack.

Idea by: Norma H. Keller, Hampton Street School, Mineola, N.Y.

WATER STORES HEAT

This simple classroom experiment will enable young children to see that bodies of water store heat better than land does (from *Water: Experiments To Understand It*, Lothrop).

"Fill two metal cans to the same level, one with soil and one with water. Place both cans in an oven set to 'warm' and leave for two hours. If an oven is not available, place both cans where they will be exposed to direct sunlight for several hours."

Remove the cans from the oven or direct sun and take a temperature reading every hour or so until both containers reach room temperature. Your record should show that the water retains the heat far longer than the soil does.

TASTE TESTS

How do you taste things? Your students will have more than one answer after they conduct these three experiments from *How Your Body Works* (William R. Scott).

- **Apples and Pears.** Have students work in pairs, with one blindfolded. One child holds a slice of pear under the blindfolded partner's nose, while feeding her a slice of apple. The blindfolded partner must guess what she is eating. Does the answer suggest anything about the part played by the sense of smell in helping us taste?
- **Sweet and Sour.** Each child will need a clean watercolor brush, a glass of water, a pinch of salt, a pinch of sugar, a spoonful of vinegar, and a pinch of bitter-tasting stuff, such as finely ground coffee or ground-up bitter almonds.

Have the students dip their brushes in water, then in salt. Tell them to touch the salty brushes to the tips of their tongues. They should note what they taste and then take a sip of water to wash off the salt. Ask them to repeat this procedure for the sides and the backs of their tongues. They will find that they taste salt at the tip and at the sides, though not at the back.

Repeating the experiment with the sugar, vinegar, and coffee or almonds, they will taste sour mostly at the sides, sweet at the tips, and bitter at the backs of their tongues.

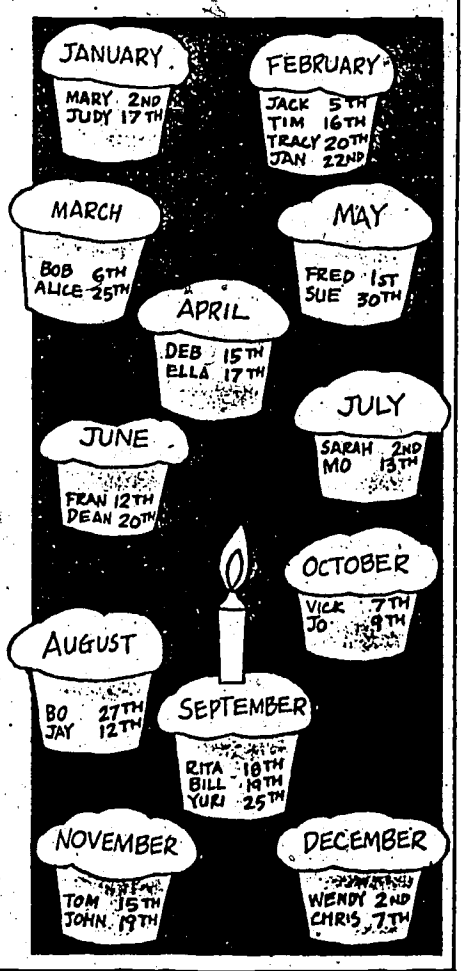
- **Dry and Wet.** Tell your students to wipe their tongues dry with paper towels and then to keep their mouths open to keep them dry. Have them drop a pinch of sugar on their tongues. Do they taste anything? Then tell them to close their mouths and moisten their tongues. Now what do they taste? Students will discover that sugar, like all foods, must be moistened with saliva before it can be tasted.

Potpourri

HAPPY BIRTHDAY TO US

Here are two birthday ideas—one to help you keep track of each child's special day, the other to help you celebrate it.

- **Cupcake Calendar.** Cut out 12 tagboard cupcakes, each about 3 inches high and 4 inches wide. Label the "frosting" of each cupcake with a



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month, and color with a different color marking pen. On each "cake" itself, write the names and birthdates of the children born in that month.

Post the 12 cupcakes on a wall or bulletin board. A single tagboard candle that can be moved from month to month will tell you at a glance whose birthdays are coming up.

Idea by: Carole J. Hefflinger, Yakima, Wash.

• **Birthday Booklets.** For a simple way to celebrate a birthday in the classroom, have each child write a letter or draw a picture for the birthday boy or girl. Collect the messages and drawings, prepare a construction paper cover, and assemble the pages into a booklet fastened with brads. The birthday child will thus have a special memento to carry home.

Idea by: Susan Terrill, Belmont Elementary School, Cuba City, Wis.

PERSONAL TIME LINES

If you have access to an instant camera, you can provide the first item on each child's year-long time line, as well as a great first-day-of-school icebreaker.

Before school begins, tack on one wall a long construction paper arrow for each child. Then, as you welcome each child, snap her or his photo and hang it to the far left end of an arrow. During the course of the year, add other items to the children's arrows to represent milestones in their lives—souvenirs from trips, birthday cards, holiday mementos, newspaper clippings. Take another set of photographs toward the end of the school year to complete the students' personal time lines. On the last day of school, send each class member off with an arrow shot through with memories.

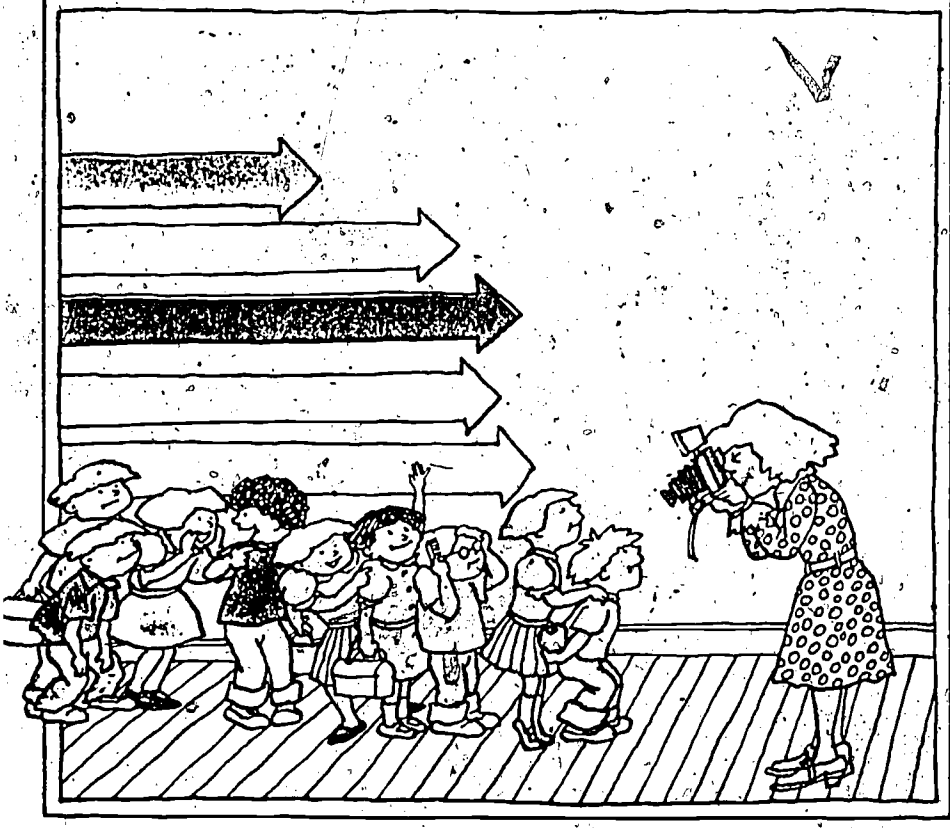
Idea by: Linda Martin Mercer, Nashua, N.H.

HOPE YOU CAN COME!

Young children apprehensive about the approach of a new school year needn't suffer in anticipation until you can reassure them in person. Dispel some of their anxiety—and perhaps even instill a little excitement—by sending your prospective students personal invitations to the first day of school.

A week or two before opening day, send each child an invitation (either homemade or store-bought) that notes all the relevant information—date, time, room number, etc.—and includes a short, personal comment from the "host/hostess": "Hope you can make it!" The children will delight in receiving their own invitations, and may actually begin looking forward to the first day.

Idea by: Cathy Toohey, Harbor Day School, Corona del Mar, Calif. ■



Seeds of Preschool Science

BY GLORIA NEEDLMAN

It all started, quite by chance, in our school play yard. The opening week of school, the yard was a painful place for children to play. Plants with tiny stickers had grown at the base of the slide and around much of the other playground equipment. Rather than wait for the custodial crew to remove them, we decided to tackle them ourselves.

It took seven days and five trash bags to complete the job. Following each weeding session, we would return to the classroom covered with stickers. In the process of carefully removing them from our clothes, shoes and skin, we began to look closely at the villainous, porcupinelike hitchhikers. Questions began to emerge from children and teachers alike. What were these prickly devils? And what purpose did they serve?

To try to find answers to these questions, we cut into some of the stickers. What we discovered—that the prickly things were actually coverings for tiny seeds—set off another round of questions and launched a primary science investigation that would continue throughout the year.

Collection and Comparison

An awareness of seeds in our environment carried quickly from the play yard to the lunch table. Soon the children were collecting and comparing the seeds they discovered in their dessert fruits. As the children ate, they talked about what they saw, and they began to classify: some seeds are round, some pointed; some are smooth, others have rough skins. Almost every day the lunch table became a place of seed discovery.

I sent home notes to parents requesting that they send to school any seeds they found in the fruits and vegetables they ate. It wasn't long before the children were bringing in seeds of all sizes, shapes and colors. We looked at them with naked eyes and through magnifying glasses. The children arranged them by size, from the tiny green pepper seed to the mango seed, the largest we had. They sorted them by color and shape, then displayed them by gluing them onto pieces of wood.

We placed some of the seeds in small Ziploc bags with identification labels, and stapled the bags to a bulletin board. As these seeds began to germinate, we transferred them to dirt-filled flower pots. Quite by accident, and to our amazement, several corn kernels sprouted in our moist sand table as well as in the dirt.

An unusual gourd was brought to school. It had already dried, and its seeds rattled when the children shook it. The gourd had a paper-thin covering. When the children peeled it, a dried, stringy pulp was uncovered. What we had was a loofa sponge, the kind sold at bath shops and cosmetic counters. After removing the outer skin, we collected the small round black seeds inside, then took turns scrubbing our hands with the dried sponge material. The children thus made another discovery: the coverings of some seeds are fruits, but some protective coverings are useful in other ways.

Observation and Research

On walks around the community we collected seeds: winged ones from the maple, prickly balls from the chestnut, and acorns from the mighty oak. When the milkweed pods we found in a vacant lot ripened, we selected a windy day to free the seeds. As the umbrella chutes floated across the play yard, the children discovered another way that seeds get distributed: they float in the wind.

Sometimes our seed study took us to the school library, where we conducted research to find out about a particular seed. One such research task was initiated when Daniel found five little round brown seeds on his walk to school. "They came from a tree," Daniel told us. He knew nothing else about them.

Our research began in the reference section of the library. In a tree guide we found a picture of seeds similar to those in Daniel's hand, but not exactly the same. To find the true name of the seed, we needed more information, so I asked Daniel to bring in a leaf from the tree.

The following morning, Daniel brought in several leaves with seeds hanging from the underside. With this additional information, the identification process proceeded. The children looked at the leaves, then at each picture in the book, responding yes or no to each picture. Whenever there was a yes response, I asked what aspect of the leaves was the same: was it size, shape, color? The research was completed successfully when the class found a picture of a linden tree, showing seeds and leaves that clearly matched what Daniel held in his hand. The children were thrilled, as was I. To identify one seed was important, but to know that information is contained in books, that plants can be named, that libraries are places to find specific information—this knowledge was of even greater importance to these young learners.

We not only collected and studied seeds, we cooked and ate many. The pumpkin seeds from our jack-o'-lantern made delicious eating when we baked and salted them. We picked popcorn plants, stalks and all, dried the corn on the cob, then removed the kernels for popping. It was quite a discovery for the children to learn that the kernels on the cob are the seeds of the plant.

We gathered the seeds from dried wildflowers, and the children used them for collage work at the art table. The pods from the honey locust became percussion instruments that made gentle sounds when struck with the side of the hand. Other pods were opened and their smooth brown seeds collected for counting games.

Of course, not every child became involved in every aspect of seed discovery. Some children showed more interest than others, some participated in more activities, but each child was involved in at least a portion of the project. There was no special time of the day devoted to the study of seeds. Whenever an interest was noted, whenever an observation involving seeds occurred, we talked, we classified and, if possible, we identified. Through this approach, we discovered the true seeds of primary science. ■

Gloria Needlman is a teacher at the University of Chicago Laboratory Nursery School.

Idea Place

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Language Arts

COOKIE DOUGH LETTERS

Children learning to print are especially eager to know how to make the letters in their own names. To make the most of this motivation, have students practice their letters by creating their names with cookie dough.

If at all possible, have the children mix the dough with you at school, perhaps the day before the shaping and baking takes place. (A simple sugar-cookie dough has few ingredients and lends itself to lettering.)

When the class is ready to "write," provide each child with a piece of wax paper on which you have outlined

the child's name in large letters. Have the children make the letters in their names by rolling "snakes" of dough and shaping them over the letters on each of their papers. Transfer the pieces of wax paper onto cookie sheets and bake. Later, allow students to pick out their own names, and eat them or take them home if they wish.

Idea by: Jean Roe Martin, Halifax, Nova Scotia, Canada.

ALPHABETICAL CRAYONS

Ordinary crayons can help young children learn alphabetical ordering while they practice using color names. Supply each child with several new crayons—with paper covers intact and readable. Have the children alphabetize the crayons by color name and then draw a line with each crayon—in order and on a piece of paper or 3-by-5-inch card—to record their answers. They can check their own answers by matching the order of the colored lines with a colored answer key. To make the activity more difficult, use more complicated color names: for example, include lavender, midnight blue, olive green and magenta.

Idea by: Carol Lauritzen, Kansas City, Mo.

SELF-PROFILES

How old are you? What do you like to do? What's your favorite book? Students answer these or other self-identifying questions to create self-profiles that they complete with pictures (from *Polaroid Education Project*, Polaroid Corp.).

To prepare for the activity, hold a discussion about the kinds of information that can help people learn about one another. Then have the class choose specific questions to answer and a format for the self-profiles. Students then write their profiles and finish the project by attaching photos of themselves. Display the finished products or have students give them to classmates for interesting reading.

HANDWRITING HELPERS

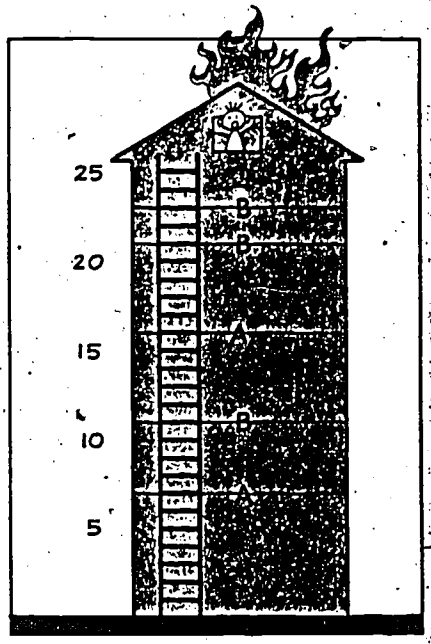
Overhead transparencies can cut down on the amount of time you spend writing poems, riddles and other handwriting lesson material on the chalkboard. To make easy-to-read transparencies, place clear acetate over a lined master and write the lesson on the clear acetate with a permanent marker. (A single lined transparency can be used over and over for both making and showing the information you want to present.) After projecting the transparencies, file them by topic in clearly labeled folders that you can turn to year after year.

Idea by: Judy C. Sewell, Harding Avenue Elementary School, Blacksburg, Va.

Mathematics

FIREFIGHTER UP THE LADDER

This activity from *Number Games To Improve Your Child's Arithmetic* (Funk & Wagnalls) will add a touch of excitement to addition and subtraction



practice. Two children at a time can play using dice, paper and pencil.

Ask the children to draw a tall building with a 25-rung ladder propped against it, leading to the roof. Tell them that the building is on fire and that they must go to the top of the ladder as quickly as possible to rescue people trapped on the roof. Every fifth rung is numbered to help players keep track of their climb, which begins when the first student rolls the dice and adds the two numbers that show. (Subtraction is used only in the final moves of the game.) The player then places his or her initial next to the rung that corresponds to the answer. The second player now takes a turn. Play continues to alternate and scores continue to move players upward, until someone reaches the top rung of the ladder.

If a player is near the roof and the sum of a roll would put her beyond the top rung, she may either pass and stay in place, or subtract the number shown on one die from the number on the other to move upward fewer rungs. If "doubles" are thrown on any turn, the player takes an extra turn.

TAKING COUNT

Stitch counters—the small cylinders knitters use to keep track of the number of stitches they've made—are inexpensive aids that can help young children master numerals from 10 to 100. Slid onto a pencil, they are easily

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held and can be used in the following learning activities.

• **Which Number Is Larger?** Have two students hold stitch counters behind their backs and spin the wheels on the counters, changing the numbers until you tell them to stop. Then have them go to the chalkboard and write the numbers they ended up with. Ask the class which is the greater of the two numbers. The child who wrote that number gets to play the game a second time with another student.

• **Match Me.** To encourage numeral recognition, choose a child to name a number between 10 and 99. Then have him or her tell it to the class and write it on the board. All the children in the class then try to make the same number on their stitch counters, checking their answers against the number on the board. Make sure each child has the chance to choose a number.

Idea by: Linda Oggenfuss, Maywood, N.J.

THE TENS FAMILY

Paper dolls cut from brightly colored paper can illustrate the grouping of the numbers from 0 to 100.

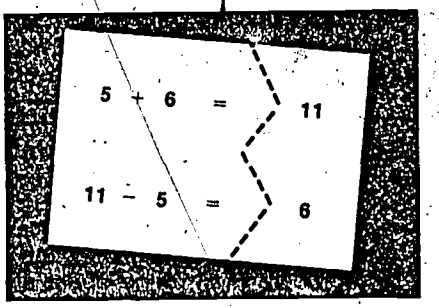
Gather a total of 100 sheets of paper—10 each of 10 different colors. Then give each child a paper doll pattern to trace and 3 to 5 sheets of paper, depending on your class size (cut out the extras yourself). Ask the children to cut 1 doll from each sheet. Call for the dolls by color and arrange each set in a row, mounting it on paper or a bulletin board. Number each doll in order, or have students do the numbering with your assistance. With the colors helping students to identify each group—ones, tens, twenties and so on—youngsters will find it easier to recognize such patterns as each group ending with the numeral 0.

Idea by: Barbara Cohen, Stony Brook, N.Y.

PUTTING IT ALL TOGETHER

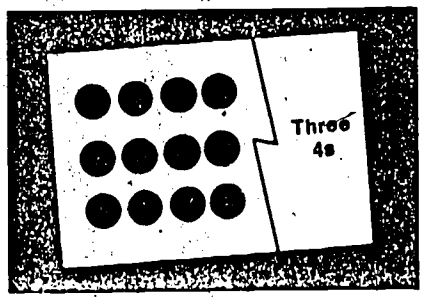
Two activities from *Strategies for Teaching Children Mathematics* (Addison-Wesley) help students to remember basic math facts.

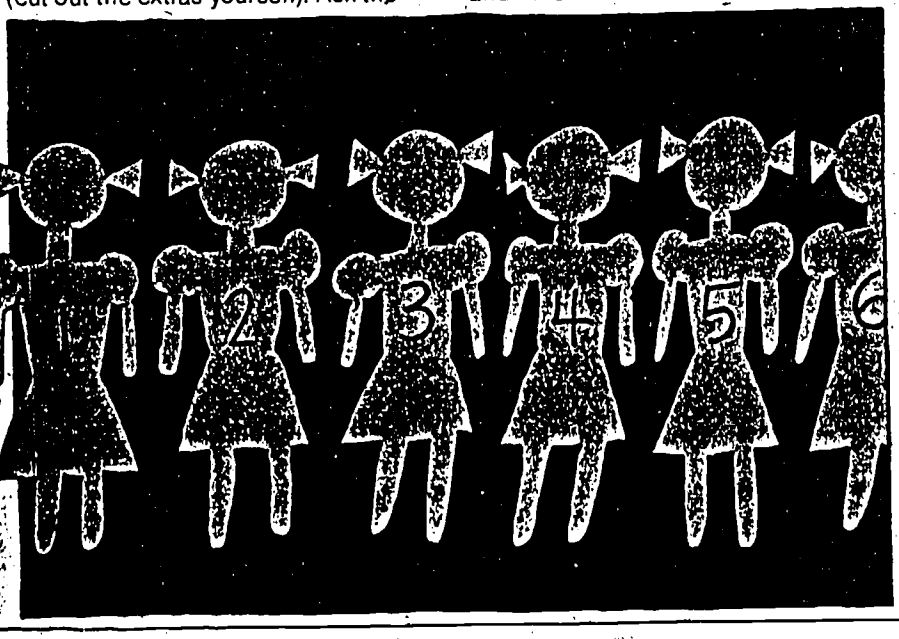
• **Puzzle Cards.** Make a set of 5-by-7-inch puzzle cards that contain addition and subtraction facts in which the addends and sum of one equation are the minuend, subtrahend and difference of the other.



Cut the cards between the problems and the answers in such a way that the pieces from one card will not fit the pieces of any other card. Scramble the pieces faceup and have the first player choose four to try to put together. Have him or her put back any pieces that don't fit. Other players, in turn, then choose four cards, also returning their unmatched pieces to the puzzle pool. Play continues until all the cards have been assembled and the student with the most complete cards is declared the winner.

• **Jigsaw Match.** Using 5-by-7-inch index cards, make a set of array-description cards that illustrate an array on the left side and describe the array in words on the right. Cut the cards between the arrays and the descriptions so that pieces from one card will not fit together with pieces from any other card. Scramble both sets of cards faceup, then have students take turns choosing four and attempting to pair them correctly. Students return unpaired card pieces to the scramble until a player is able to make the final match-up and end the game. The student with the most pairs is the winner.





Arts & Crafts

FOILED AGAIN

A large assortment of "junk"—nails, bolts, yarn, keys, odd pieces of wood, corks and the like—can be turned into intriguing mystery collages that spark collecting and identifying interests (from *Activities and Resources for Guiding Young Children's Learning*, McGraw-Hill).

Have each child in the class bring in (or choose from a rummage box you provide) several junk items. Students glue the odds and ends onto a piece of 8½-by-11-inch cardboard. When the glue is dry, have the children paint

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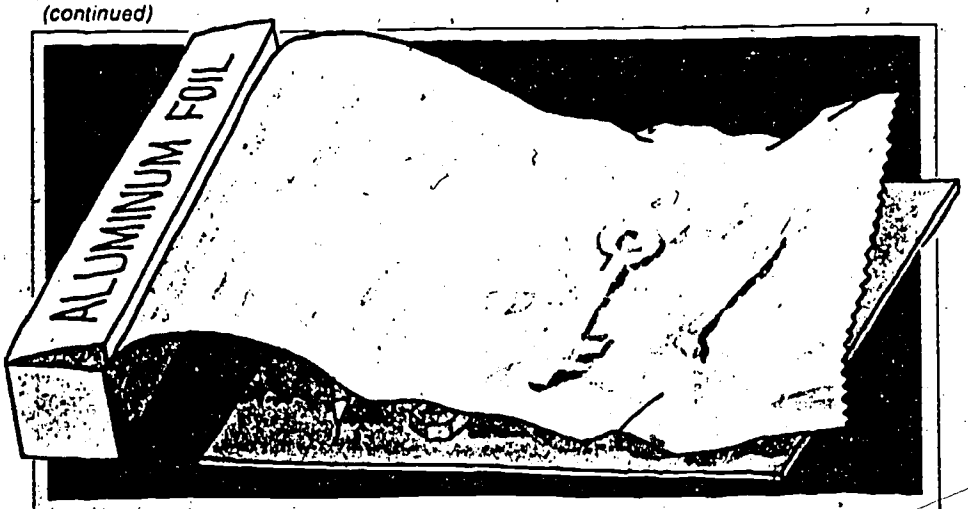


the objects with thinned glue and then press aluminum foil over everything, molding the foil so that the shape of each object is clear. When the mystery collages are again dry, have students polish the foil with a cloth and then take turns guessing the objects in one another's creations.

HOMEMADE PAINT

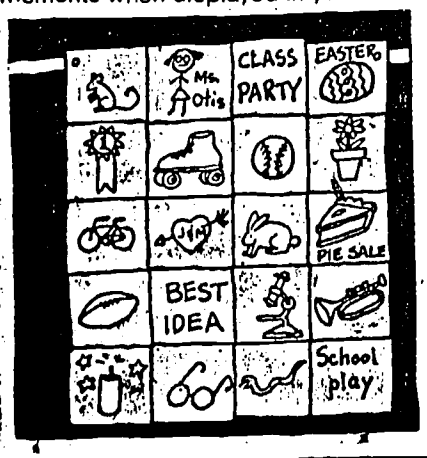
Youngsters love to paint, and you can add to their fun by letting the kids make their own media. This simple recipe (from *Do A Zoom Do*, Little, Brown) calls for the following materials: small jars with lids, vinegar, cornstarch, food coloring and measuring spoons.

Give the children these directions: Put ½ teaspoon vinegar and ½ teaspoon cornstarch into a small jar. Add about 10 drops of food coloring. Put the lid on the jar, and shake the mixture well. There's your paint! If the paint is too thin, add more cornstarch. If it's too thick, add more vinegar.

A COLLECTIVE MEMENTO

A patchwork of fabric squares—individual representations of students' most memorable school activities—becomes a meaningful class memento when displayed in your room. Give each student an 8-by-8-inch square of felt or other suitable material, and have the youngsters glue or paint pictures or words that describe their remembrances on their squares. Either stitch the squares together or glue them in place on a large sheet of material. Hang the finished quilt on a dowel, and your class will have a collective reminder of its enjoyable and educational activities.

Idea by: Linda Valentino, Minisink Valley Middle School, Slate Hill, N.Y.



LAMPSHADE MOBILE

The wire frame from an old lampshade makes a lightweight, durable base from which to hang any number of mobile ornaments. Simply strip away the shade leaving the frame intact. The wire is easy to paint and repaint, and strong enough to hold fairly heavy objects.

Idea by: Sharon Grasha, Laurel, Miss. ■

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Wunnerful, Wunnerful Geography

BY UTE ELISABETH VAN NUYS

Teaching world geography to a group of lively first graders was the last thing on my mind that dreary November day. A strong rain had kept us inside all morning and the children were getting restless. As a change of pace, I announced story time.

I read Hans Christian Andersen's *The Fir Tree*, then I told the children about Andersen and some of his other stories. Someone asked where he had lived. Feeling playful, I assumed a thick German accent and replied, "Vere did he live? Vy he lived in wunnerful, wunnerful Copenhagen!"

"Wunnerful, wunnerful Copenhagen? What's that?" Amy asked.

I went over to our big world map. "Wunnerful, wunnerful Copenhagen is right here," I pointed, "in wunnerful, wunnerful Denmark." The children thought this uproariously funny.

Sensing a new game, the children started studying the map for the first time. Cries of, "What's this? What's that green one?" popped up from the group. "That's wunnerful, wunnerful Sweden, and that's wunnerful, wunnerful Australia, where kangaroos come from," I answered, pointing out each country. The children were delighted and were still into "wunnerfuls" when the lunch bell rang.

The following Monday, Brian marched in announcing, "I want to tell everybody where I been this weekend." I suggested he wait until circle time to share his news. At that time, Brian, all swagger and six-year-old aplomb, said, "Listen here everybody. Guess where I been this weekend?" Twenty-three cross-legged first graders took up the challenge. "Disneyland?" "Your grampa's?" Brian smiled in smug superiority. "Nope. I been on an airplane and I been to wunnerful, wunnerful New York." The class roared.

Amy, our class spokesperson, asked slyly, "And where is wunnerful, wunnerful New York, Brian?" Brian frowned and eyed the map. I came to his rescue. "Why right here, in the wunnerful, wunnerful United States."

Circle time was forgotten as other children clamored to find places they had visited or heard about. Observing their enthusiasm, I thought: Why not use this windfall for teaching?

Preparation and Initiation

That night I set to work cutting up old *National Geographics* and mounting the pictures on construction paper. A few days later, during story time, I read aloud from A.A. Milne's *Now We Are Six*. Afterward I told the class a little about London; showed pictures of Buckingham Palace, the royal family, Big Ben and double-decker buses; and presented a new book, *England: A Picture Book To Remember Her By*.

Some of the children were very interested, others were not, until I launched into my mock accent: "And vere is wunnerful, wunnerful London?" The attention was total. "Vy, in wunnerful, wunnerful England!" Suddenly the picture book was in demand.

I found an old copy of *Legends of the Rhine* at a garage sale. Although the language of the book was terribly stilted and old-fashioned, there were some good pictures. I read the book at home and then retold the stories, using the pictures at appropriate points. We found the "wunnerful Rhine" on our map and traced the "wunnerful" countries it flowed through. The legends proved so compelling that we went on to Greek and Scandinavian myths.

Poetry, too, contributed to our growing knowledge of the world. Rudyard Kipling's poem about a crocodile sparked an interest in the Nile and its people. Also highly popular were the *Children of the World* books, depicting through photographs child life in other lands. At the end of each book we returned to our beloved map to locate the places we had read about.

The children fast became adept at using maps and globes, and they were soon able to find many places themselves. Exotic place names crept into their creative stories and they developed one of the most unusual sight-reading vocabularies of any first grade. Their understanding of geography was better than that of many children twice their age.

Geography was an unqualified success, but one thing bothered me more and more as time went on: the playful use of an accent. I didn't want the children to laugh at people who spoke with an accent. Eventually, I broached the topic with my class. I pointed out that if they were to speak words in another language, they would doubtless say them with an American accent. To illustrate this point, I used a tape recorder to record a few words in German—first mine, then their attempts at repetition. When we listened to the playback, they were amazed to discover that they too had accents.

The Visitor Hour

Toward spring, I asked the children if they would like visitors from other lands to come and talk to us about their "wunnerful" countries. They were enthusiastic; and so began our Wednesday morning visitor hour.

Our first guest was a charming Dutch-American grandmother, who completely mesmerized her young audience with stories of growing up in Holland. An Indian woman came, wearing a sari. We sampled Greek pastries brought in by a Greek-American and learned a French song.

To prepare for each guest, we turned our weekly library trips into research time. Because there were never enough children's books about the upcoming guest's country to go around, the librarian would raid the adult travel section. To our amazement, the children accepted these books readily, poring over the pictures and asking us to read parts of the text out loud to them.

What had begun as an impromptu game had developed into a comprehensive, year-long unit. Geography, that unlikely candidate for a first grade curriculum, had proven its value in many ways. Not only were first graders capable of learning names and places, reading maps, appreciating a wide variety of literature and using the library as a research center but they showed a capacity for understanding and respecting other peoples, cultures and values as well.

I learned something too: An ear sensitive to the vibrations of student interest can result in a joyful learning experience. And isn't that what teaching is all about? ■

Ute Elisabeth Van Nuys is an early childhood specialist and a freelance writer.

Idea Place

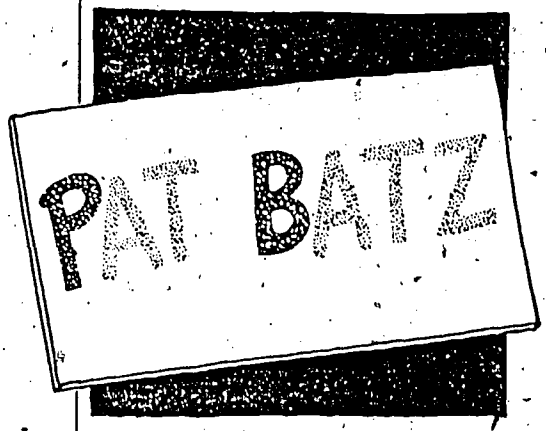
Early grade teachers should not overlook the many easy-to-adapt activities described in the Middle Grades section of Idea Place.

Reading

SPARKLE AND SAND SIGNS

Youngsters will get a real feel for their names—and for reading them—with the products of this craft project.

Print each child's first and last name on a piece of oaktag or heavy manila paper. Trace the first letter of each name with glue. Have the child pour colored glitter on the initials and pour the excess off into a dish. When



these letters are dry, trace with glue the remaining letters of the child's first and last names. Have the child sprinkle sand over them, as he did with the glitter, and pour off the excess. When the project is dry, the child will easily identify his sparkling initials, and his name will be readable and touchable.

Idea by: Anne Friedman, Owl School, Washington, D.C.

PLASTIC LETTER DISKS

Very young children can really get a hold on these letter disks made from the plastic lids of coffee cans and dry goods. Use them for practicing letter and word identification.

Collect from parents and colleagues a good supply of lids at least 4 inches in diameter. Out of construction paper, make a set of 3-inch capital letters, then glue one letter to each disk. Keep up your supply of lids to make replacements or to add lower-case letters.

Idea by: Lucy J. Knight, Winston Educational Center, Washington, D.C.

BOOK SWAP DAY

Spring cleaning is appropriate any time of year, especially when the detritus enables you to hold a classroom book swap. Get students and their families to toss their used books your way, and after a flurry of making choices, each child in your class will go home with a stack of new reading material and loads of enthusiasm for tackling it (from *101 Activities for Building More Effective School-Community Involvement*, The Home and School Institute).

A week before the event, make a classroom announcement about Book Swap Day. Ask students to cull books from their personal libraries to exchange at school. (You may want to send home a parent permission slip as well.) As books are brought to class, keep a record of the number of books each child contributes.

On the day of the swap, set out all the books and let children browse and make recommendations. At the end of a specified period, each child chooses a new batch of books—one for each book brought from home. Unclaimed books may be sent home with eager readers, donated to the school or class library, or saved for the next swap.

Mathematics

A FENCE AROUND SPACE

What two-dimensional shape with a fixed perimeter produces the greatest area? Students can explore fundamental geometric concepts—and figure out the answer to this question—through a simple project (from *The Measurement Book*, Enrich).

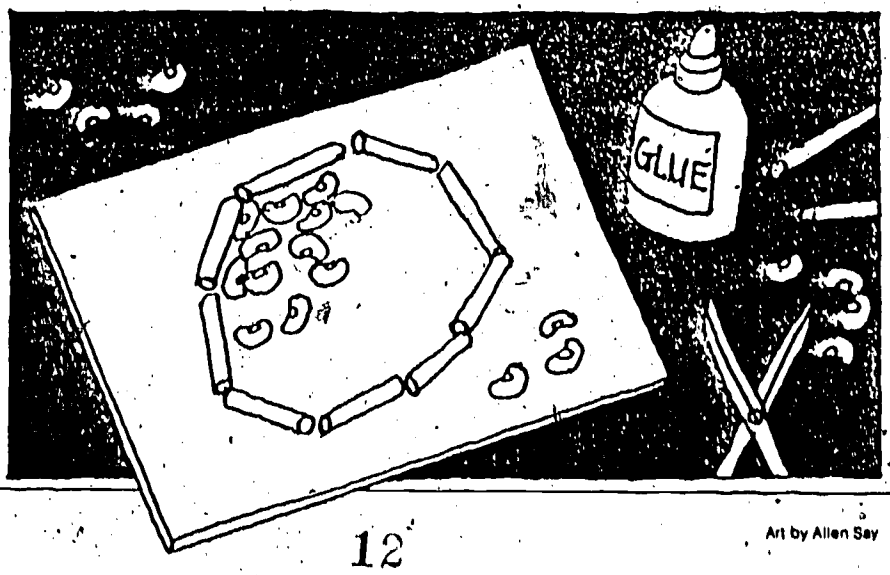
Materials needed are drinking straws, construction paper, glue, scissors and lima beans. Give students two rigid plastic straws each. Ask them to construct any closed geometric shape they wish, by cutting and gluing their straws to a piece of construction paper to create a fence for one layer of lima beans. Students fill their shapes with beans and count how many will just cover it. Then give students two more straws; ask them to construct a different shape by cutting their straws and gluing them to another piece of construction paper. Have students repeat this process several times, and then discuss which shape encloses the most beans.

THE VERSATILE GRAPH

Give graphs a permanent place in your classroom and see how easily students learn to size them up.

Using markers or string and thumb tacks, create a large bulletin-board grid. A pattern of 14 horizontal lines and 25 vertical lines, 2 inches apart, will provide the background for a variety of graphs. Leave room around the grid for graph titles and axis labels.

Cut 2-inch squares from colored construction paper to serve as bar increments. These squares—each representing a class member—can be used over and over to illustrate such concepts as the class's favorite colors, pets, foods and so on. To increase the complexity of class graphing efforts, change the value of each square, create graphs that require the use of partial squares, or use the grid to make line graphs that record such



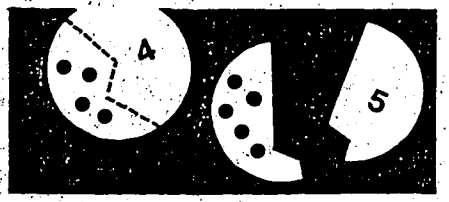
Art by Allen Say

phenomena as the daily temperature over a week's time.
Idea by: Terry Chadsey, Nathan Hale School, Lansing, Ill.

JIGSAW PUZZLES

To help children learn to associate a numeral with the set it represents, *Holt Mathematics* (kindergarten, teacher's edition, Holt, Rinehart & Winston) suggests making paper plate jigsaw puzzles and using them in a variety of games.

Use felt-tipped markers to draw a numeral from 0 to 12 on one half of a paper plate; on the other half of the same side of the plate, draw an array of dots equal to the numeral. Cut each plate between its number and its array, in such a manner that only the two corresponding halves fit together.



Two children—each with a set of shuffled plate parts—work separately to see who can fit all the parts of his or her set together first.

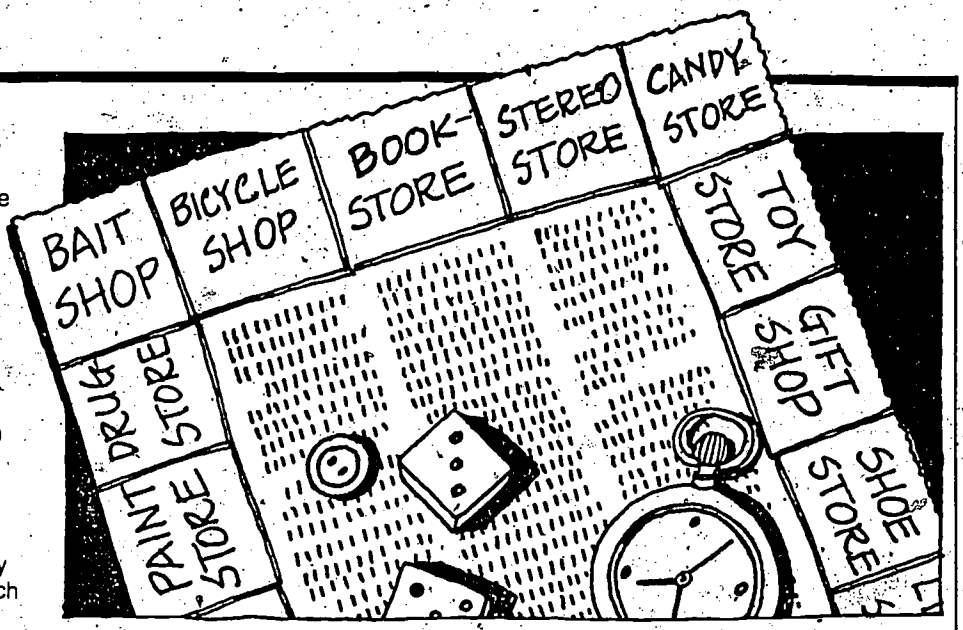
Two sets of puzzle pieces can also be used to involve several children at once. Divide students into two teams and stage a relay race. Display a set of shuffled puzzle pieces on a table for each team. (There should be one more puzzle for each team than there are team members.) One at a time, students from the front of each team come to their table, assemble a puzzle, and go to the end of their line. The next player in each line then goes to the table, assembles a puzzle, and so on, until the first player is again at the head of each team. The team that assembles its puzzles first wins.

Social Studies

LET'S GO SHOPPING

This two-person game will help youngsters become familiar with sections of the newspaper besides the comics.

Make a gameboard by gluing a newspaper page onto a piece of posterboard. Using a felt-tipped marker, draw a path of squares around the border of the newspaper page. In each square, write the name of a kind of store (for example, a muffler shop, a stereo store).



Children will need a clock or watch with a second hand, a supply of newspapers, a pair of dice, and buttons or the like for markers.

Players may start on any square. After tossing the dice and moving the indicated number of spaces, each player must find in the newspaper the name or picture of an item likely to be sold in the kind of store on which he has landed. If the child succeeds within 30 seconds, he clips the qualifying item and earns a point. The first player to earn ten points is the winner.
Idea by: Barbara Ashley, Lexington, S.C.

A THANKFUL TREE

Thanksgiving losing its stuff? Turkey feathers! A thankfulness project to which the whole class contributes may give children an opportunity to think about the meaning of the holiday.

Give each child a colored construction paper leaf. Then ask the children to write on their leaves one or two "I'm thankful for" ideas. Attach the collected leaves to a giant paper tree displayed on a bulletin board. A treeful of thankful thoughts can provide a heartening way to greet the season.
Idea by: Wendy Vogt, East-West Finley Elementary School, Claysville, Pa.

MYSTERY GUESTS

Engineer, truck driver, nurse. Your students may think they are familiar with these occupations, but do they have realistic ideas about the duties and skills the jobs entail? Help them get a fuller understanding of the adult work world and involve parents in your curriculum by initiating a Mystery Guest Day. The diversity of jobs among your students' parents provides you with all the material you need for an engaging and informative career education unit.

On Mystery Guest Day, students play a form of Twenty Questions, asking yes-or-no questions to help them guess the occupation of one of their classmate's parents. (Remind the student whose parent is participating not to "leak" any hints and to refrain from questioning.) After the job has been determined (or a time limit is up and the job is revealed), students ask further questions about aspects of the job that interest them.

One student then writes a brief description of the job—the duties performed, skills required, schooling necessary and so on. Keep descriptions in a career notebook that commemorates each parent's classroom visit and contribution to the world of work.
Idea by: Maryann J. Lacasse, Chamberlain Elementary School, Rochester, N.H.

Potpourri

SUPPLY SHOE RACK

A simple, inexpensive shoe rack can save your school money in supplies, and you, time spent loaning items and reclaiming them.

Purchase or make a large hanging shoe rack. Label each pocket—stapler, transparent tape and so on—and hang the rack where it is within

(continued)

students' reach and your eyesight. Let students borrow items whenever they like, providing they return the supplies to their proper pockets.
Idea by: Betty Dale, Wellsboro, Pa.

PARENT GAME-IN

Put parent hands to work and reap benefits in the form of new classroom teaching aids, as well as in improved communication with the home front.

Send home an informal survey to determine the best evening for the majority of parents to spend with you in your classroom. Send a second note home inviting the adults to roll up their sleeves for some educational-materials-making at a specific time on a particular date.

On the chosen evening, push together desks to form tables, and supply each with the ingredients necessary to create one game or activity. In assembly-line fashion, parents at each table can construct gameboards, flash-card problems, activity folders and so on. Appoint a leader at each table to help keep track of progress.

If you supply coffee and several parents provide snacks, the evening will be all the more enjoyable and productive.
Idea by: Melissa Donovan, Ada Elementary School, Ada, Mich.

FIELD TRIP LISTS

During your next class field trip, traveling to the site can become an educational activity in itself.

Several days before the trip, have each child prepare a list of 20 objects commonly seen outdoors—flagpole, dog, clothesline, etc. Collect the papers and, on the morning of the field trip, distribute them so that no child receives the list she prepared.

During the bus or car ride, children watch for the items on their lists. When a child spots an item on her list, she checks it off and writes down where she saw it (general descriptions, such as "white farmhouse near railroad tracks," will do, but encourage students to be specific and accurate, including addresses when possible). Students can continue their observation activities on the return trip.
Idea by: Mina Lewis, Hatfield Elementary School, Hatfield, Pa. ■

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Take a Spool to School

BY BERNICE E. BROWN

The first time I demonstrated spool knitting to my second grade class, my students couldn't have been more spellbound if I had been spinning straw into gold. Watching me work yarn around the four little nails protruding from an empty wooden thread spool, and seeing the colorful yarn creation I produced, proved wondrously magical for my young charges. That introductory demonstration turned out to be just the beginning of an exciting, year-long project with far-reaching results.

Spool knitting is easy for young children to learn (see directions), particularly if they begin with the secret-to-success starter technique I devised especially for youngsters with small, uncoordinated fingers. It calls for a collection of used Airwick Solid air freshener dispensers. In the base of each four-pronged dispenser, cut a 1¼-inch hole with a sharp knife, and smooth the hole by scraping it with the knife. The plastic holder thus serves as an enlarged version of the wooden thread spool. (If these dispensers are unavailable, an alternative is to use a plastic 8-ounce juice container and four Popsicle sticks. Cut the bottom out of the container and tape a Popsicle stick to the center of each side so that ¾ of an inch protrudes beyond the cut edge.)

I introduced the plastic starters early in the fall, along with skeins of bright red and green rug yarn (rug yarn being thicker and therefore easier to manipulate than regular yarn). The students caught on quickly to the spool knitting process, and their braids grew rapidly.

During the time the children were practicing knitting on the plastic starters, we were collecting wooden spools and leftover balls of worsted-weight yarn in bright colors for the next phase of the project. I prepared each spool by writing a child's initials at one end, hammering four small nails into the opposite end, and marking an arrow to the right to indicate the direction the yarn should follow (see illustration).

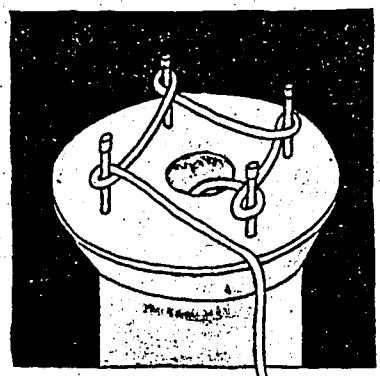
As soon as the children demonstrated their ability to knit on a plastic starter, they "graduated" to a wooden spool. The transition was simple to make once they'd mastered the basic technique. Later they would sew their braids into flat spirals, making small mats and hot pads for holiday gifts.

In January I noticed a dramatic improvement in the children's handwriting, something I attributed directly to the spool knitting. These youngsters were developing fine coordination through the simple task of lifting yarn over yarn. At the same time, they were getting practice in the left-to-right movement required for reading and writing.

My very slowest student became the most accomplished spool knitter in the class. His first braid, the longest of anyone's by far, earned him the well-deserved admiration of his classmates.

Directions for Spool Knitting

1. Hammer four small nails or brads into one end of an empty wooden thread spool, leaving ¼ inch of each nail exposed.
2. Pass 6 inches of yarn down the spool hole.
3. Wrap the yarn around each nail clockwise, encircling the spool to the right.
4. When you return to the first nail, do not encircle it again, but pass the yarn to the outside right only. Hold the yarn against the nail with your finger.
5. To begin knitting, lift the lower loop over the upper yarn and over the nail with your fingers (or use a crochet hook or partially opened paper clip.
6. Take the yarn to the outside right of the next nail, and repeat Step 5.
7. Tug gently on the yarn tail beneath the spool to tighten the stitches.
8. Continue until you're ready to end. Then cut the yarn to 6 inches, pass the yarn through each loop, remove and pull tight.



Spool Knit Fever

During the winter, one of the parents presented us with a long wooden frame with dozens of nails evenly spaced around the rim. Using the same spool knitting technique they had learned, the children used the frame to produce tubelike knitted caps. I taught them how to make and attach pompons, and happily noted their pride in wearing these caps.

When we began a math unit on graphing, I found a way to tie in their spool knitting interest. Our classroom was made up of 8-inch square tiles, which we used to represent numerical units. Once a week the children would lay their in-progress knitted braids along the length of the floor and record the number of units covered on individual graphs to show each child's weekly progress. We also made a joint monthly graph to show the total length in units of all the braids combined. Later we replaced the tile units with inches, feet and yards, and eventually with metric measurements.

In late spring, the second graders decided to put on a fair, and "Spool Fever Day" was announced. Every bit of spool knitting handiwork we could gather was displayed in the art room for the occasion: dollhouse rugs, hall rugs, cat mats, plant hangers, etc.

Our year-end fair was visible testimony to the success of our spool knitting project, but beyond the more concrete by-products of our endeavor were other valuable outcomes. Underachievers had become achievers. Self-discipline and self-motivation had developed. There was improvement in individual coordination as well as in classroom behavior. Best of all, the class itself seemed to knit together in a very special way—all because I brought a spool to school. ■

Bernice E. Brown, a former classroom teacher in Wisconsin, is a freelance writer in Sedona, Ariz.

Art by Allen Say

Idea Place

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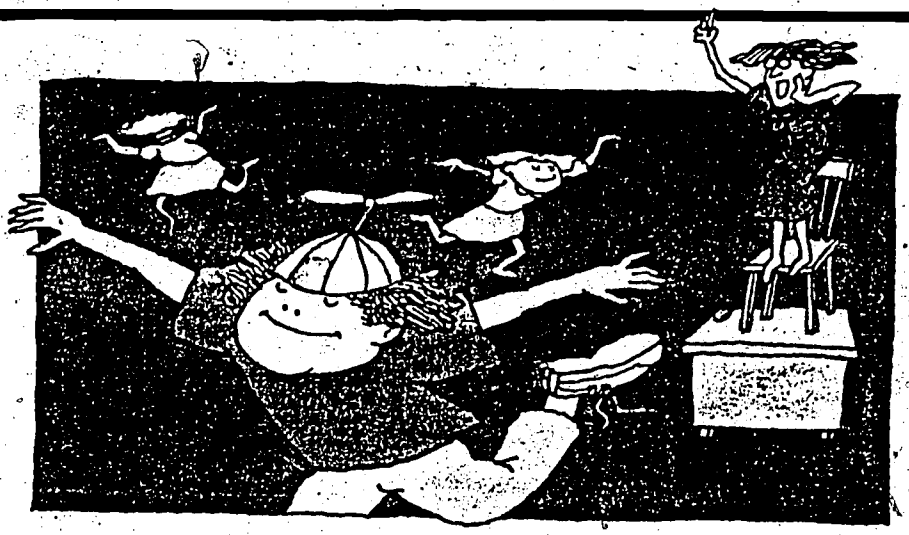


Reading

MUSICAL WORD MATCH

The game of musical chairs is adapted for this activity (from *Music, Art, and Drama Experiences for the Elementary Curriculum*, Teachers College Press) that gives children practice in recognizing sight words.

You will need recorded music, chairs—one for each child—and two identical sets of flash cards that display words with which the children are familiar. Tape a word card from one set to each chair, and give a card from the second set to each child. Then turn on the music and have the children march around the chairs. When the music stops, each child sits on the nearest chair and checks the flash card she's holding against the word that's taped to the chair. If the words match, the child remains seated. If not, the child stands, and the game continues until all the chairs have been taken.

This game can also be used with homonyms, synonyms or antonyms, as well as with words that require visual discrimination, such as *horse* and *house* or *nose* and *noise*.

FLIGHT TO THE SPOT

To help youngsters learn to listen to, remember and follow verbal instructions, try this game from *Listening* (revised edition, National Council of Teachers of English), in which students pretend to be airplane pilots listening for landing instructions.

You take the part of the control tower operator, issuing instructions such as the following: "Fly around the library table, over to the third window, along the bookcases, around the listening center, and come to rest under the pencil sharpener."

Students must follow your instructions precisely in order to make a "perfect landing." As they become more adept at the game, increase the complexity of instructions and encourage children to try different mnemonic devices, such as association and rehearsal.

READERS' THEATER

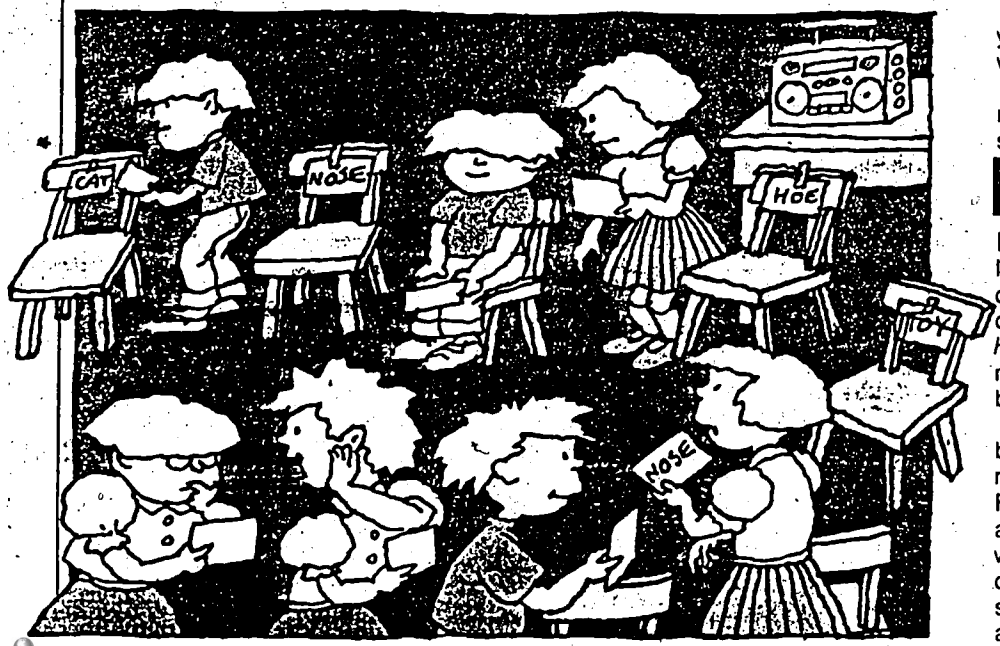
A dramatic reading can bring just about any story to life. *Exploring Books With Children* (Houghton Mifflin) offers these steps for adapting material for dramatic reading:

Select a brief passage—a short story or a scene from a book, for example.

Prepare a script by eliminating everything that does not move the story along. Also eliminate all indications of speaker—"he said," "she called," and so on.

Determine the number of readers you'll need—one for each character who speaks, plus a narrator.

Give a copy of the script to each reader. You may want to mark the scripts for sound effects.



Mathematics

RECTANGLE MULTIPLICATION

Introduce children to the abstract concept of multiplication with this concrete, hands-on activity from *Teaching Kids Math* (Prentice-Hall). All that's needed are a pair of dice and 36 tagboard squares.

Ask a student to roll the dice and to build a rectangle (or square) that represents the two numbers rolled. For example, a child who rolls a 3 and a 4 would build a rectangle 3 squares wide and 4 squares long. Have the child count the total number of squares, then translate the result into a multiplication equation: $3 \times 4 = 12$.

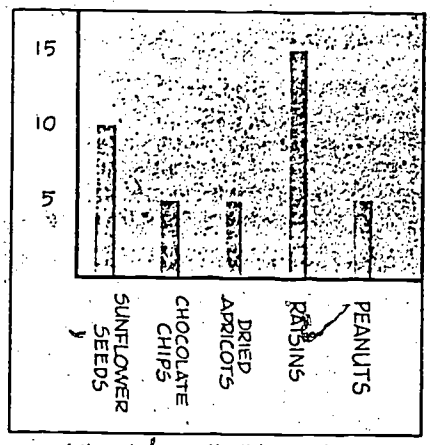
Art by Allen Say

To expand on the activity, challenge students to figure out how many different rectangles could be built with a certain number of squares, say 24. Have them demonstrate their answer: four rectangles, one 3 by 8, one 4 by 6, one 1 by 24 and one 2 by 12.

GRAPHING DELICIOUS DATA

Working with munchables can make graph concepts more palatable. In this activity, students prepare line or bar graphs based on various treats.

After showing students some sample graphs and explaining their function, give each student a paper cup containing an assortment of "delicious data"—for example, 15 raisins, 5 peanuts, 10 sunflower seeds, 5 dried apricots, 5 chocolate chips. Have students prepare a line or bar graph of the contents of their cups, reminding them not to sample



any of the data until all items have been accounted for on the graph. Vary the activity by using different kinds and numbers of items.

Idea by: Kelly Macaulay, Paul Banks Elementary School, Homer, Alaska.

BRIDGE OF NUMBERS

Add a bit of challenge and excitement to routine addition and subtraction drill with this absorbing game from *Math Activities for the ABLE Calculator: Grades 4–6* (University of California). Materials needed include: a dittoed copy of a numbered hundred-square (beginning with 1 at the bottom left and ending with 100 at the top right); a regular deck of playing cards; two different colored crayons, one for each of two players; and either pencil and paper or a calculator.

Explain to players that the goal of the game is to build a "bridge of numbers" from the bottom row of the hundred square to the top row by circling adjacent numbers in one color. The numbers may be connected vertically, horizontally or diagonally; they need not be connected in a straight line or in numerical order.

Numbered cards are worth their face value. Picture cards are valued as follows:

jack = −10 (subtract 10)
queen = 0
king = 10
ace = 1 or 11

To play, each player takes a different colored crayon. One player is the dealer. He shuffles the cards, deals five to the other player and to himself, and places the rest of the deck facedown in the center of the table.

The dealer looks at the five cards in his hand and picks one to place faceup on the table. He then circles the value of the card—say, 6—on the hundred-square with his crayon. Next he draws a card from the top of the facedown deck to replace the card he just played.

The second player now chooses a card from her hand, places it faceup on top of the first card, adds its value to that of the first card, and circles the *total* on the hundred-square with her crayon (that is, she circles not the number on the card but the sum of the numbers on the two cards). For example, if she plays a 7, she adds 6 and 7 and circles 13 on the hundred-square. She then draws another card for her hand.

Play now returns to the dealer, who chooses a card—the king, for example—lays it faceup, adds its value (10) to the previous value (13), circles the total (23) on the hundred-square with his crayon, and draws another card.

Play continues in this way—with players taking turns laying down cards, adding the value of each new card to the previous total and circling the result—until the total reaches 100, at which point play begins again at 0. (For this reason, it's a good idea for players to keep a running total throughout the game—either on scratch paper or with a calculator).

Whenever the total reaches 100, and if neither player has completed a bridge, the dealer puts all the cards together again and reshuffles the deck. The game continues until one player completes a "bridge of numbers" in his or her color—a process that may take three or four rounds to achieve.

Note: Players may circle a number more than once, and they may circle numbers already circled by the other player. Also, any player who circles 100 exactly can choose any number on the hundred-square to circle.

For a version that focuses on subtraction, have players start at 100 and *subtract* the values of the cards played. In this version of the game, the jack is worth +10, since all other numbers are to be subtracted. A player who circles 1 gets to choose an additional number to circle.

Science

MAKE A RAINBOW

Illustrate how rainbows form with this experiment from *Let's Play Science* (Harper & Row). Choose a sunny day to try it out.

Explain that light is made up of many colors, and that when it passes through water, it breaks up and the colors become visible as a rainbow.

Have on hand a glass of water and a sheet of white paper. Place the glass so that it is half on and half off the edge of a table and so that the sun shines directly through the water and onto a sheet of white paper on the

Idea Place

floor. Adjust the paper and the glass until a rainbow forms on the paper.

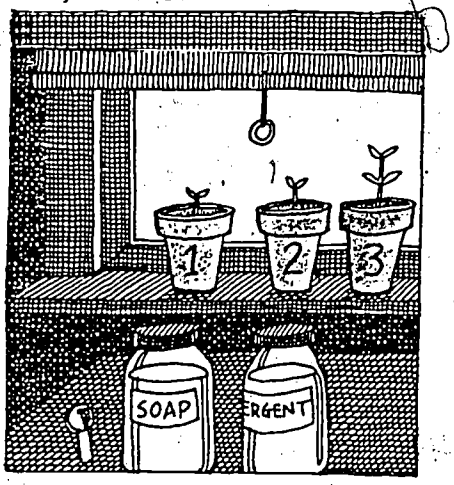
Ask the children why they think rainbows usually appear when the sun comes out just after a rain. Have them draw their own rainbows, being sure to put the colors in the right order (red, orange, yellow, green, blue, purple).

PLANTS AND POLLUTION

Are small amounts of soap or detergent harmful to the growth of plants? Find out with this experiment from *Science Activities in Energy* (Oak Ridge Associated Universities).

Collect the following materials: 6 radish or beet seeds, soap and detergent, 3 Styrofoam cups, 2 quart jars, soil, water.

Fill both jars to the same level with water. To the first jar add ¼ teaspoon soap; to the second add ¼ teaspoon detergent. Then fill the three cups with soil and plant two seeds in each cup, about 1 cm deep. Number the cups 1, 2 and 3, and place them on a sunny windowsill.

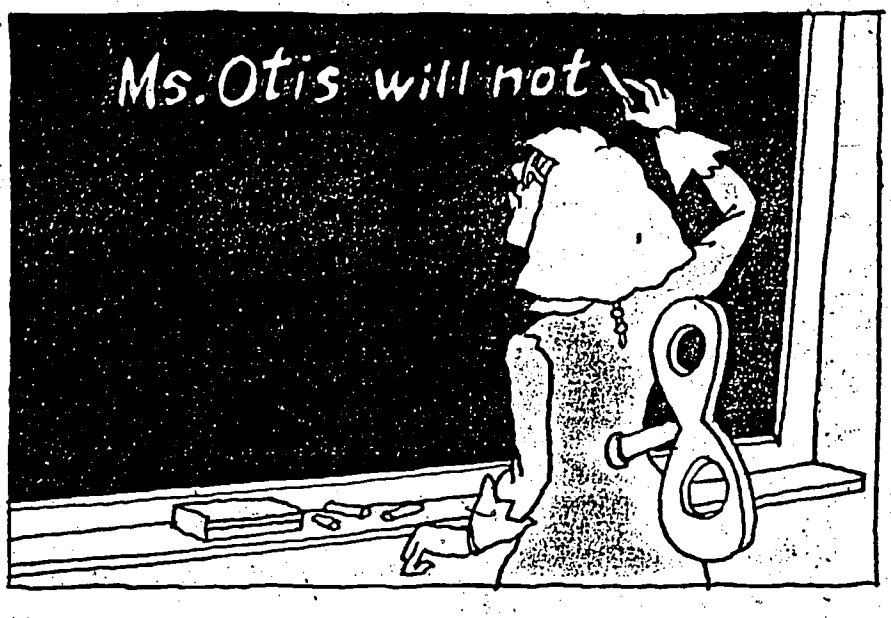


Each day, water cup number 1 with 2 tablespoons of soap solution. Water cup number 2 with 2 tablespoons of detergent solution. Water cup number 3 with 2 tablespoons of plain tap water. Chart the growth of the seeds in each cup. Compare the results. Which seeds sprout first? Which grow fastest?

Potpourri

MOOD-CHANGING MUTATION

For a dramatic change of pace for you and your class, try assuming a new identity for a day. In the morning, write on the board, "(Your name) will not be here today. My name is Miss Pickleberry and I will be your teacher." Wait a few minutes for the students to notice and react. Then begin the class by announcing: "Your teacher called me last night to say that her class seemed a little gloomy lately, and she thought a change would do everyone good. So here I am. I'm sure we'll all get along well, and that you'll help me make sure everything runs smoothly."



For the rest of the day, conduct the class as the new teacher. Remember to stay in character and not to answer when addressed by your real name.

Idea by: Beth A. Frank, Atlanta, Ga.

COPY BOOKS FOR MESSAGES HOME

Communication between school and home can be a problem, because notes and verbal messages don't always make it to their destination. To improve this situation, try giving each student a copy book to be used only by you and the parents. Make students responsible for bringing their books to class and taking them home every day—or every week, or however often is appropriate.

You use the books to write brief messages to parents about their children's progress or to notify them of school events. Parents use the books to respond to your notes. It's a means of keeping the lines of communication open—both ways.

Idea by: Terry Hallman, Sussex, N.J.

POSTER PRESERVATION

Posters and other display materials are apt to deteriorate quickly if you tape them up and take them down too often. A simple way to prolong a poster's life is to put strips of masking tape on the back—in corners, along sides and in the center. Use circles of tape to attach the poster to the wall, sticking them to the masking-tape strips rather than to the easily torn paper.

Idea by: Kathy M. Peterson, Alpha, Ill. ■

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How Story Time Can Promote Comprehension

BY MARY E. GERTH

Decoding skills are important and surely deserve attention, but decoding is not reading. Comprehension requires an interaction between reader and writer, an interaction that should start long before formal reading instruction begins.

The traditional story time—at home or in preschool and primary grades—can go a long way toward promoting reading comprehension, or it can actually inhibit the development of good comprehension skills. If children are allowed to be merely passive listeners who may tune out at will, they will develop habits of inattention that will be hard to break. If they are permitted to accept ideas without understanding them, they will lose the spark of curiosity that inspires true learning. Good listening skills are vital in building comprehension skills.

How can story time foster these skills? The key word is *interaction*. If children participate in each story with active listening and response, they will bring their own meanings to the story and derive new ideas that will give meaning to the next story. The skills integral to the reading process can begin with listening to stories.

Skill Building During Story Time

Previewing comes into play when the teacher tells the children the name of the book, shows them the front cover, and asks them what they think the story will be about. Accept all answers, but encourage children to give reasons for their forecasts. After you've read part of the story, refer to these predictions and let the children decide which ideas are supported by evidence in the story. Use the same technique in predicting outcomes. Help the children develop the ability to explain why they chose a particular response. And be sure to emphasize that identifying the facts that prove or disprove a theory is more important than making a correct guess.

Just as young readers learn to use picture clues to determine meaning, so may young listeners. Show a picture from the book you're reading and ask questions as to what the picture tells about the plot, the scene, or the feelings of a particular character. Leave out a word as you read and let the children use the picture to decide what word might have been used in the story.

Share your appreciation of words with children by rereading a sentence or phrase that you particularly enjoy. You might make a comment such as, "I like the way the author said that. It makes me think of. . . ." Encourage children to respond to their own favorite passages.

Illustrations add meaning to a story, but so can a child's imagination. Ask, "If you were going to make the picture for this story, what would it look like? What elements do you think should be in the picture?" Responses to such questions can lead to lively discussion and enhance the meaning of the material being read.

Because vocabulary growth occurs when children truly absorb the meanings of the new words they encounter, let the children dramatize the way a character "trudges" up the road or the way the wind "swept" everything in its path. A five-year-old learns best by doing, as do we all.

Different storybooks lend themselves to different skill-building activities. Some stories lend themselves to step-by-step reading and analysis. Such stories can and should be reread to bring the story together as a whole. Other stories might be read as a whole first for dramatic effect, then followed by exercises in sequencing, recall of details, dramatization, or imaginative extension of the story through "what if" questions. There are also those magic times when a story holds everyone in thrall, when good literature is its own excuse for being, and there is no need for dissection. A small sigh of pleasure from a fascinated listener is enough. The important point about story time is that it be an actual learning situation. ■

Mary E. Gerth is a kindergarten teacher in Chamberlain, S.D.

Idea Place

Early grade teachers should not overlook the many easy-to-adapt activities described in the Middle Grades section of Idea Place.

Reading

RAINBOW VOCABULARY

This rainbow bulletin board idea can help give your students a more colorful vocabulary, as well as teach them shades of meaning and research skills.

Make a simple line drawing of a rainbow, using felt-tipped markers in red, orange, yellow, green, blue and violet. Cut a treasure pot from black paper and a cloud from white, and pin the cutouts on a bulletin board so that the rainbow ends in the treasure pot and the cloud floats above the rainbow.

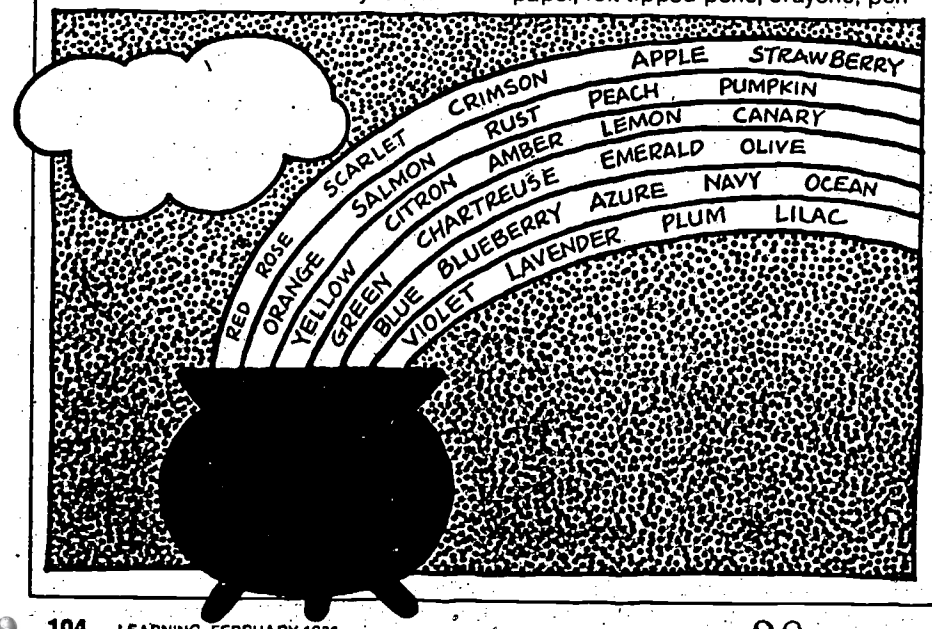
Introduce the activity by pointing to several items in the classroom, all of which are a variation on one color, and asking students to identify the color. When students respond that all the items are blue, for example, ask, "Do you mean all these things are the exact same color?"

Then ask for more precise descriptions. Students may volunteer such words as "navy" and "sky blue." Write the responses on the chalkboard. When a child offers a word like "blueberry" or "ocean," point out how useful a simile is in describing a color, since we already know the color of the ocean and a blueberry. Then choose the most apt responses and write them on the appropriate line of the rainbow in matching felt pen.

Tell students they are to fill the rainbow with words for each color. Discuss how they can find these words: by looking in dictionaries, encyclopedias and library books; by asking family and friends. (A few children will probably discover right away that the crayon box is a good place to start.)

Also point out that there are uncommon words for colors, words like "azure" and "crimson" that are not part of the students' regular vocabulary and are not found in the crayon box. See if students can come up with other such words. To reverse the process, give the class a word such as "cerulean" and ask students to guess where on the rainbow the color belongs. Then have them check their guesses.

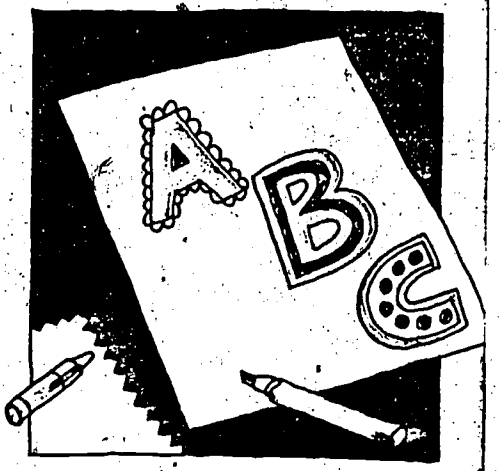
Idea by: George Ann Ford, Eisenhower Elementary School, Enid, Okla.



MODERN-DAY SAMPLERS

Making a sampler is a good way for children who are learning the alphabet to practice their letters and their penmanship, and to learn a little history at the same time.

Explain that children in earlier times made samplers to show their skill at stitchery. Show some pictures of early samplers as examples. Then pass out materials for students to use in making their own samplers—heavy paper, felt-tipped pens, crayons, pencils, fabric, paint. Children create original designs using their choice of available materials.



A variation of this activity can be helpful to students who are having difficulty learning their letters. Let them create samplers using materials of different textures, such as sandpaper, fabric, glitter or waxed paper. Have each child trace the letters with a pencil, then with a finger, and finally reproduce the letter by tracing it in sand or salt.

Idea by: Jamie Eastham, Edmond, Okla.

SNAPPY SEQUENCING

Sequencing exercises are more attention getting when the contents are fun to read. Try these ways of developing your own exercises:

Write nursery rhymes or other simple, familiar verses with their lines out of order. Have students number the lines correctly.

Write short jokes with the sentences out of order and have students rewrite them so that they make sense.

Have students write their own short stories or paragraphs and mix up the order of the sentences; then have each pass his paragraph to a classmate to sort out. The student who wrote the paragraph checks to see if the sequencing is correct.

Idea by: Rebecca Webster Graves, Burlington, N.C.

COMPUTER STORIES

Do you have a class or school microcomputer available to you? If so, you can bring electronic efficiency to your language experience activities. Time-consuming tasks such as writing

Art by Allen Say

stories from students' dictation and making duplicate copies can be done with remarkable speed.

You will need: a microcomputer, a video monitor with a screen large enough to be seen clearly from a few feet away, some kind of storage device (tape recorder or disk drive), and a printer.

Sit at the computer's keyboard and have a group of students gather around you. As a student dictates a story, type it out, starting with the title and the author's name. The child will see his words appear immediately on the screen.

After several stories by each child have been typed and stored in the computer's memory, you can print individual "books," including a title, the author's name and a table of contents, so that the children can read their own stories and exchange books with one another to read.

Other good computer projects include a class newsletter that can be printed and sent home to parents, and letters to friends and relatives that you type as students dictate.

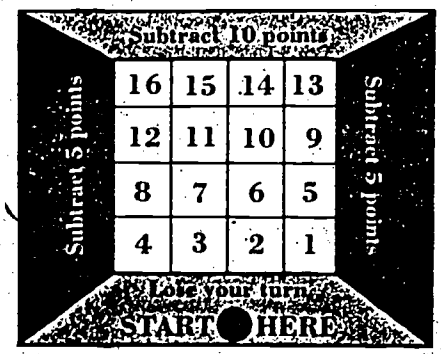
Idea by: Bill Barber, Hays, Kans.

Mathematics

DISK SLIDE

Use this game from *30 Math Games for the Elementary Grades* (Fearon) to slide a little extra addition and subtraction practice into your math hour.

On smooth paper or cardboard, make a gameboard like this:



Provide a disk (a plastic tiddlywink, for example) that will fit in one of the numbered squares without touching the lines. Give students paper and pencil for computation.

The first player places the disk on the starting circle and pushes it so that it slides onto the gameboard. If the disk lands in the center of a square, touching no lines, the player scores the number of points in the square.

If the disk lands on a line between two numbers, however, the player scores the total of those two numbers; if it lands on the intersection of two lines, he totals the numbers in all four of the squares it touches. If it stops in any of the four border areas, he must follow the instructions written there. A player who slides the disk off the gameboard loses his turn. Players alternate until one has accumulated 50 points.

TWO NUMBER LINES

Use number lines in two ways—as the basis of a game and of a project—to teach elementary number concepts.

- **Number Line Fill-up.** A number line serves as the playing board in this game (from *Manipulative Activities and Games in the Mathematics Classroom*, National Education Association) that offers practice in counting, pattern recognition, one-to-one correspondence and addition concepts. Materials needed are: a die, a supply of dry beans or other markers, one number line—marked with squares numbered from 1 to 25—for each player (any number of children can play).

The first player rolls the die and draws that number of markers from the pile. She puts these markers on her number line, one to each square, starting with 1. Then she passes the die to the player on her left.

Players take turns rolling the die and filling their number lines until someone has filled in her whole board, at which point the game ends. For the last turn, an exact throw is not necessary: a player who has 3 spaces left and throws a 5 may still finish.

To vary the game, increase the length of the number line. For older students, use two different-colored dice, designating one as positive and one as negative.

- **Year-Long Number Lines.** How many is 1,000? 5,000? Number lines that students continue to add to all year provide a graphic answer.

Cut lined paper in lengthwise strips about 2 inches wide. Have a good supply of these strips always on hand. Students start numbering on the top line, glue another strip onto the bottom when the first one is filled, and keep numbering. Check their work after every hundred numbers. They can correct mistakes simply by tearing off the strip and gluing on a new, renumbered one. As they progress, have them roll up the number line and close it with a paper clip.

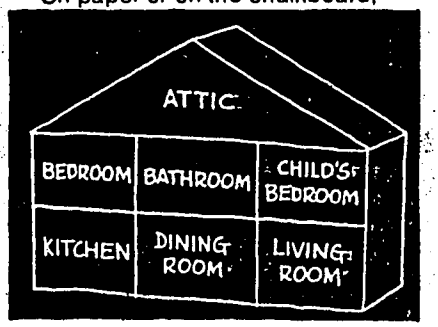
By the end of the first grade, most students should be able to get to 1,000. For the second grade, 5,000 is a good goal. It's best to set short-range goals as well; you might require students to reach a certain number by the end of the week.

Idea by: Linda K. Inman, Martinsville, Ill.

ABOVE, BELOW AND BETWEEN

Young children become more at home with relational terms such as *next to*, *between*, *above* and *below* through this activity from *The Mathworks* (Creative Publications). It's also useful for improving visual memory.

On paper or on the chalkboard,



draw and label a large diagram of a house, similar to the one in the illustration. Then ask such questions as: What room is *next to* the living room? What room is *above* the kitchen? What room is *between* the kitchen and the living room? What room is *below* the child's bedroom?

Create similar diagrams—or have students make them—of buildings, parks and so on. Ask questions like those above.

Social Studies

GOING PLACES

Put up a travel bulletin board to accelerate students' learning about geography, history and maps. Bring in some calendar or magazine pictures of scenic places. Choose some that are historically or geographically

(continued)

significant. Have students cut pictures of cars and trucks from magazine ads, and make highways from strips of paper, drawing in the center divider. They may also add more places by drawing pictures of their own houses or of spots they have visited.

Pin the pictures on a bulletin board so that the highways connect the places, and use the display as a basis for discussion. Talk about the places —What happened here? What kind of weather would you expect there? —and have the students determine which places are situated north or west of others, and in which directions a car would have to travel to get from one place to another.

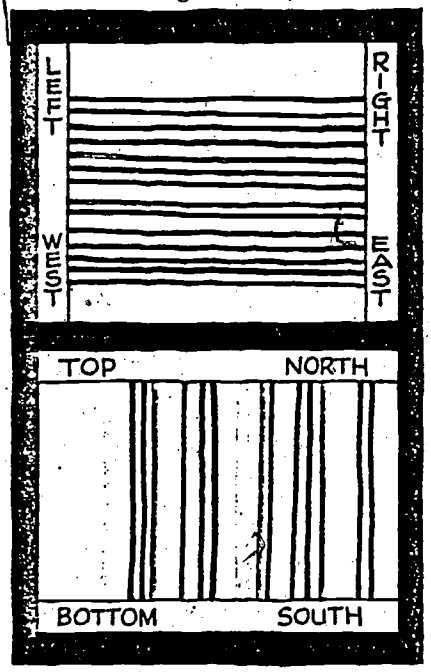
Idea by: June La Roque, Banks County Primary School, Homer, Ga.

DIRECTIONAL STRIPES

To introduce basic map-reading skills, prepare these colorful striped designs to strengthen children's concepts of up, down, right and left. (From *Developmental Arts . . . Hands-On Enrichment Activities for Young Children.*)

Each child will need these materials: 12-by-8 inch art paper, a ruler, a pencil, two or three colors of tempera paint or felt-tipped pens.

Children make a left and right margin on one piece of paper, and a top and bottom margin on a second. Then



they label the margins by printing the words "left," "right," "top," "bottom," "north," "south," "east" and "west" in the appropriate places. Using two or three colors, they draw stripes on both papers—horizontal on one, vertical on the other. As they draw, have them remind themselves of the direction they're going—from east to west, from north to south, from right to left. They may want to keep their designs to refer to when they read maps later.

Arts & Crafts

SHAKE A PAINTING

You can add a new twist to painting by substituting marbles for brushes in this activity from *Purple Cow to the Rescue* (Little, Brown). For each student, provide these materials: an empty coffee can (or similar container) with a plastic lid, a sheet of construction paper, a few marbles, one or two colors of paint in shallow containers.

Give these directions: Roll up a sheet of construction paper and cut it to fit the inside of the can. Then dip a marble into the paint, drop it in the can and shake. Dump out the first marble and put in another one dipped in a different color paint. Pull out the paper to see the surprise picture.

To watch the paint pattern grow, place the sheet of paper in a large baking pan. Dip the marble into the paint and gently jiggle the pan to guide the marble over the paper.

FLOWER CANDLES

Light glowing through pressed flower designs makes these candles especially attractive. Students can make them as gifts.

You'll need these materials: small wildflowers and leaves with interesting shapes, picked by the students on a field trip or on the school campus; newspaper and heavy books; white

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(continued from page 106)

glue; drinking glasses or brandy snifters; tissue torn in pieces about 1 inch square; utility candles.

Press the leaves and flowers between several layers of newspaper, and place a heavy book on top for two or three days, until the flowers are fairly dry but not brittle.

With white glue, paste the dried materials on the outside of the glass to create a design. Make a mixture of half glue and half water, and use it to completely cover the surface of the glass—including the flower design—with pieces of tissue. The tissue should be moist but not dripping.

The glue mixture will dry clear, and the design will show through when a lighted candle is placed inside the glass. Heat the bottom of the candle slightly and press it down to prevent shifting.

Idea by: Gloria G. Pinkus, Merritt Island, Fla.

CREATIVE CLAY

Do your students tend to make paperweights every time they work with clay? Here's a process that focuses on open-ended creativity rather than on product-oriented activity.

Each student will need: a fistful of modeling clay; a few paper towels for handwiping; newspaper to protect desks or tables; a small dish of water; and tools to impress the clay—bottle caps, pennies, screws, toothpicks or other small items.

Tell the students that they need not make an animal, a pot or anything identifiable at all. They are to follow the directions and use the tools as they see fit; there is no right or wrong way. After each instruction, have the students destroy what they made. (They may object; be sympathetic, but hold to this rule.) Let them know that all the clay will be put back into the pack at the end of the lesson. Nothing will be fired or glazed.

Then give these directions:
(1) Make something small. (2) Make something big. (3) Make something skinny. (4) Make something fat. (5) Make something short. (6) Make something tall. (7) Make something smooth. (8) Make something rough. (9) Make something pretty. (10) Make something ugly. (11) Make something even. (12) Make something uneven. (13) Make something complicated. (14) Make something simple. (15) Make something round. (16) Make something square.

At this point, let the students create some opposites of their own.

Idea by: Diana Hensley, Costa Mesa, Calif.

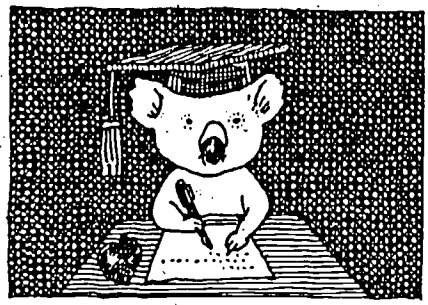
(continued)

A Puppet With a Purpose

BY MARY BETH SPANN CICIO

The best thing I ever did for my third graders was to give them a puppet named Kerry Koala. The second best thing I ever did for them was to take it away.

I first spotted Kerry in a toy shop window one muggy August afternoon, when my thoughts were beginning to turn to September and school. I



thought Kerry might liven up our social studies curriculum, which focused heavily on Australia. When I found myself plunking down $12.95 for an out-of-pocket purchase that the school budget could never accommodate, I reasoned that it was a small price to pay for a teaching assistant.

From the first day of school, Kerry was a hit with my class. Everyone was instantly attentive when Kerry spoke of her native land's customs and culture, and the kids were soon directing questions to our "resident Australian" (ensuring that I did *my* homework on Australian facts and history).

But just as I started to feel smug about my clever approach to social studies, my furry assistant began to prove a source of classroom conflict. Having become the class "social butterfly," Kerry was rarely left alone. It was not unusual to see her perched on a desk during multiplication drill or cuddled in a lap during reading time. The problem was that there just wasn't enough Kerry to go around.

When the arguments and tears first erupted, I tried the usual mediation techniques: "Can you think of a fair way to solve this problem?" or, "Maybe if you play with Kerry *now*, someone else can have a chance after lunch."

Nothing worked. The problem escalated until one day I found two angry children pulling Kerry in opposite directions as if she were taffy.

Driving home that night, I became aware of a growing sense of irritation over the way the kids had treated Kerry. "She would never put up with such abuse if she were a *real* koala," I mused. With that thought, I realized I had a solution to my problem, though it involved some risk.

A Drastic Plan?

The following day, prior to our social studies lesson, Luke asked, "May we have Kerry?" My nod sent Luke flying to the familiar cardboard box that served as Kerry's house, but Luke did not find Kerry. Instead, he drew out two handfuls of envelopes, each with a child's name on it.

I appeared as mystified as the children by the envelopes, one of which was addressed to me. Opening it, I announced, "I think I have the beginning of a letter here. Let me read it aloud":

Dear Ms. Cicio,

I am very sad to say that I am leaving school for good. I am homesick for Australia, but there is another reason.

"Does anyone have page two?" I asked. Shian did and she continued reading:

Everyone always fights over who will hold me.

Orren had page three:

It makes me sad to see my good friends so angry.

And, in turn, each child read a portion of the letter:

Maybe if I leave you can all be happy again and you will not fight.

I love all of you and I will miss you very, very much.

Please remember to be kind and to share your things. Say nice thoughts to each other, too.

Maybe someday I will return, when everyone has learned to share happily.

I hope you will write me letters in Australia.

Love,
Kerry Koala

When we had finished the letter, the kids looked stunned. I began to worry that my idea might have been too drastic.

"What I'd like to know," pondered Dustin, "is how she ever managed to run away all by herself."

"I'll bet she left by the window," Peter suggested. "Remember that koalas are exceptional climbers. I just can't figure out how she'll get all the way to Australia."

A look at our class globe confirmed that Australia was indeed far away (we calculated the distance). Kerry would have to take a plane or a boat to reach her destination.

"Well, boys and girls," I sighed, "I guess we'll just have to wait for Kerry to write to us from Australia—if she ever makes it."

Fortunately, we didn't have to wait long before a letter from Kerry appeared in the cardboard box.

Kerry wrote us regularly after that. And before long, my kids began to reply to her correspondence, asking pertinent questions about Australia ("How many aborigines live in Australia and what are they like?") and relating classroom happenings ("We saw pictures of eucalypus trees"). Kerry was once again helping me to teach social studies.

Several weeks later, when Amanda went to check the cardboard box for a letter from Kerry, she found Kerry herself. The reunion was a joy to watch. All the children were ecstatic to have Kerry back, but they were careful to handle her gently and to share her readily, fearing that if they didn't, she might slip away again.

But Kerry was back to stay. An occasional argument did break out after the novelty of her return wore off, but it was quickly resolved when the children reminded themselves that Kerry might pull her disappearing act if pushed too far. It was gratifying to observe the children disciplining themselves without my interference.

Although I don't know if I'd ever repeat the experience, I believe my third graders learned some valuable lessons from it. Beyond providing a unique way to study a foreign country, and adding a personal, authentic touch to our lessons, our traveling puppet helped teach my children how to share and respect the things they cherish. ■

Mary Beth Spann Cicio teaches prekindergarten in Roslyn, N.Y.

Art by Allen Sa.

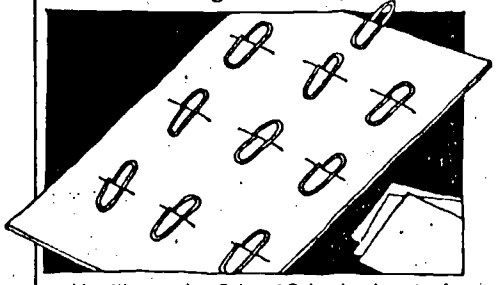
Idea Place

Early grade teachers should not overlook the many easy-to-adapt activities described in the Middle Grades section of Idea Place.

Reading

CLIP-ON CONSONANTS

Pictures of objects—or animals—whose names begin with a certain letter can help kids keep their consonants straight. Youngsters play this game (from *Independent Activities in Reading*, Kern County, California, Superintendent of Schools Office) by choosing pictures to correspond with the letters being learned.



You'll need a 9-by-12-inch sheet of oaktag, ten paper clips, 21 letter-size envelopes, about 200 pictures illustrating familiar words that begin with consonants (pictures of a car, a cat, a house, a book and so on—10 or more for each consonant), and the same number of 2-inch oaktag squares as you have pictures.

Make nine slits in one sheet of oaktag and fasten a paper clip in each slit. Place the remaining paper clip over the top center of the sheet.

After pasting each picture on an oaktag square, group the pictures according to initial letter. Top each stack with a paper identifying the initial letter, then put the letter and nine squares from each collection in a separate envelope, along with a couple of "jokers"—pictures whose labels begin with a different consonant.

To play the game, choose an envelope and clip its consonant to the top of the oaktag sheet. Have a student place pictures that begin with that consonant under the other clips. Pick a different envelope and change the consonant at the top of the oaktag sheet for each new game.

The game may also be played with pictures of objects whose names begin with consonant blends.

LISTENING FOR SENSE

Students sharpen their awareness of sentence sequence and relevance in these two listening activities from *The Language Arts in Childhood Education* (Rand McNally).

- *Story Sequencing.* Read a familiar short story to the class ("Goldilocks and the Three Bears," "The Three Little Pigs," "The Gingerbread Man"), and change it as you read by either leaving out one of the main events or putting events in the wrong order. Have students listen to the story all the way through, and then ask them to tell or write the story correctly.
- *Detecting Irrelevance.* Read aloud a short paragraph containing one sentence that is irrelevant to the others. For example:

  Sandy brought a kitten to school. His name is Sleepy because he sleeps so much. There is a red car in the garage. Sleepy likes to drink milk.

Have students listen to the whole paragraph and then identify the sentence that doesn't fit. Vary the number, length and complexity of the sentences according to your students' age and ability.

PREFIX/SUFFIX PAIRING

Pick up the pace of language learning in your classroom with a game (from *A Bouquet of Reading Activities: Pick an Idea*, Oklahoma State Department of Education) that uses cards and a spinner. Together, these materials help students create new words and understand the structure of familiar ones.

Print root words (at least ten) on 2-by-3-inch pieces of cardboard. On 1-by-3-inch cardboard strips, print prefixes, making several of each. Make a spinner card with 10 to 15 suffixes printed in its segments.

Two to five people may play. One player should be designated the scorekeeper; another should have the job of looking up questionable words in the dictionary.

Each player is dealt at least five prefix cards. The root word cards are placed facedown in the center of the table.

The first player draws a root word card from the stack and tries to combine it with a prefix card in her hand to form a new word. If she can't make a sensible pair, she returns the root word card to the bottom of the stack and play passes to the left. If she can make a word, she lays the two cards involved faceup on the table and earns one point. She then spins the suffix pointer. If the pointer stops at a suffix she can add to her word, she earns another point. The game ends when all the root word cards have been used. The player with the most points wins.

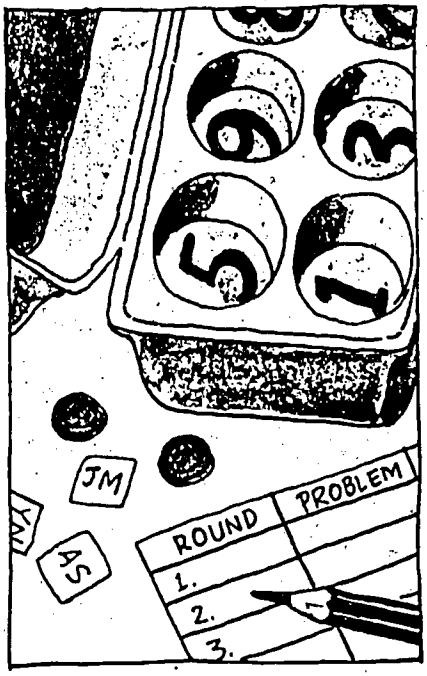
Variations: Have students deal the root word cards and draw the prefix cards; allow more than one spin of the suffix pointer after a root word and prefix have been combined; stipulate that only a word with a prefix *and* a suffix earns points.

Mathematics

MORE OR LESS

Add some excitement to addition practice with a game in which students score points by solving problems correctly and by betting on the results of a chance throw (from *Arithmetic Skill Development Games*, Fearon Pitman).

You'll need these materials: one



egg carton; two small pebbles or buttons; lined paper and pencils. Write the numerals from 0 to 10 randomly inside the egg carton cups; use the numeral 5 twice. On one sheet of

Art by Allen Say

paper, draw a playing board consisting of three columns labeled "More than 10," "Equal to 10" and "Less than 10."

Each player creates his own record sheet on lined paper, dividing a standard sheet into three columns labeled Round, Problem and Score. He writes the numbers from 1 to 10 down the left side of the sheet in the Round column and also initials a small scrap of paper to use on the playing board.

Between 2 and 6 people play, one of whom is the caller. Each round the caller shakes the closed egg carton with the pebbles inside, then opens the carton and calls out the two numbers the pebbles have landed on.

At the beginning of each round, each player bets whether the sum of the two numbers the pebbles land on will be more than, equal to, or less than 10 by placing his or her initialed scrap in the appropriate column of the playing board. When the caller announces the two numbers, the players write them in the Problem column next to the appropriate round on their record sheets. Students also write the answer to the problem but do not reveal it.

For example, if the first pair the caller announces is 4 and 5, players will write 4 + 5 = 9 opposite the 1 in the Round column. When everyone finishes the round's computation, players show their record sheets. They earn one point for a correct answer and a second point if they have also won their bet. They record the points earned in the Score column (no points are given for a winning bet accompanied by a wrong answer), retrieve their betting markers, and go on to the next round. After ten rounds, they total their scores. The player with the highest total score wins.

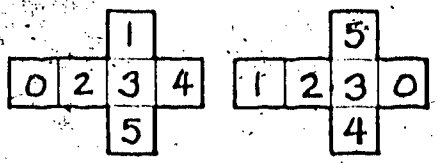
Variations: Have students play the game with multiplication instead of addition problems. On the playing board, label the columns "More than 20," "Equal to 20" and "Less than 20."

TO ADD OR SUBTRACT . . .

To add or subtract, that is the question . . . posed by a bingolike game from *Mathematics in Our World*, level 1 (Addison-Wesley).

You'll need two number cubes for each pair of students playing, as well as a game sheet and six markers (buttons, beans, paper clips or similar items) for each player.

Make the number cubes from small cardboard boxes, wooden cubes or painted over dice. Label their sides as shown:



Also make game sheets like those below, duplicating several copies of each:

4	1	3
2	0	1
3	5	2

3	2	0
1	5	4
2	4	3

1	5	3
2	0	0
4	4	2

A player rolls the number cubes and decides whether she will create an addition or subtraction problem using the numbers showing (her goal is to arrive at an answer that appears on her game sheet). If she rolls a 2 and a 3, for example, she may add them and put a marker on 5, or she may subtract them and put a marker on 1. If both those numbers are already covered, she loses her turn. When a player rolls two numbers whose sum is greater than any number on the board, subtraction is the only option.

The player who gets three markers in a row in any direction is the winner.

Science

SURPRISING STRENGTH

Paper and eggshells are not generally esteemed for their strength. But two activities (from *Fun With Scientific Experiments*, Random) demonstrate that they can sometimes hold a surprising amount of weight.

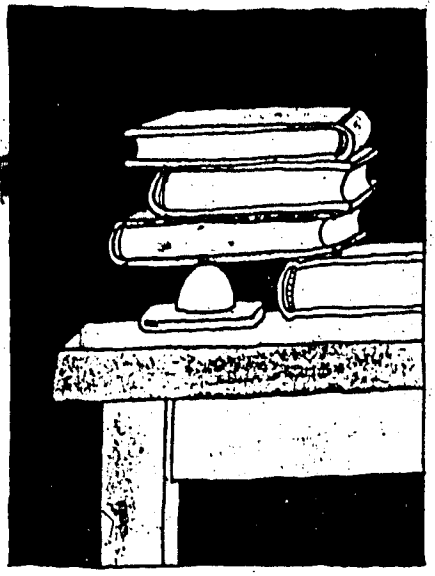
• *Powerful Paper.* Curved and corrugated, the paper you use to prove papyrus power is still, after all, only paper. Students can test the staying ability of a single sheet themselves or leave the challenge to you!

You'll need a box made of corrugated cardboard, a pair of scissors, a medium-size can, rubber bands, a board, and a stool or chair.

From the box, cut a 3- or 4-inch-wide strip long enough to wrap around the can. Mold the strip to the can and hold it in place with rubber bands. Slip the can out of the cardboard tube, place the tube on end on the floor, and lay the board across it.

Sit on a stool directly behind the tube. Place your feet squarely on the board and carefully raise your body until you are standing up. The paper will support you!

• *Extraordinary Eggshell.* The next time you beat, scramble, poach or fry an egg, put aside its seemingly fragile shell. Then take the discard to class, where it can help you make a



statement about strength. Carefully snip the jagged points from the edge of a half eggshell, making it as even as possible. Lay the shell, open side down, on a small piece of folded cloth (to compensate for any unevenness of the edge).

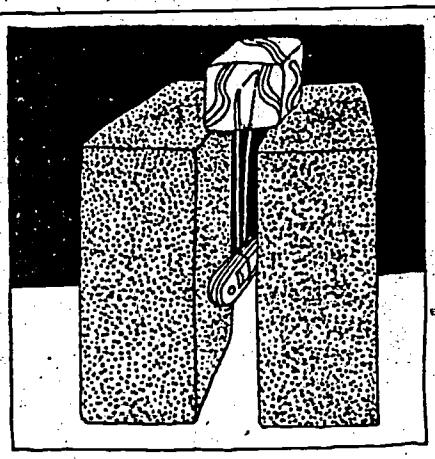
Find a book that is about as thick as the shell is high. Lay the book beside the shell, and place another book with one end on the shell and the other on the first book. Add books to the pile carefully, one at a time, until the shell collapses. Weigh the books to learn how many pounds the shell could support.

PRESSURE HEATS UP

The relationship between pressure and heat is demonstrated in this experiment from *Easy Physics Projects: Air, Water, and Heat* (Prentice-Hall).

You will need: about a foot of thin wire, two bricks, an ice cube and a skinny object (such as a penknife) to serve as a weight.

(continued)



Place the two bricks on end about an inch apart. Set the ice cube on top, bridging the space, and loop the fine wire around it. Tie both ends of the wire to the weight, making sure that the object hangs freely.

After a while, pressure from the wire will produce enough heat to melt the ice beneath it, and the wire will cut through the ice cube. Water that flows above the wire freezes again.

Discuss these results with the class. Point out that roughly the same thing happens when people skate on ice. The pressure of the skates produces heat that melts the ice, and skaters actually glide on a thin film of water.

Potpourri

LAMINATED "CHALKBOARDS"

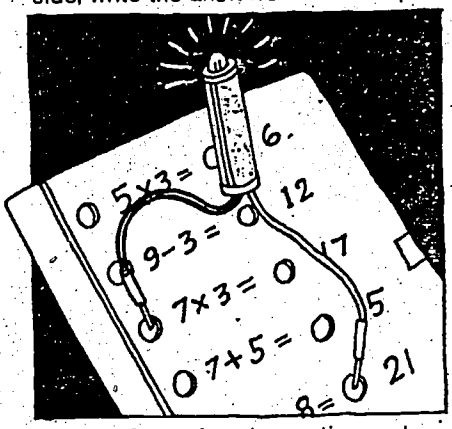
When you're working with individual youngsters or small groups, the chalkboard is often inconveniently distant and impersonal. A laminated 12-by-14-inch piece of tagboard makes an ideal substitute. You and your students can write on it with marking pens and erase it easily with a damp cloth.

Idea by: Ellen Athas, Tomah, Wis.

ELECTRIC MATCHING

Some schoolwork will never be truly electrifying, but you can brighten up routine pairing exercises by having students make their matches with a simple circuit tester instead of a pencil.

Gather these materials for your project: a manila file folder or poster board, aluminum foil, masking tape, a hole punch, scissors, and an auto circuit tester that runs on penlight batteries (available at drugstores or hardware stores for about $1.50). On the left side of the file folder's cover, write a list of questions; on the right side, write the answers in mixed-up order. In front of each question and each answer, punch a hole.



Open the folder and on the inside of the front cover, lay a ½-inch-wide strip of foil from the hole in front of a question to the hole in front of the correct answer. Cover the strip with masking tape. Affix a similar strip for each question-answer pair, then close the folder and tape it shut so that students cannot see the circuits. The circuit tester will light up when a student matches a question with its correct answer.

Idea by: Barbara A. Palmer, Medina, Ohio.

BULLETIN BOARD SCRAPBOOK

It's easy to forget the details of bulletin boards you designed long ago, and it's frustrating when you'd like to create them again. Solve the problem by taking a picture every time you put up a display. Group the pictures into categories (seasonal, language arts, science and so on) and paste them into a scrapbook for future reference.

Idea by: Barbara Humphrey, East Saint Louis, Ill.

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Kids Dig Science in the Sand

BY GLORIA NEEDLMAN

A wonderful discovery was made the day I placed a large magnifying lens in our classroom sandbox, where several children were busy digging, plowing, mounding. One child moved the lens aside without a glance, but a second later picked it up and shouted, "Look at all the little stones. They're the sand!"

Immediately each of the other sand diggers wanted a turn to look through the lens, and soon they were all discussing the tiny pieces that made up the sand, as I stood back, listening and observing. I brought out a container filled with coarse sand from the play-yard sandbox. I suggested that the children might like to look at these particles (a new word) as well, and of course everyone was interested. The coarse sand was easier to separate and to recognize as being made up of tiny stones. A wonderful discovery!

Only two children showed interest in further exploration, so the three of us went to our science encyclopedia to find out how the stones became so small. Soon other children joined our research; we read portions from the encyclopedia and then walked to our school library to locate additional material. For these children, reading small sections from several books was satisfying and informative.

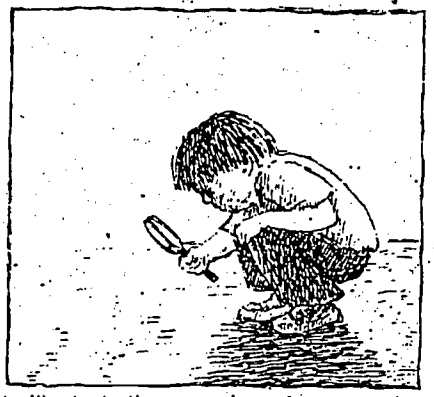
Sand and Water Experiments

Dry sand sifts through a screen, and the particles separate, but moist sand can be molded, making it more suitable for children's play needs. Sometimes the children sprinkle the sand with a watering can; sometimes they pour cups of water to wet the sand quickly and thoroughly. One day, when they wanted wet sand and were about to add water, I placed a tray with three sponges, a dish of water and several eyedroppers next to the sandbox. I asked if anyone knew about clouds and rain, and if they might saturate the sponges to create pretend rain with which to make the sand wet.

The six playing children put down their cups and looked at the tray. Billy, a five-year-old, asked, "Why do you use those things for rain?"

Liz responded, "Those things (pointing to the droppers) make the rain, silly, and the water spills in the sand and we use the dish for a cake." (A rather thorough handling of all the things I had presented, I thought.)

Having used the word *saturate*, I needed to explain it, not with more words, but with a hands-on demonstration. I dipped one eyedropper into the water, carefully squeezed the bulb, and when it was filled, emptied its contents into one of the sponges. I invited the children to follow my example, and after watching and learning from one another how to use the droppers, they soon presented me with three soaked sponges with which



to illustrate the meaning of *saturated*. As I held one sponge over the sand and let water drip out of it, I asked the children to imagine that the sponge was a saturated cloud and that the drops coming from it were rain.

As follow-up, we read from the book *How To Make a Cloud* (see resources at the end of the article), after which several children went back to dig and work in the newly wet sand. For those who showed further interest, I decided to try another experiment, this time with moisture and water vapor.

As I set up our two-burner stove and filled a coffee can with water, I asked, "What happens to the bathroom mirror at home when someone takes a hot bath?"

"It gets all fuzzy."

"You can't see in it."

"It's not a mirror anymore."

"We don't have a bath; we only have showers."

Each of these responses was important, for they suggested how to help the children understand their own observations. As the can of water began to heat, we noticed the formation of tiny bubbles on the water surface. I put a plate over the open can, and asked the children what they thought would happen when I removed the plate. Again, many ideas were expressed; and I lifted the plate so that they could check their responses. I next held a small mirror over the now-boiling water, and one by one each child took a turn running a finger over the moist surface. It was like the bathroom mirror, they agreed, covered with what I called *water vapor*. The children gave it their full attention for many minutes.

When interest seemed to lag, I asked what would happen to the water if I left the can on the hot burner for a long time, until lunch (a period of time the children could easily understand). There were a variety of answers and guesses, but no one suspected the water would continue to change to water vapor until the can was empty, which of course is what happened.

I didn't return to a discussion about rain or clouds or water vapor for several days, not until a child asked, "Where did the water go?" That question led us to further research and to a second water-vapor experiment, adding more information and observations to our "sandbox science" investigations.

Children's Resources

- *Castles and Mirrrors and Cities of Sand* by Lillian Bason, pictures by Allan Eitzen (Lothrop, 1968).
- *How To Make a Cloud* by Jeanne Benedick (Parents Magazine Press, 1971).
- *Let's Find Out About Water* by Martha and Charles Shapp (Watts, 1975).
- *Scienceland Magazine*, October 1982 (501 Fifth Ave., New York, NY 10017).
- *Wonders of Sand* by Christie McFall (Dodd, 1966).
- *Young People's Science Encyclopedia*, prepared in cooperation with National College of Education (Childrens Press, 1979). ■

Gloria Needlman is a teacher at the University of Chicago Laboratory Nursery School.

Art by Allen Say

Idea Place

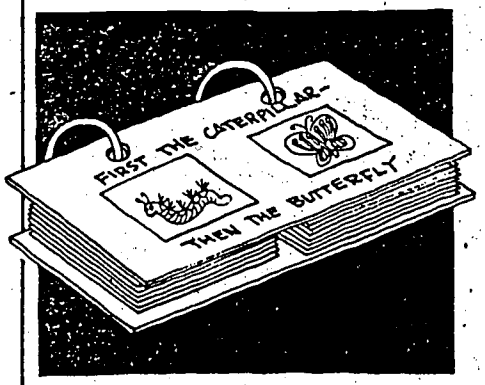
Early grade teachers should not overlook the many easy-to-adapt activities described in the Middle Grades section of Idea Place.

Language Arts

WHICH COMES AFTER?

A flip-chart-type book of pictures to match makes a simple sequencing activity that children can do independently. To make it, you'll need tagboard, marking pens, a hole punch, and metal fastening rings.

Cut the tagboard into 20 three-inch squares, and divide the squares into two equal piles. On the first 10 squares, draw simple, easily recognizable pictures—a snowflake, an orange, a tadpole, a writing pen. On the second 10, draw pictures that could logically follow from the first ones—a snowman, a glass of orange juice, a frog, a book. On the back of each pair, draw small identical symbols (dots, squares, circles) that can be used to confirm the match. Punch a hole in the top of each card and, keeping the stacks separate, put the squares in random order.



Make a cover for the flip-chart book out of two 4-by-8 inch pieces of tagboard. Illustrate the cover with a pair of pictures like the ones inside—for example, a caterpillar on the left and a butterfly on the right—and give it an appropriate title ("First the Caterpillar, Then the Butterfly"). Punch two holes at the top of the cover and attach the two stacks of cards with metal rings.

Invite a child to try to match the pictures in the left stack with those in the right, checking each choice by looking at the symbols on the backs.

Idea by: Cathy Reinhart, Fairborn, Ohio.

FIRST-LETTER CHARADES

Here's a dramatic and entertaining way to give beginning readers practice in identifying first letters of words.

Divide the class into groups of three or four students, and ask each group to choose a captain. Assign a different letter of the alphabet to each group, and have the groups take turns presenting their letters. While the captain tries to form the letter with his body—arms, legs, torso—his teammates act out different things that begin with that letter. For example, if the letter is *K*, the captain makes himself into a *K*—perhaps by standing straight and pointing an arm up and a leg down diagonally from the body—as others in the group act out such words as *kitten*, *king*, *kite* and *kettle*.

The other groups try to guess the letter being presented. A point goes to the first group to guess correctly. At the end, the group with the most points wins.

Idea by: Betty Klein, Lawton, Okla.

Mathematics

MENU MATH

An assortment of menus—obtained from pizza parlors, luncheonettes, Chinese and other restaurants in your area—is the key ingredient in this activity meant to give students an appetite for math. You'll also need a supply of inexpensive paper plates.

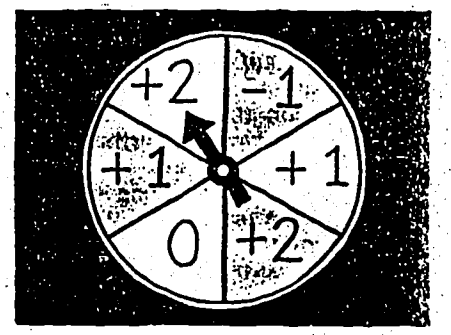
On each plate, write math problems based on one of the menus. These can range from simple addition and subtraction problems to more complex word problems involving several math processes. Include questions about making change and choosing the better buy. For example: "If you pay for a small plain pizza with a $5 bill, how much change will you get?" "Which costs less, the special shopper's lunch or soup and a sandwich?" "If you have wonton soup, fried rice and milk, how much will your lunch cost?"

Idea by: Diane Nelson, Campbell Park Elementary School, Saint Petersburg, Fla.

METER SPIN

This spinner game, described in *Measure Matters* (Creative Publications), serves to reinforce the fact that ten decimeters make a meter as it introduces the concept of positive and negative numbers.

Make a spinner with six sections labeled as follows:



Out of heavy paper or tagboard, cut six meter-long strips (about 4 cm wide) and 60 narrower strips, each a decimeter long.

The players each take a meter strip and a pile of decimeter strips. The goal is to make a meter by lining up ten decimeter strips across the top of

Art by Allen Say

the meter strip. Players take turns spinning the pointer and adding or subtracting decimeter strips according to the result. The first player to make a meter wins.

CALENDAR COMPUTATION

Turn old calendar pages into arithmetic activity sheets. You can use them in various ways:

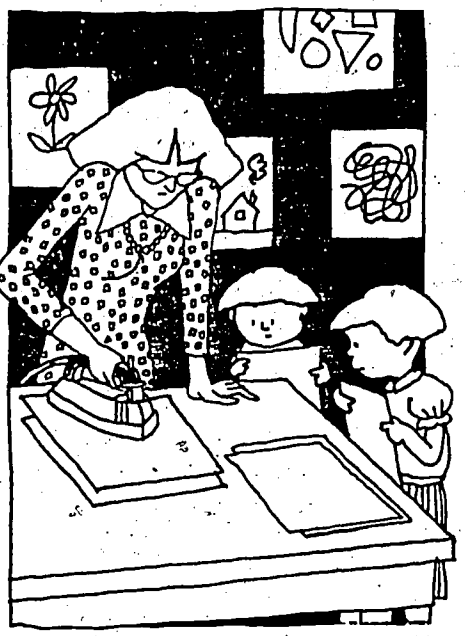
- Have children who are learning to print numbers copy in each square the number that appears there.
- Ask children to write an equation in each square that will produce the number in that square as an answer. You may want to have them write more than one equation to show that different operations can be used to produce the same answer.
- Use the calendar pages to provide practice in column addition. The student adds the numbers of each day of the week and writes the total at the bottom of the column.

Idea by: Angela M. Longo, Nutley, N.J.

Arts & Crafts

SANDPAPER PRINTS

Give young children the experience of printmaking using this easy process. Materials needed include oil crayons, medium- to heavy-grade sandpaper (enough so that each child can have a piece), colored construction paper and an iron.



Have children draw a scene or a design on the sandpaper, pressing down heavily with their crayons. You will want to do the next step yourself, placing the sandpaper facedown on a piece of construction paper and pressing the back with a hot iron.

Staple the sandpaper original next to the print to provide an interesting mirror image.

Idea by: Sue Ann Fickess, Cedar Falls, Iowa.

MAGAZINE STATIONERY

Students can make colorful personalized stationery—envelopes and matching letter paper—using old magazines, scissors, glue and white paper. Give them these instructions:

Tear out a full-page picture from a magazine. Try to find one that has the focus of interest in the middle of the page. Trim the torn edge so that it's straight.

Turn the picture over. Draw a line across it 4 inches up from the bottom. Fold the bottom of the picture up along this line. Glue the sides to form an envelope.

Put a dot in the middle of the upper edge of the back of the picture. Using a ruler, draw a line from the dot to each top corner of the envelope. Cut along the lines to form the envelope's flap.

Cut two freeform shapes from white paper to make places for writing the return address and mailing address. Glue these onto the envelope.

To make the matching letter paper, cut a small section from the scraps of the magazine picture and paste it at the top or in the corner of a plain white sheet of paper.

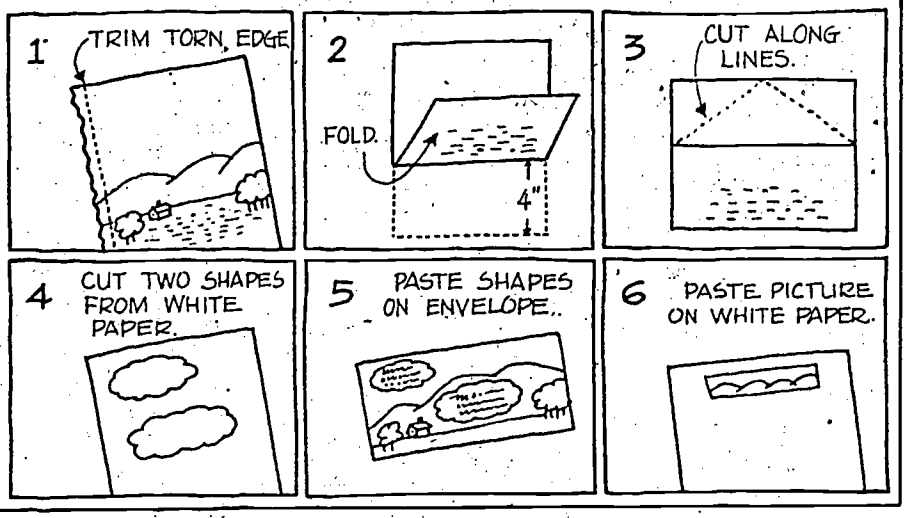
Idea by: Ellen S. Alvin, Stirrup Elementary School, Miami, Fla.

SOLVING A STICKY PROBLEM

The glue you use for art projects is likely to come in plastic squeeze bottles whose twist-off tops are easily broken or clogged. A simple solution is to transfer the glue to the kind of plastic bottle that liquid dishwashing soap comes in. The push-up tops are easier to use and easier to clean.

You can also use these bottles to hold paint.

Idea by: Lisa Craker, Interlochen Elementary School, Interlochen, Mich.



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How To Cook Up Teaching Delights

BY PATRICIA ANN MELCHERT

Cooking has a special kind of magic that can captivate children's interest and enthusiasm. For youngsters, cooking represents a delightful combination of science and mystery, of exactness and creativity. Best of all, to their minds, the reward for success is fairly immediate: eating what they have made with their own hands.

As a learning experience, cooking employs a broad spectrum of physical, mental and social skills necessary for growth and development—including eye-hand coordination, math and reading ability, and cooperation. The key to making classroom cooking a successful, satisfying educational venture for both teacher and student is good planning and preparation. The teacher must know every detail of the recipe, and all utensils and ingredients should be set out prior to cooking.

Specific Suggestions for Cooking in the Classroom

- *The recipe.* The recipe should be written in very precise, easily understood, step-by-step directions. I like to write it on a 2-by-3-foot easel-style tablet, printing with a heavy marker. (This way everyone, including me, can see at a glance what to do next.) The point is to get all of the recipe in view at once. I usually write the recipe for a single batch, although we often double or triple recipes.
- *Utensils and Equipment.* Obviously, the more you can use available materials, the less costly will be the cooking projects. Whenever possible, use jars and plastic containers in which other foods have come; premeasured and appropriately marked, they can serve as measuring cups. (gum-backed plastic labeling tape will stick washing after washing).

Keep in mind that for stirring and hot plate cooking, sturdy bottoms and high sides on pans and bowls are important. I like stainless steel nestling sets and wooden spoons with long handles.

A hot plate with a temperature control, although more expensive, is safer and more reliable to cook with than one with only an on-off switch. A substitute for the hot plate is an electric frypan or a slow cooker. With the cooker, foods can be prepared and left to cook without stirring.

If a refrigerator is unavailable, picnic coolers and Thermos bottles can serve as substitutes. Try to use supplies that need little or no continuous

refrigeration; for example, use powdered milk instead of fresh milk.

Choosing baking pans with metal lids is advisable. The lids not only preserve the food and eliminate the need for a commercial throwaway wrap, they can also serve as trays and baking sheets.

Organization and Execution

The composition and size of cooking groups are matters of individual choice. You may use interest groups, reading or math groups or multiability groups. Once the groups are established, though, I like to keep the same youngsters in the same cooking group, for several reasons: it establishes routine despite irregularity of meeting time; the youngsters become familiar with the cooking tasks and begin to take turns on their own; and you learn to anticipate areas of difficulty for particular groups and can thus plan ways to avoid problems.

To organize the cooking, we lay out individual ingredients and utensils on trays in the order of the steps in the recipe. These are placed on a *supply table*. As we proceed through the recipe, the children take turns bringing the supply trays to the *cooking table* as needed, then taking them away as soon as the supplies have been used.

To be certain that ingredients are measured correctly, we measure *all* the ingredients separately before mixing anything together. This system not only prevents errors, it ensures time for understanding the math involved in measuring and in doubling recipes.

- *Clean-up.* Cleaning up the cooking area should be as much a part of the cooking experience as the cooking itself. Depending on your available space, the clean-up area might be set up in a separate location so that when a bowl or utensil has served its purpose, a youngster can take a turn washing, drying and putting it away. Or the entire clean-up can be done by the youngsters at the end of the cooking period.

Much table mess and many spills can be avoided by always working on trays. Having extra sponges and a spill pan handy seems to be the best way to avoid having to use them. If a sink is not available in the room, you will need two buckets—one for clean water and one for waste water. Pitchers for transferring water should also be handy.

- *Marketing and Budgeting.* Providing and maintaining the cooking budget can be handled in several ways. You can reserve a portion of the school classroom allotments, or you can charge a fee, similar to a book fee, to each child per semester. Taking turns bringing food can work only if the costs of various items are taken into account and equalized. Students might also earn part of the money—by selling what they bake.

For youngsters, going to the store and purchasing ingredients helps them gain an understanding of costs and shopping. If you talk with your students' parents about this aspect of cooking, you might find some who are willing to take children grocery shopping for you.

Collecting the materials and getting organized will be the humdrum part of establishing your classroom cooking program. But once these two basic tasks are accomplished, you should find that the program will not only run smoothly, but will reward you and your class with many worthwhile hours of cooking and learning experiences. ■

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