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Published by The Children's House
Mankato State University
Mankato, Minnesota 56001
U.S.A.
To the children --

past, present and future --

of The Children's House.
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When The Children's House of Mankato State University opened its doors in 1972, there were very few comprehensive appropriate curricular materials for preprimary children. The teaching staff, together with student teachers and other student participants, began creating, collecting and organizing learning experiences to meet the stated objectives for the total development of the child. An eclectic approach was utilized, looking at the needs and abilities of the total child. As such, the program which was developed at The Children's House was based on the philosophy that each child learns best in an atmosphere of care, trust and respect. This atmosphere can be best achieved by demonstrating caring behavior and mutual respect, which allows each child to grow to his fullest potential.

For the young child, this means that the program must emphasize experiences rather than experiments, and exposure rather than mastery. Hands-on experiences are provided in order to further cognitive development through learning-by-doing. The program builds upon the knowledge and skills already in the child's life; furthermore, it provides opportunities to extend these skills.

After these years of teaching young children, we sense the need for a comprehensive curriculum in which we can incorporate our ideas and experiences. With this background, many resource units have evolved, which we offer to our colleagues in early childhood education, in an effort to help other programs meet the following goals for young children:

a. to help each child develop his own creativity and self-expression.
b. to help each child develop an inquiring mind and to provide experiences to develop problem-solving skills.
c. to help each child achieve and appreciate success as he enjoys learning experiences.
d. to help each child accept personal responsibility and develop the ability to work and to organize work independently.
e. to help each child establish satisfying and successful social relationships with his peers and with adults.
f. and, finally, to help each child develop a concept of himself as a worthy individual, a good friend, an eager learner and a willing participant in learning experiences.

THE FIVE SENSES is one resource unit. It is hoped to serve as a resource to others as they guide the learning of young children. It is not a cut-and-dried, how-to-do-it book. But it is a collection of numerous learning experiences within the context of a unit setting. The various disciplines are not, and cannot, be separated; learning overlaps. With a central theme, young children will have many opportunities to examine, investigate, explore, experience and discover concepts of meaning. As the children approach the same concept from a number of experiences, they will have opportunities to formulate ideas, to test these ideas for validity and meaning, and to draw conclusions relevant for them.
Real life experiences offer the core of this learning curriculum. First-hand, concrete opportunities to know the real world are crucial for young children. In the security and safety of the early childhood center, children may test and try their knowledge of, and contacts with, the reality of life. As they experience and learn, they may modify their knowledge and attitudes.

No time schedule is included in this curriculum. The child's learning should not be determined by the clock. As long as the child is interested and is learning, he should be allowed time and opportunity to explore.

The child's learning also depends upon his safety and happiness. Therefore, in all these materials, safety is extremely important. Consider use of non-breakable materials (plastic rather than glass), non-toxic items (paints, plants, foods), non-infectious experiences (animals which do not transmit rabies). Likewise, the child's happiness is crucial. Be certain his needs are considered, adjustments made for his level and style of learning, and appropriate experiences and materials provided.

We have used the female and male pronouns interchangeably in order to avoid sexist discrimination.

These materials have been collected from many sources: our own years of teaching children; teachers at The Children's House; student participants and student teachers at The Children's House; and other students in early childhood education. Wherever possible, the copyright source has given permission. However, if by chance we have inadvertently infringed on copyrights, we apologize for it. If copyright owners will contact us, we will correct the error in subsequent editions.

In the preparation of this curriculum, we gratefully acknowledge the help and support of Marion Cords, Geraldine Skarphol, Patrice Parsons, and the other outstanding teachers who have involved children in the learning process through the years at The Children's House. We also express appreciation to Meredith S. Ring, artist and teacher of young children, as well as to Jan Eimers, secretary at The Children's House.

We recognize that the success of each resource unit is contingent upon the ability of teachers to adapt these materials to meet the needs of the children they teach.

We accept no monetary remuneration for our efforts; our reward is knowing the materials will benefit many children and their teachers. Net proceeds from the sale of this first printing will accrue to The Children's House, which is the campus prekindergarten daycare facility at Mankato State University. You are invited to visit us!

Marjorie L. Oelerich
Jean Peterson

Mankato, Minnesota
1987
FEELING
UNIT 6

CREATIVE LEARNING:
A CURRICULUM FOR PREPRIMARy CHILDREN

THE CHILDREN'S HOUSE
Mankato State University
Mankato, MN 56001
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POPPING CORN

Spread a large tablecloth on the floor. Seat the children around the edges. Pass around some unpopped corn for children to feel. Discuss what it will feel like when it is popped. Measure popping corn into the popper according to directions. (If oil is required, add it.) Carefully place the popper in the center of the tablecloth. Explain to the children that the popper gets very hot; each child must remain in her own spot until all of the corn is popped. Leave the popper uncovered; plug in the cord. The children will observe and discuss the corn as it pops and lands on the tablecloth. Collect the corn after it has cooled. The children will touch the popped corn and discuss how it feels compared to the unpopped kernels. Eat immediately or save for a snack. (Children under three years of age should not be served popcorn because of safety.)

SANDPAPER LETTERS

Children may print their names and/or other letters in sand placed in a flat styrofoam meat tray. After the letters have been formed, glue may be put in the letter shape with sand sprinkled on top of the glue. When dry, the sand letters may be used by the child as she touches the shapes.

SAND LETTERS

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FLOWER TOUCH

Take a field trip to visit a florist, garden show, neighborhood garden, or city park. Show the children how to carefully feel the texture of the different flowers without destroying the petals. Discuss the difference in the texture of the petals, leaves, stems, etc. Some feel soft and velvety, some feel prickly, some feel hard, and some feel smooth.
VEGETABLE TOUCH

Provide a variety of fresh vegetables for the children to touch. Include carrots, celery (with leaves), potatoes, lettuce leaves, broccoli, onions, and any others that are available. Allow the children an opportunity to feel, scrape, cut and wash the vegetables. Discuss whether they are hard or soft, squishy or firm, smooth or rough. Cook some of each vegetable in separate pans, or place a small amount in each section of a muffin tin and place in oven for 15-20 minutes at 350 degrees. Allow the cooked vegetables to cool. Then touch each; discuss the texture of the cooked vegetables compared with the raw vegetables. How did they change?

DRIED/FRESH FOODS

Provide a variety of dried foods and their fresh counterparts, such as raisins and grapes, apples, pears, apricots, corn and beans. Touch each. Discuss and compare how they feel. Cook some of the grapes in boiling water until the skins crack. Spread on a baking sheet and place in an oven at 160 degrees for three to four hours, turning at least once. Compare the resulting raisins with the fresh grapes. Wash, peel and slice some of the apples. String them on a heavy thread and hang in the room for three or four days to dry. Compare the dried apples with the fresh apples. Soak some of the beans for two or three hours. Place them in a pan, cover with water, and cook at a slow boil until tender. Cool and touch. How do the cooked beans feel compared with the dried beans?

FINGER JELLO

Prepare finger jello. When it is firm, children may cut it into different shapes with cookie cutters or blunt knives. Touch the firm jello. Touch some of the unflavored gelatin powder. How do they compare in touch?

To make finger jello, sprinkle four envelopes of unflavored gelatin over 1 1/2 cups of cold fruit juice. Let stand for one minute. Add 1 1/2 cups hot fruit juice. Stir until the gelatin is completely dissolved. Pour into an 8" baking pan. Chill until firm.

A variation would involve using two envelopes of unflavored gelatin with two packages of flavored jello. Boiling water instead of fruit juice may be used.
FEELY BOX

Cover a small cardboard grocery box with contact paper. Cut a circle in the middle of one side large enough for a child's hand to fit in, but not large enough to see inside.

Collect pairs of items. Put one of each in the box and the other on a tray. Discuss the items on the tray, referring to their various characteristics. Each child then chooses one item from the tray and reaches into the box to feel for the matching item.

Provide single items which the child will recognize. Place the items in the box. As the child feels inside the box, she names the item and then pulls it out to check for accuracy.

Collect various items together with a pictorial representation of each item. Place the items inside the box and the pictures on the tray. The child feels in the box to find an item, and then selects the picture of that item; she pulls the item from the box to check for accuracy. A variation would have the child select the picture first, and then find the item in the box. The pictures may be affixed to tagboard and laminated for more durability.

FEELIES

Foam insulated covers which encase pop cans may be slipped inside an adult sock to form an individual "feely container." The sock will fit around the foam cover and be tight enough at the top to prevent seeing inside unless the sock is stretched. Use the same activities as with the Feely Box.
OPEN FEELY BOX

Cut one side from a grocery box. Cut two circles in the ends of the box so the child's hand will fit inside. Be sure the box is a comfortable size for the child to hold on her lap while she has her hands in the ends. The child will hold the box, with the open side facing out. Put a surprise item in the box. The child will not be able to see it, but can feel it with both hands through the ends of the box. Other children will be able to see what is in the box and can provide clues for the child to identify the item. Use this Open Feely Box for activities similar to the Feely Box.

MUFFINS

Provide each child with a small container and teaspoon with which to mix an individual muffin. Also provide small amounts of blueberries, bananas, peanut butter, dates or nuts. After each child has mixed her muffin, she may feel the items with her fingers and add them to the muffin. She may also feel the texture of the muffin batter. After baking the muffin, she may compare the texture of the baked muffin with that of the unbaked mixture. Below is a recipe for individual muffins.

INDIVIDUAL MUFFINS

Each child may make one muffin. She will measure 3 tablespoons Bisquick with ½ teaspoon sugar and 1½ tablespoons of the egg/milk mixture (prepared by the teacher as follows: beat one egg with a fork; add enough milk to make one cup). When the basic muffin is mixed, the child may add one or more of the following ingredients: 5 blueberries; small slice of banana (mashed); ½ teaspoon peanut butter; 2 dates, cut into pieces; or 2 nuts, cut into pieces. Put into muffin paper; bake for 15 minutes at 400 degrees, or one minute in the microwave.

FEELING WALK

Take a Feeling Walk. Before leaving, discuss the items which might be found and felt. Make a list. While walking, collect twigs, bark, leaves, nuts, etc. Upon returning to the classroom, compare the items found with the list of what had been anticipated. Make a collage. Or make crayon rubbings by placing a piece of paper over the item and carefully rubbing with a crayon until an impression of the item appears on the paper. Feel the different textures in the collage or the rubbings.
RUBBINGS

Provide each child with paper and crayons. Remove the paper from old crayons and use them sideways. Each child will feel different textures in the room and make rubbings of a variety of rough surfaces, such as brick or masonry walls, carpet, tile floors, pegboards, etc. Provide the experience outdoors, rubbing on the sidewalk, side of the building, tree trunk, fence, gate, door, etc. Help the children label their rubbings.

FINGERPAINTING

Fingerpaint with a variety of media, including conventional fingerpaint, shaving cream, whipped soapsuds, or liquid laundry starch. Add sand for different texture. Add a small amount of tempera paint for color. Fingerpaint on a table top or on wax paper, as well as on fingerpaint paper.

FOOT PAINTING

Use thick tempera paint and long sheets of paper for each child to make footprints. Children may take off their shoes and stockings so they can put one foot at a time in a flat container of paint. Press each foot on the paper. Provide a pan of warm soapy water and a towel for children to wash and dry their feet when finished. One or several children may walk on the paper in one direction. When dry, attach the footprints to the ceiling for an interesting display.

SNOW TOUCHES

Bring in dishpans of snow or fill the water table with snow. The children may feel the snow. For comparison, provide a dishpan of warm water to feel. Children may discover that items feel different in terms of texture, as well as temperature.

ALPHABET BAG

Prepare a small, attractive cloth bag with a drawstring top. Place a small object inside, the word for which begins with the letter of the day, e.g., "A" for apple, acorn, alligator, etc. Each child has a turn feeling in the bag, but should not tell what the object is until all have had a turn to feel it. Discuss the object as a mystery, to help children "not tell" until each has a turn.
DRESS UP

Provide a wide variety of clothing of different fabrics for the dress up corner. Find items with fur, velvet, corduroy, leather, silk, chiffon, etc. Children will identify the texture of the dress up items as rough, smooth, slick, bumpy, fuzzy, etc. Each child may feel her own item, as well as carefully touch each other's dress ups.

MYSTERY NUTS

Collect two of each nut, such as hazel nuts, peanuts, walnuts, Brazil nuts, almonds, pecans. Place one of each of the nuts in a basket and lay the other one on a tray. Blindfold the child; give her one nut from the basket and she will find the matching nut from the tray. Set the two matching nuts aside and continue until all are matched.

TEXTURE BOARD

Glue items of distinctly different textures on a heavy piece of poster board. The child will feel and describe the items as rough (sandpaper), soft (cotton balls), smooth (silk, satin, rayon), hard (stone), scratchy (scouring pad), soft and smooth (velvet), fuzzy (fur). Print the texture words on cards for use by children who can match the word to the item.

TEXTURE BOX

Line the inside of a small grocery box with patches of various fabrics, such as terry cloth, velvet, corduroy, flannel, satin and with various types of paper, such as wax paper, foil, and sandpaper. Make a circle large enough for a child's hand to fit through one end. Each child may feel and describe the inside of the box.

TOE FEELING

The children will remove their shoes and socks as they sit on a chair. Blindfold the child as her turn begins. Hold objects such as marbles, sandpaper, balls, etc., against the child's toes. The child will identify the texture of the item as rough, smooth, etc. If possible, the child may name the item.
CHANGING TEMPERATURES

Prepare a bowl of cold water (with an ice cube), another bowl of lukewarm water, and a third bowl of quite warm (not hot) water. Each child will feel each bowl of water separately, and then feel with each hand in a different bowl. Discuss how each hand feels.

BOA CONSTRICTOR

Visit a zoo, pet store or biology lab where snakes are kept. Boa constrictors are particularly interesting. Provide a safe opportunity for each child to feel the snake's skin. Discuss how the snake feels. Is it slimy? Slick? Rough? Cold? Warm?

DISCOVERY

Collect a variety of materials such as sponge, cotton balls, sandpaper, velvet, ping-pong ball, keys, ball of yarn and plastic tray. Put all items on the tray. Each child will tell everything she knows about one item by just looking at it. She then feels the object to tell what else she discovers.

ENVIRONMENT BOX

Collect several boxes large enough for a child to sit inside. Glue a variety of different materials in the bottom of the boxes. Examples would include plastic, carpeting, sand, rocks, leather, velvet, burlap, straw, and grass. Children will take turns sitting in each of the boxes and describing what they feel.

COLLAGE

Provide collage materials such as sequins, snips of yarn, holes from a paper punch, bits of aluminum foil, sandpaper pieces, craft sticks, cotton balls, scraps of fabric, shiny and smooth paper, leaves, dried flowers and grasses, and bits of paper in a pattern of their choice. Hang the finished collages on the wall at the children's eye level. Encourage the children to discuss the different textures they have used.
CLAY

Provide a variety of types of clay for the children to use. Natural clay, commercial clay, commercial play doh, homemade play doh and other clays may be used. As children create forms, discuss the different textures of these materials.

PLAY DOH

Play doh may be made and used by the children to experience textures. Mix together equal parts of flour and salt; add water to make pliable. Food coloring may be added.

COOKED PLAY DOH

Combine 2 cups flour, 1 cup salt, 4 teaspoons cream of tartar; add 2 cups of water, 2 tablespoons cooking oil and food coloring. Cook over medium heat, stirring constantly until a ball forms in the pan. Store in an airtight container.

SILLY PUTTY

Silly Putty makes a good medium for children to explore textures. Combine 1 cup of Elmer's Glue (not school glue) with ½ cup liquid starch. Store in an airtight container.

BAKER'S DOUGH

Baker's dough provides opportunities for children to experience textures, as well as create interesting shapes and structures. Combine 4 cups flour, 1 cup salt, and 1 3/4 cups water. Knead for five minutes. The dough may be formed into shapes, rolled out and cut with tools or cookie cutters, or free-formed with the hands. Bake in 325 degree oven for one to two hours, depending on the thickness of the item.

SURPRISE BAG

Prepare a small, attractive fabric bag with a drawstring for each child. Put various items in each bag, such as pencils, marbles, small rubber balls, square wood blocks, bits of sandpaper, cotton balls, pieces of velvet, etc. Instruct the children to reach in their bags and pull out the following: a hard object, a rough object, a smooth object, etc. Discuss how they knew which object to obtain.
PULSE RATE

Help each child find her pulse with the first two fingers of one hand on the inside of the wrist of the other hand. If possible, count the number of beats in thirty seconds. Sometimes the pulse at the side of the neck is easier to feel.

SKELETONS

Each child may feel the bones under the skin of her body. Help the child name the bones she feels, such as arm, leg, finger, rib, jaw, etc. A human skeleton might be borrowed from a medical or biological source. Those bones could be felt and compared with the child's bones.

SAND DRAWING

Collect small dress boxes, other sturdy, flat boxes, or use 9" x 13" cakepans. Pour sand in to a depth of 1/2". Children may draw pictures or print letters in the sand with their fingers. They may use twigs or craft sticks to make designs in the sand. A gentle shake of the container will erase the drawings or letters; the sand will be ready to use again.

NAMES

Print the child's name on a piece of paper. Invert the paper over a scrap of carpet. The child will punch tiny holes along the letters with a tack with a beaded head or a small nail. When finished, turn the carpet over and trace the shape of the letters with the fingers.

BRaille

Contact the state or local services for the blind and visually disabled. Borrow a braille writer, and if possible invite a blind person to visit the classroom to demonstrate its use. Write each child's name in braille; the children now "read" their names with their fingers.

MY FAVORITE THINGS

Label a grocery bag with each child's name. The child may then put a collection of things in the bag which she likes to touch. Children may share their collections with others and touch the things in each other's bag. They may sort their items into categories of things which are soft, smooth, rough, etc.
PIZZA VOCABULARY WHEEL

Some children may be ready to learn some touch words. An empty pizza board makes a good gameboard. Mark the pizza board into eight sections. On each section, glue an item of a different texture. Use eight clip clothespins, with the texture for each picture printed on it, for example the items could be cotton balls with the word "soft" printed on the clothespin; a stone for the word "hard;" fur for the word "fuzzy;" sandpaper for "rough;" scouring pad for "scratchy;" velvet for "smooth;" tree bark for "bumpy;" and crumpled aluminum foil for "prickly."

TOUCH MOBILE

Attach a variety of interesting feeling objects to a 15 inch long tree branch. Fasten the branch so it will hang down in the room at a height the children can easily reach and touch. Children will identify items which are smooth, rough, soft, etc. Include cotton balls, sandpaper circles, scraps of fabric, fur, corrugated cardboard, styrofoam packing peanuts, cookie cutters, balloons, crumpled aluminum foil, buttons and other interesting textures.

SMOOTH/ROUGH

Label one container with the word "smooth" and another container with the word "rough." Collect various items, such as fingerpaint paper, seashells, pine cones, cotton balls, balloons, corrugated cardboard, fur, rocks, sponges, fabric scraps, feathers, marbles, balls, tree bark and popped corn. Children will sort the items by feeling each and deciding in which container it should be placed.
HAPPY HANDS

One hand can wave. (Put one hand behind the back and wave with the other hand.)

One hand can snap. (Snap fingers.)
But he needs a friend. (Bring out other hand.)
If he wants to clap. (Clap hands once.)

One hand can wave. (Wave with one hand, keeping the other behind the back.)

One hand can snap. (Snap fingers.)
But he needs a friend (Bring out other hand.)
To fold in his lap. (Fold hands in lap.)

CLAP YOUR HANDS

Clap your hands, clap your hands. (Clap)
Clap them just like me. (Clap)
Touch your shoulders, touch your shoulders, (Touch shoulders)
Touch them just like me. (Touch shoulders)

Shake your head, shake your head. (Shake head)
Shake it just like me. (Shake head)
Clap your hands, clap your hands. (Clap hands)
Now let them quiet be. (Fold hands in lap)

LEAVES

In the autumn, children may gather leaves into a pile. Be sure that the pile is in a safe place and at least two feet thick. The children may then take turns jumping into the pile and wiggling around in the leaves. When finished with this activity, bring some of the leaves inside and crush them to use in collages or as the leaves on pictures of trees in the fall.

CREATE A STORY

Children may create a story using many texture words. For example, one child (or the teacher) may begin the story with a sentence, such as the following: "The cotton felt soft as I glued it to the bunny picture." Another child may add a second sentence to continue describing the experience.
RIVERS AND MOUNTAINS

Terrain contributes to meaningful touch experiences. Use shallow containers and plaster of paris or clay to make different land and water masses. For example, in one pie tin put a mold of plaster of paris. While it is damp, make indentations to represent rivers. Also, form high masses to represent mountains. Another container could have one central mass surrounded by water to represent an island.

TOUCH LOTTO

Make a touch fabric lotto game. Prepare gameboards of heavy tagboard about 9 inches square. Cut two 3" X 3" squares for each set of a variety of about twelve different fabrics. Cut enough sets for nine different squares for each gameboard. Glue one square from a set in each of the nine squares on the gameboard. The other set will go into a pile from which the child will match to her gameboard. One swatch from this pile is selected; the child who finds the corresponding match will cover that portion of her gameboard. The children will feel the fabric swatch as well as their squares to decide if it is a match. Ideally, the swatches are identical colors, so the decision must be made on the basis of the texture.

POPCORN

Popping corn. POP! POP! POP!
Pour the corn into the pot. POP! POP! POP!
Take and shake it till it's hot. POP! POP! POP!
Lift the lid and what have we got? POP! POP! POPCORN!
(Snap fingers on each POP! or pantomime the action.)

TEENSY WEE NSY SPIDER

A teensy weensy spider
Climbed up the water spout. (Climb finger upward with index finger and thumb touching—or for younger children, walk fingers up the arm.)
Down came the rain (Wiggle fingers to make rain.)
And washed the spider out. (Hands and arms flung downward and outward.)
Out came the sun (Hands form circle.)
And dried up all the rain. (Hands open wide and outward.)
And the teensy weensy spider
Climbed up the spout again. (Fingers climb upward as before.)
OPEN, SHUT THEM

Open, shut them. (Hands follow directions of verse.)
Open, shut them,
Give a little clap.
Open, shut them,
Open, shut them,
Put them in your lap.

Creep them, creep them;
Right up to your chin.
Open wide your little mouth,
But do not put them in.

Open, shut them,
Open, shut them,
To your shoulder fly.
Then like little birdies
Let them flutter to the sky.

Falling, falling,
Almost to the ground.
Quickly pick them up again
And turn them round and round.
Faster, faster, faster;
Slower, slower, slower.

Open, shut them,
Open, shut them,
Give a little clap.
Open, shut them,
Open, shut them,
Put them in your lap.

FINGER FUN

One ear, two ears. (Point to body parts throughout.)
One eye, two eyes.
One mouth, one nose.
Ten fingers and ten toes!

FAMILY KNIVES AND FORKS

Here are the family's knives and forks. (Make motions with hands.)
This is the family's table.
Here is brother's looking glass;
And here is the baby's cradle.
PARADE FUN

Clap two hands. (clap hands)
Stamp two feet. (stamp feet)
A parade is marching down the street. (hold hand above eyes as if observing a parade)

Toot, toot, toot says the little flute. (hold hands to mouth to blow flute)
Boom, boom, boom says the great big drum. (hold and beat a pretend drum)
Bong, bong, bong says the big brass gong. (hold and hit pretend cymbal)

Clap two hands. (clap hands)
Stamp two feet. (stamp feet)
A parade is marching down the street. (hold hands above eyes as if observing parade)

BALL FOR BENNY

Here's a ball for Benny, (form hands and make motions throughout)
Big and soft and round.
Here is Benny's hammer.
Oh, how he can pound!

Here is Benny's music,
Clapping, clapping so.
Here are Benny's soldiers
Marching in a row.

Here is Benny's trumpet.
Toot, toot, toot, toot, toot.
Here's the way that Benny
Plays at peek-a-boo.

Here's a big umbrella,
Which keeps our Benny dry.
Here is Benny's cradle.
Benny, rock-a-bye.

WHAT IS IN THE BOX?

Separate the children into two teams, sitting in rows facing each other. Use one empty box with a lid. One team leaves the room while the other team selects an object to put in the empty box. The first team returns to their row. Clues are given to this team so they can guess what is in the box. Clues may include where the item is usually found, what it is used for, what sounds it makes, etc. Each child on the guessing team gets one turn to shake the box to guess its contents.
WHERE IS MICHAEL?

(This is a fast-action game. Repeat faster each time to see who can do it quickly without making errors. The winner is the child who makes no errors in words or movement.)

Say, (touching mouth)
Have you seen (touching eyes)
Or heard (touching ears)
From Michael? (touching head)
He is needed (touching knees)
In the army. (folding arms)
Now he is back (touching back)
From the front (touching chest)
With a hip, hip (slapping hips)
Hooray for the army! (throwing hands in the air)

TOUCH GAME

A game or bulletin board may be constructed to give children experiences with touching different textures. Make a large right hand and large left hand from oaktag. Label each finger/thumb with a touch word, such as rough, smooth, soft, hard, bumpy, waxy, spongy, slippery, fluffy, sharp, etc. Glue velcro on each finger/thumb. Make fingers and thumbs of the same size as the oaktag hands. On one side of these, glue the velcro mesh. On the other side, glue material to correspond to one of the touch words. The child will match the texture with the words; she will know she is correct by the shape of the fingers/thumbs.

SPONGE SHAPE

Cut sponges into different shapes, such as a triangle, star, doughnut, square, and various alphabet letters. Blindfold the player so she identifies the shape by feeling the sponge. The child who correctly identifies the most shapes is the winner. A variation would have the sponges put in a small container of water so the child feels the wet sponge as she identifies the shapes.
GUESS AND EXPERIMENT

Children guess which of the following is easier to hold in one hand. Experimenting with the objects will confirm or correct the guess.

- a thimble or a teacup
- a button or a baseball bat
- a peanut or two eggs
- a book or a typewriter
- a coat or a tricycle

Other items may be added.

A variation would have children guess which things are soft and which are hard. After guessing, experiment to confirm or correct the guess.

- marshmallow
- brick
- car
- paper
- sweater
- pillow
- book
- cotton
- desk
- wall
- crayon
- sponge
- snow
- stone
- chair

Another variation would have children hypothesize which objects could be made smaller by squeezing them in one's hand.

- crayon
- sponge
- paper
- stone
- nail
- book
- mitten
- chalk
- cup

ONE LITTLE BODY

Two little feet go stamp, stamp, stamp. (stamp feet)
Two little hands go clap, clap, clap. (clap hands)
One little body stands up straight. (stand straight)
One little body sits quietly down. (sit)
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RHYTHM INSTRUMENTS

Children will note sounds made by rhythm instruments. A song may be played on the piano or record player; children may accompany the song with these rhythm instruments. Listen to the different sounds. Discuss them.

COMB MUSIC

Place a small sheet of tissue paper or waxed paper over a comb. The children will hold the comb to their mouths and hum through the paper. What do you hear? Why do you hear a sound? What do you feel on your lips?

BALLOON DRUM

Children may make their own drums by stretching a balloon over the mouth of a plastic container. Secure the balloon with a rubber band. Tap the drum with fingers or a wood stick. Note the resulting sound.

VIBRATING PAPER SOUND

Give each child a strip of paper measuring 1 1/2" X 4". Fold the paper in half; cut a small semicircle out of the folded end. Place the paper between the middle finger and the forefinger. Be sure the fingers are not touching the hole. Bend the open ends of the paper back. As the child places her lips between the open ends and blows hard, the paper will vibrate and produce a sound.

MAKE A SHAKER MUSICAL INSTRUMENT

Each child will make a shaker musical instrument by putting beans or pebbles in an empty soda pop can and taping the hole closed. Decorate the can. Shake to enjoy the sounds. A variation results in a tambourine shaker by placing seeds or rice between two paper plates and stapling around the edges. Decorate the shaker with streamers, designs, etc.
MAKE A STRINGED MUSICAL INSTRUMENT.

Discuss items which could be used to make musical instruments. Provide materials, such as milk cartons, pencils, rubber bands, wood rulers, etc.

Children may stretch two rubber bands lengthwise across a milk carton. Place a pencil underneath the bands at each end so they will vibrate freely. Experiment with different positions of the pencils to note different sounds.

Try rubber bands of the same length, but with different thicknesses. Note the pitch variations.

MAKE A DRUM

To make a drum, children may use empty oatmeal boxes or coffee cans. The lids serve as drumheads; a string may be attached for a shoulder strap. Children may decorate their drums with paints, wallpaper or contact paper.

CHANGING PITCH

Give each child a long straw. Flatten about 1/2" at the end and trim it slightly. Place about 1" of the straw into your mouth. As you blow, sounds will be produced. Different lengths will produce different sounds. Try putting funnels of various sizes over the end of the straw. Note the different sounds. Children may make their own "straw orchestra."

SOUND WALK

Take the children on a sound walk. At different points in the journey, stop to record on paper the sounds which were heard. After returning to the classroom, chart the sounds as to loud and soft, high and low, pleasant and unpleasant, etc.

SOUND MOVEMENT

Play different rhythmic sounds on records or on the piano. Have the children move to the sound. Discuss how different sounds make us feel. Discuss the fact that different sounds make us think of different places or times or animals.
PAPER MEGAPHONES

Children learn that the direction of sound can be controlled by constructing paper megaphones and experimenting with them. Discuss the fact that the megaphone makes the sound louder. What happens if we speak through the large end, instead of the small end?

SOUND TRAVELS

Discuss the fact that vibrations make sounds travel, and they travel best through solids. Soft materials absorb sound, so it is difficult to hear.

This may be experienced by having children click spoons together in the air, in water, on a metal surface, and under a blanket. What is different about the sound in each instance?

Have children record their voices on a tape recorder. Then have them record their voices as they speak through a pillow. What do they hear? What do they understand? How are the voice sounds affected by the soft material of the pillow?

TELEPHONES FROM TIN CANS

Children may make telephones with two tin cans and a piece of wire. Attach the wire to the end of each can. When the cans are held apart so the wire is stretched tightly, sounds will travel. Have one child talk into one can while another child holds the other can to her ear. Discuss what the child heard; discuss how the sound traveled.

SPOON SOUNDS

Loop string around a spoon. The child will hold the ends of the string in her ears while the spoon hangs without touching other items. Have another child gently tap the spoon with another spoon. Tap it with other objects. What did the child hear? How did the sound waves get from the spoon to the ears?
ECHOES

Children will experience echoes as the product of sounds hitting a smooth, hard surface. Have children call into different containers, such as a deep pail, a shallow pan, a deep bowl, a waste basket, etc. Which gives back more reflected sound?

Experiment in the classroom bathroom. Have children call loudly in that room. Note the echoes. Then place a rug on the floor and thick towels on the walls. Have children call loudly in the room under these circumstances. Note the differences in the echoes. Discuss the fact that smooth, hard surfaces reflect sound (cause echoes), whereas soft and bumpy surfaces absorb sound (and do not produce echoes).

BOTTLE XYLOPHONE

Fill eight empty soda bottles with different amounts of water. Arrange them from the greatest to the least amount of water. Have the children use a pencil to tap the different bottles. Have them blow over the tops of the bottles. Which has the highest sound? The lowest?

Children may read color-coded music for simple songs to play on the bottle xylophone. Suggestions would be "Twinkle, Twinkle Little Star" or "Mary Had A Little Lamb."

SOUND EXPERIMENTATION TABLE

Have a table in the room where the children can experiment with sound. Provide cups, rubber bands, tin cans, straws, tuning fork, spoons, metal rulers, gourds, and other items which can provide interesting sounds. As children tap on the items or tap the items together, note the kinds of sound made. A wall chart could be used to record high and low sounds, loud and soft sounds, etc.

SIGN LANGUAGE

Invite a resource person who knows sign language to visit. Have this guest teach the children a few words in sign language. Explain how sign language helps persons who cannot hear.

TELEPHONE TRIP

A trip to the telephone company reveals the use of sounds for this system of communication. Following this trip, provide experiences with telephones and their use.
SOUND TUBES

Make a double set of sound tubes from empty film containers or plastic pill bottles. Put a few ingredients in each container for sounds. Suggested items include rice, beans, salt, marbles and flour. Be sure to glue the lids shut. As children shake the containers, they listen to the sounds. They may match the sounds in the two sets. They may also arrange the sounds from loudest to softest, or from highest to lowest.

TELEVISION STATION FIELD TRIP

A trip to the television station offers children experiences with the use of sounds for television programming. Upon return to the classroom, children may make their own television program for a news show, a weather report, or a variety show.

RADIO STATION FIELD TRIP

Visit the radio station to learn about the use of sounds in the radio. Children can compose a radio story with sound effects.

FIRE STATION FIELD TRIP

Sound is very important in warning us of danger. After a trip to the fire station to learn of those sounds, the children may make a fire station in the block corner and use model fire trucks. They can imitate sirens and bells.

MANY A MICKLE

A little sound--
Only a little, a little--
The breath in a reed,
A trembling fiddle;
The trumpet's ring,
The shuddering drum;
So all the glory, bravery, hush
Of music come.

A little sound--
Only a stir and a sigh
Of each green leaf
It's a fluttering neighbor by;
Oak on to oak,
The wide dark forest through--
So o'er the watery wheeling world
The night winds go.
A little sound--
Only a little, a little--
The thin high drone
Of the simmering kettle;
The gathering frost,
The click of needle and thread;
Mother, the fading wall, the dream,
The drowsy bed.

Walter De La Mare

TUNING FORK

Discuss the fact that a tuning fork is used by musicians for tuning their instruments. Tap a tuning fork and dip it into water that has a cork floating in it. The cork will move. Also have a hanger with kernels of puffed rice hanging on it. When the vibrating tuning fork is held next to the kernels, the kernels will move as a result of the sound waves.

SOUND BULLETIN BOARD

The teacher may write two or three sound words on a bulletin board. Children can make pictures, or cut pictures from magazines to illustrate each sound. Suggestions include squeek, whistle, honk, shout, splash, quack, bark and moo.

ART SOUNDS

Children may make pictures of "the loudest sound I know" or "the softest sound I know." Display their work in the sound center.

WHO IS KNOCKING AT MY DOOR?

Children sit in a semicircle, except for "It" who sits on a chair with her back to the children and is blindfolded. One child is chosen to go to "It" and kneel down and knock on the chair. "It" asks, "Who is knocking at my door?" The kneeler answers, disguising her voice and saying, "It is I." Or the kneeler may answer by barking, mewing or crowing. "It" guesses who the kneeler is. If the guess is correct, the kneeler becomes "It." If after three guesses, "It" cannot name the kneeler, the kneeler becomes "It" anyway.
LISTENING GAME

One child is "It" and stands in the circle of children. "It" is blindfolded. The children in the circle alternate standing tall and stooping low. When tall, they say the following in loud voices; when stooping low, they use soft voices. "It" must guess whether the circle of children is standing tall or stooping low. Here is what the circle of children say:

- I'm very, very tall! (Stretch arms up on tiptoe.)
- I'm very, very small. (Stoop down, fold self into ball.)
- Sometimes I'm tall! (Stretch up again.)
- Sometimes I'm small. (Stoop down low.)

(teacher indicates with her hand what the children are to do next, and this is what "It" must guess:)

GUESS WHAT I AM NOW!

MUSICIAN RESOURCES

Visiting instrumental musicians come to the classroom to demonstrate various musical instruments. Have representatives from the various instrument families: string, percussion, brass and wind.

AUDIBLE FOODS

At a tasting party, direct children to listen to the sounds created when they eat different foods. Audible foods include celery, crackers and carrots because sounds are made as they are eaten. Prior to the party or as part of the entertainment, make popcorn. Discuss the sounds made as the kernels pop.

ANIMAL SOUNDS

Direct children to think which animal makes more sound when running:

- A boy or a deer?
- A turtle or a pig?
- A donkey or a cat?
- A girl or a mouse?
- A puppy or a pony?

Children may name other comparisons.

KITCHEN SOUNDS

Collect kitchen items, such as a mixing spoon, eggbeater, vegetable brush, metal pan, and plastic bowl. Discuss with the
children the sounds made when each item is used. One child is selected to make these sounds with these items while the other children close their eyes. The child who guesses correctly becomes "It."

THE SOUNDS I LIKE TO HEAR

The sounds I like are not the same,
But I hear them all at my favorite game.
One of the sounds I must report
Is a basketball bouncing on the court.
The sound of the people up in the stands,
as they whistle and shout and clap their hands.
The sound of the buzzer as the game begins,
The shouts of encouragement from all of my friends.
The sound I like better yet
Is the sound of the ball swishing the net.
The sound of all the running feet.
The sound of victory, oh, how sweet!
The sound of joy when the game is won;
The sound of the coach saying, "A job well done!"

Scott Fogle

SOUNDS AROUND US

A goose can honk like an automobile.
A snake can hiss like this-s-s-s-s.
An owl can hoot like a railroad train.
A bee can buzz and does-z-z-z-z.
A cow can moo like an old foghorn.
What pigeons do is coo-oo-oo-oo.
But nicer than hisses or buzzes or coos
Is the purr-r-r-r-r that I hear from my kitty.
It's pretty.

Ruth Manley Powers
HEARING RESOURCES

Arrange a field trip to a facility which provides audiometric testing. The children may take turns having their hearing assessed and observing other children being checked. Discuss the experience. Role playing of the experience may occur in the early childhood center.

TAPED SOUNDS

Record on tape a variety of sounds which the children might be expected to recognize, such as a door closing, car horn honking, electric mixer in use, alarm clock buzzing, toilet flushing, teacher talking, etc. The children will identify the sounds as they listen to the tape. Collect magazine pictures of the items taped. The children may match the picture of the item to its sound.

TAPED VOICES

Record on tape the children's voices, as well as that of the teacher and other adults. The children will identify each voice. They may also have an enjoyable experience listening to themselves sing a simple song.

SOUND SCREEN

Set up a screen with a large cloth, sheet of cardboard, or other barrier. Behind it, provide a series of sounds which the children may identify. Use an eggbeater being turned, scissors cutting paper, drum being tapped, rubber ball being bounced, etc.

VIBRATION AND SOUND

Place a metal strip or ruler on the edge of the table. Hold it with one hand while you pull down with the other hand. Let it snap upward quickly. Discuss the fact that the movement is called vibration. Children will feel the air move as it vibrates; they will also hear the sound. Children may take turns with the experience.

RUBBER BAND SOUNDS

Stretch rubber bands between two chair legs. Children will note that no sound is heard. Have each child pluck the rubber bands to note the resulting sound.
SEEING
UNIT 6

CREATIVE LEARNING:
A CURRICULUM FOR PREPRIMAR Y CHILDREN

THE CHILDREN'S HOUSE
Mankato State University
Mankato, MN 56001
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MAGIC CIRCLE WALK

Provide each child with a 12" length of string and a magnifying glass. Take a walk outdoors. Each child will make a circle in the grass with her string and examine with the magnifying glass the items which are inside the circle.

SIGHT COLLAGE

Children will cut out magazines pictures of human eyes and items they like to observe. Paste them into a collage arrangement. Each child may make her own collage or this could be a group composite project.

RAINBOW

Use a prism to make a rainbow. Discuss how the sun's rays can be separated to show the rainbow colors. Make soap bubbles; examine the colors. See if the colors change when food coloring is added to the soap mixture.

SIGNS AND SYMBOLS WALK

Take a walk and look for traffic signs, directional signs, and information signs. Discuss the importance of these signs for our safety and information. A follow-up activity could allow children to replicate these signs. A traffic light may be made with red, yellow and green circles glued to black construction paper. Other signs may be made, such as the stop sign used by traffic crossing guards.

OPTOMETRIST TRIP

Visit an optometrist who will demonstrate and explain her equipment. Give children an opportunity to view the letter chart; note that the rows of letters become smaller at the bottom and are more difficult to see. Back in the classroom, the children may set up an optometrist office for dramatic play.
VISION AIDS

Set up a learning center with instruments which alter or enhance vision. Include items such as eyeglasses, magnifying glasses, binoculars, telescope, microscope and color paddles. Provide objects for children to examine with these instruments.

KALEIDOSCOPE

Children may make kaleidoscopes. Place shavings from wax crayons between two pieces of wax paper. Iron with a warm iron (done by the teacher). Attach to one end of a paper towel roll. Hold the kaleidoscope to the light. Note the fact that the crayon pieces have melted and blended together to form new colors.

EYEGLASSES

Each child may make eyeglasses. Cut frames from poster paper. Glue colored cellophane to the frames. Attach pipe cleaners to fit the ears. Discuss the fact that items appear different when viewed through colored paper.

DIFFERENT HUES

Cut paint sample cards apart and glue to oaktag cards. Store the hues for colors in separate envelopes. Children will arrange hues for one color from lightest to darkest.

DYES

Make dyes using natural ingredients, such as spinach leaves, yellow onion skins, and beets. Boil the vegetable or leaves in two quarts water until the water is dark. Strain the vegetable out and use as a dye bath. Children can dye pieces of fabric.

BLINDFOLD WALK

The importance of vision is emphasized when we cannot see. Provide a blindfold walk to experience this fact. Children will work in pairs, with one person being blindfolded and the partner leading. The blindfolded child will hold a cane (a long cardboard roll) and take the hand of the partner, who will direct the experience by talking about the walk. Discuss the importance of hearing and touching for blind persons.
BLINDFOLD LUNCH

Each child will be blindfolded for a snack. Discuss the means by which the child identifies the food, how she manages to get the food from the plate to her mouth, and her reliance on touching and tasting when she cannot see what she is eating.

SEEING EYE DOG

Visit a blind person with a seeing eye dog. Experience the fact that the dog "sees" for the blind person. Learn the importance of respecting the dog as a helper to the blind person, rather than as a pet with which to play.

APPEARANCES

Everyone appears different. Trace the outline of each child's body on a long roll of paper. Each child will color her clothes, provide her facial features, etc. Talk about the similarities and differences among the children in size, shape and colors.

BINOCULARS

Each child may make binoculars. Tape two short cardboard rolls side by side. Hold the binoculars to the eyes and focus on viewing another child. Give a detailed description of that child--her facial features, color of hair, color of clothes, etc.

LIGHT, LIGHT

Some objects let light through (are transparent), and other objects do not. Provide objects of each type. Children will experiment to discover which objects let light in and which do not.

EYE CHART

Children will work in pairs. View the partner's eyes. Discuss the color of the eyes (iris), pupil, eyelashes and eyebrow.
COLOR MIXING

Provide different colors of tempera paint. Using small containers, each child will mix two different colors. White plastic egg carton cups may be cut apart to mix the colors in. Water that has been colored with food coloring may also be used for mixing. Children enjoy using eyedroppers to transfer colors from one container to another. Discuss and identify the resulting color.

INVISIBLE WRITING

Write a message or draw a picture with milk on white paper. Note the fact that it is difficult to see the words or pictures. Heat the paper in an electric skillet. The writing or picture will turn brown and the message will be revealed.

EYE CARE

After a visit to the optometrist, discuss the importance of eyes and what we can do to protect our eyes. Examples would be using care with sharp objects (scissors), wearing goggles when we work at the carpenter table, and checking with the doctor when our eyes are infected.

POLICE OFFICER, FIND MY CHILD!

One child is the police officer. Another child describes the missing child (a child in the group) in terms of color of hair, clothing, etc. The police officer finds the missing child based on the description.

WHAT'S MISSING?

Have several objects on a tray. Assist children in observing and discussing them. While the children's eyes are closed, remove one object. Children will identify what is missing.

FINGERPAINT TO MUSIC

Provide music from a record player, tape recorder or other source. Arrange for children to fingerpaint with one color. After a few minutes, provide music with a different tempo and add another color of paint for the children. Encourage children to express the sound of the music in their fingerpainting. The experience emphasizes the relationship of sight and sound in art.
BEAR HUNT

(Leader gives the line which is repeated by the group.)

Let's go on a bear hunt! (Pat hands on thighs unless otherwise indicated.)
Okay. Let's go.
Open the gate. Close the gate.
Coming to a bridge. Can't go around it. Can't go under it.
Have to go over it! (Thump chest with closed fists.)
Coming to a river. Can't go over it. Can't go under it.
Have to swim it! (Pretend to do crawl stroke.)
Coming to a tree. Can't go over it. Can't go under it.
Have to climb it! (Pretend to climb tree.)
Coming to a wheat field. Can't go over it. Can't go under it.
Have to go through it! (Rub palms together to make swishing sound.)
Oh! Oh! I see a cave. It's dark in here! (Cover eyes.)
I see two eyes! I feel something furry! (Reach out hand.)
It's a bear! Let's go home! (Pat hands on thighs.)

(Repeat above actions in reverse, using fast motions. At the end, say . . .
Shut the gate! We made it!

GRANDPARENT'S GLASSES

These are grandmother's glasses. (Make circle of thumb and forefinger over eyes.)
This is grandmother's cap. (Peak hands on head.)
This is the way she folds her hands, (Fold hands.)
And puts them in her lap. (Place folded hands in lap.)

These are grandfather's glasses. (Make circle of thumb and forefinger over eyes.)
This is grandfather's hat. (Flat hand on head.)
This is the way he folds his arms, (Fold arms.)
And sits there just like that. (Sit upright.)

DID YOU EVER SEE A LASSIE?

One leader is chosen. Other children do as the leader does as they sing "Did You Ever See A Lassie?"

Did you ever see a lassie, a lassie, a lassie,
Did you ever see a lassie, go this way and that?
Go this way? And that way? Go this way? And that way?
Did you ever see a lassie go this way and that?
COLOR RIDDLES

Children will create rhyming riddles in which a color word is one of the rhyming words. Following are two examples:

The sky is pretty.
The sky is _____. (blue)
It's way up high
Over me and you.

A fancy trick
Which I have seen—
Yellow and blue
Turn into _____. (green)

COLOR WORD READING

Print color words on 2" X 6" oaktag. Put cards in a small container. Children take turns getting a card. If they can read the color word, they get to keep the card in their pile. If not, they return it to the container. The child with the most words at the end is the winner.

"I CAN SEE" BOOK

Each child may make her own book, or one composite book may be made for the class. The teacher writes on each page (or children who are able may do their own writing) "I can see . . . " Each child writes a word of something they especially like to see. Illustrations may be made with crayons or paints, or pictures from magazines may be cut and pasted on the page.

TRAFFIC SIGNS

Provide two sets of shapes of traffic signs. On one set, print the words for the sign; leave the other set blank. Children will match the two sets as they learn the shapes and words for traffic signs.
SMELLING
UNIT 6

CREATIVE LEARNING:
A CURRICULUM FOR PREPRIMARY CHILDREN

THE CHILDREN'S HOUSE
Mankato State University
Mankato, MN 56001
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THE SMELLING SONG (Sing to the tune "Did You Ever See A Lassie?"

Have you ever smelled a rosebud, a rosebud, a rosebud?
Have you ever smelled a rosebud? Ah, how does it smell?
(Adverbs and adjectives which might be used include spicy,
sweet, sour, good, burned, or rotten.)

THINGS I LIKE TO SMELL

Each child will make a flower. In each petal of the flower, the child will draw a picture of one thing she likes to smell. Discuss the items. Make a class composite book with the finished flowers.

FAVORITES

So many things I like to smell,
A tulip, lilac and bluebell,
A rose or daisy in the dell,
A roasted peanut in the shell.

So many things I like, that's true.
How many things are liked by you?

MY APPLE

Look at my apple, it's nice and round.
(Make a ball shape with both hands.)
It fell from a tree down to the ground.
(Make a downward motion.)
Come let me share my apple, please do!
(Make a beckoning motion.)
We can cut it right in two.
(Make a slicing motion.)
One half for me and one half for you.
(Hold out two hands, sharing halves.)

GIFT SACHET

Place a drop of perfume on a one-inch square of blotting paper. Glue this blotting paper on a large sheet of construction paper. The child will decorate the construction paper. The completed sachet may be placed in an envelope and given to the person for whom it is intended. These gifts are nice to place in closets and bureau drawers.
IDENTIFYING SCENTS

Collect a variety of items with a distinctive scent, such as soap, peanut butter, oranges, perfume and cookies. Blindfold a child; hold one of these items near her nose and ask her to identify the item by the smell.

SMELLY CONTAINERS

Prepare several containers, such as pill bottles, baby food jars, or film cans with cotton balls dabbed with a different scent in each container. Use food flavorings, such as almond, vanilla, lemon, garlic, cinnamon; or use other scents, such as dishwashing soap, shaving cream, vinegar, etc. Children may match the odor with a picture of the item. Or there may be two containers of the same odor for the child to match.

VEGETABLE SOUP

Children may wash, clean, and chop a variety of vegetables to be cooked in a soup mixture. Discuss the odor of each vegetable as it is prepared raw, and again as the soup is cooking and being eaten.

To make the vegetable soup, use raw vegetables such as three carrots, two onions, two potatoes, two stalks of celery, etc. Simmer in four cups water and two beef bouillon cubes over medium heat until the vegetables are tender. Cool the soup until it is comfortable for the children before serving.

SMELLING TRAY

Collect a variety of different smelling objects; place them on a tray. For example, provide perfume, an orange, flowers, peanuts, soap, bananas, garlic, scented candle, etc. Each child may smell each object and identify it. Cover the tray and ask the child to recall the objects she has smelled. Which smells were easy to identify and remember? Which were not? Why?

MR. YUK

Some smells are unpleasant and/or dangerous. Discuss with the children the fact that smells may help us to be safe. Provide some Mr. Yuk labels which are available from the local poison control center. Or children may make their own Mr. Yuk labels. Collect some common household items to determine whether or not they are safe. Include sour milk, rotten egg, gasoline, and clorox. Attach Mr. Yuk stickers to the poisonous items.
MAPLE SYRUP

Use magazine pictures or photographs of various aspects of making maple syrup. Discuss the various utensils used as well as the cooking process which results in syrup made from the sap. Children may dramatize the process using clothing and boots they wear to school. Provide realistic tools, such as tree taps (both hand-carved and commercial metal), drill, containers (plastic, metal and wood), plastic lines, evaporator pan, thermometer, hydrometer, jars, labels, firewood and cooking shed.

MAPLE SYRUP SCRAPBOOK

Children will bring newspaper stories about making maple syrup. Include children's drawings of the process. Make a list of maple syrup recipes and uses for the maple syrup, such as baking beans, on pancakes and waffles, and in making maple syrup candy.

APPLE SMELL AND TASTE

Provide each child with a slice of apple to eat. Discuss the taste of the apple. Then have them hold their noses as they eat another slice of apple. Discuss the taste of the apple this time. Discover that the senses of smell and taste are interrelated.

FLORIST SHOP

A florist shop may be established in the classroom. Shelves and tables will be needed. Provide various flower plants and cut flowers. Working materials will include pots, potting soil, sand, scissors, trowels, water, watering can, stakes and natural fertilizer. Children may experience potting new plants, cutting flowers, arranging floral bouquets, etc.

CHEESES

If possible, visit a creamery where cheese is made, or visit the cheese section of a grocery store. Note the different cheeses and their odors. Discuss the fact that cheese is made from milk (cows, goats, sheep, etc.). Bring different kinds of cheeses back to the classroom. Have a cheese and cracker snack. Discuss the odors of the cheeses.

PEANUT BUTTER BALLS

Enjoy the smells when making Peanut Butter Balls. Combine 1 cup peanut butter and 1 cup honey. Add 1 1/2 cups powdered milk. Stir. Roll into small balls. Smell, eat and enjoy!
SPICES AND HERBS

Each child may make a pattern of a spice container on colored construction paper. In the center of each, put a few drops of glue. Sprinkle a few spices on the glue. Included could be cinnamon, cloves, sweet basil, rosemary, garlic powder, onion flakes, oregano, anise, nutmeg, etc. The child may print the name of the spice on the picture.

MY FAVORITE SMELLS

Discuss with the children their favorite smells. Each child may then make a collage of some of these. Use real items, if possible, for the collage. Pictures from magazines or drawings by the children may also be used.

SMELLS BULLETIN BOARD

Pin up or staple several pictures of both pleasant and unpleasant smelling things. Attach a piece of yarn to each picture. Have the yarn long enough to reach one of two smelling pots at the base of the bulletin board display. Label one of the smelling pots "Pleasant Smells" and the other "Unpleasant Smells." Children will put the yarn in the container in which it belongs. A variation would be to place the pictures themselves into the receptacles. The children might also add appropriate pictures to the bulletin board as they find them in magazines or make them with paints or crayons.

SMELLY HUNT

Hide some scents, either the real thing or cotton dabs, around the room. Ideas to use include room deodorizers, perfume, onions, cheese, incense, etc. Provide clues for finding the items.

Allow a specific length of time, at the end of which they gather in the group to discuss what they have found. Award all with smelly stickers.
FLORISTS

Visit a flower shop, local garden or greenhouse. Smell the individual flowers. In what ways do they smell similar? Different? What are the favorite scents of the children? Write a class composite thank you note following the visit. Children may make pictures of their favorite flowers as part of the thank you.

FLOWERS

Children will help arrange a bouquet of flowers in a vase. During the day, the children may smell and touch the flowers. Change the bouquet from time to time, providing seasonal flowers for children to experience.

HOUSEKEEPING SMELLING

Provide cologne in the housekeeping area for children to use in their dramatic play. Fragrant room air fresheners may also be made available. Scented soaps may be provided, too, for children to use in washing their own hands, as well as for bathing the dolls.

Freshly made toast with peanut butter may be put in the housekeeping area. Children may spread the peanut butter and serve it to each other. Discussion of the toast and peanut butter scents may include whether or not these are desirable scents.

SMELL THE FLOWERS

Cut flowers of a variety of shapes from different colors of construction paper. Place a few drops of cologne on a cotton ball and glue it in the center of the flower. Pin the flower on the child's clothing. As she wears it throughout the day, she can note the fragrance.

SMELLING WALK

Take a walk around the local area; identify the odors encountered. Discuss whether the odors come from kitchens, offices, traffic, factories, garbage, gardens, street repairs, etc.
LUMBERYARD SMELLS

Visit a local lumberyard to note the smells of the various woods. Bring some boards back to the classroom. Discuss the odors as well as the uses of the woods. Discuss the trees from which the boards were taken.

APPLE CIDER

Locate a person with equipment and knowledge to make cider from apples. Such a person may be located through the local county extension office or local apple growers. Plan a field trip for the children. During the trip, direct the children's thinking to the many apples used to make the cider. Give each child a turn at cranking the press. Smell the juice as it flows out of the press. Sample the juice as it is made. Arrange to take some of the juice back to be enjoyed in the classroom.

After the trip, review the various aspects of the experience. Children may make a picture story of the steps involved. Be creative in sending a thank you note to the person who made the experience possible.

POPCORN PARTY

If possible, find a farmer who raises popcorn. Visit the farm; discuss the cornstalks, ears of corn, kernels, etc. Bring some ears of popcorn back to the classroom. Children may shell the popcorn. Pop some of the corn. Note the odor as it pops. Smell, eat and enjoy the popcorn!

MAPLE SYRUP MAKING

Take a field trip to a farmer who has a sugar maple tree. Perhaps she will demonstrate how to tap the tree for the sap. Bring some sap back to the classroom. Boil it several hours until it is of syrup consistency. Or brown sugar and water may be added to the sap to make a greater quantity of maple syrup. If sap is not available, maple syrup may be made with the brown sugar and water, adding maple flavoring.

APPLE BUTTER MAKING

Children may make apple butter. Provide each child one apple and a table knife. She will cut the apple into four pieces and remove the seeds and stem. All pieces will be put into
an electric skillet. Each child will put one tablespoon of water into the skillet. Cook on medium heat until apples are tender. Press the pulp with a foley food mill. Each child will add one tablespoon of sugar and a few grains of cinnamon to the pulp. Cook it again until the consistency of apple butter and cool. Spread on bread. Smell, eat and enjoy! (Throughout this experience, discuss the smell and how the smell changes.)

SMELL PUZZLERS

Puzzles and riddles may help children think about smells. Here are a couple of examples. Others may be created by the children.

When I see danger, I raise my tail up high.
Then it's time to say "Good-Bye!"
What am I? (A Skunk)

Why are flowers lazy? (Because they are always found in their beds!)

What is the scariest thing in a lunchbox? (A Sand"witch"!)

SMELL TRIP

What would you smell if you went to the following places? Draw pictures and/or list the items.

1. Flower Shop
2. Lumberyard
3. Laundry
4. Bakery
5. Ballgame
TASTING
UNIT 6

CREATIVE LEARNING:
A CURRICULUM FOR PREPRIMARY CHILDREN

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Mankato, MN 56001
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DRIED APPLES

The children may wash and slice apples into thin slices. Thread a plastic needle with heavy thread for each child, who will then string the apple slices on the thread leaving some space for air to circulate between the slices. Hang the apples in the room for three or four days (longer if the weather is damp). Then taste and compare this dried product with a fresh, raw apple.

TASTING WITHOUT SMELLING

Cut similar size and shape pieces of apples and onions. Blindfold one child at a time; ask the child to gently pinch the nostrils together. The child will then taste samples of the apple and onion to see if she can distinguish between the two by taste alone. Discuss why or why not? What effect does smell have on the taste of food?

CHARTING SWEET AND SOUR

Provide a variety of items for the children to taste, such as sardines, cocoa, bitter chocolate, milk chocolate, grapefruit and pineapple. After tasting the foods, the children may decide if each is sweet or sour. Prepare a chart with sweet as one category and sour as another. After each child has tasted the food, she may put a picture of the food on the chart in the appropriate place. Children may make pictures of the foods to chart. Or the pictures could be prepared beforehand, in which case each child will choose the appropriate picture to put on each part of the chart.

LEMONADE

Each child may make her own lemonade for a tasting experience. Pour 1/4 cup of water in a cup. Add 1 teaspoon of sugar or honey. Stir until dissolved. Add 2 teaspoons lemon juice. Stir. Add one ice cube. Drink and enjoy the taste!

LOOK ALIKES

Provide a variety of pieces of food which look alike, such as peeled slices of apple, potato, pear and onion. Compare the tastes. Compare pieces of food which contrast in some characteristic. Perhaps they are foods with a contrasting taste, such as lemons and bananas; or the food may have contrasting texture, such as carrots and bananas. Discuss the similarities and differences in color, flavor and texture.
THINGS WE EAT

Collect pictures of edible items and inedible items. Discuss with the children each picture and why or why not it is edible. After discussing the pictures, the children may take turns selecting a picture and telling the group whether or not it can be eaten, and why. Collect pictures of inedible objects, such as scissors, pencils, coins, clothing, and other items which children should be discouraged from eating. Children will discover which items are edible and which are inedible.

PEANUT BUTTER AND JELLY SONG

First you take the peanuts, and you dig 'em, dig 'em, dig 'em, dig 'em, dig 'em; (pantomime digging motion)
You get peanut, peanut butter, "jelly". (whisper "jelly")
Peanut, peanut butter, "jelly". (whisper "jelly")

Then you take the peanuts, and you smash 'em, smash 'em, smash 'em, smash 'em, smash 'em; (pantomime crushing peanuts with your hands)
You get peanut, peanut butter, "jelly". (whisper "jelly")
Peanut, peanut butter, "jelly". (whisper "jelly")

Then you take the berries, and you pick 'em, pick 'em, pick 'em, pick 'em, pick 'em; (pantomime picking berries)
You get peanut, peanut butter, "jelly". (whisper "jelly")
Peanut, peanut butter, "jelly". (whisper "jelly")

Then you take the berries, and you smash 'em, smash 'em, smash 'em, smash 'em, smash 'em; (pantomime crushing the berries with your hands)
You get peanut, peanut butter, "jelly". (whisper "jelly")
Peanut, peanut butter, "jelly". (whisper "jelly")

Then you take the berries, and you spread 'em, spread 'em, spread 'em, spread 'em, spread 'em; (pantomime spreading jam on bread)
You get peanut, peanut butter, "jelly". (whisper "jelly")
Peanut, peanut butter, "jelly". (whisper "jelly")

Then you take the sandwich, and you bite it, bite it, bite it; and you chew it, chew it, chew it, chew it, chew it; (pantomime biting and chewing a sandwich)
You gumpft peanmuft, peanmuft buppr, "chully" (whisper)
Peanumuft, peanmuft buppr, "chully" (whisper)—These lines are sang as if you had a mouth full of peanut butter!
POPCORN POEM

Pop, pop, pop, says the popcorn in the pan.
Pop, pop, pop, you can catch me if you can.
Pop, pop, pop, says each kernel hard and yellow.
Pop, pop, pop, I'm a dancing little fellow.

I'M A LITTLE KERNEL (Sing to the tune of "I'M A LITTLE TEAPOT")

I'm a little kernel in the pot.
Heat me up and watch me pop.
When I get all big and white, I'm done.
Popping corn is lots of fun.

SWEET AND SOUR

Syrup and honey are sweet.
Pickles and lemons are sour.
Peanuts and crackers are a treat
For a snack most any hour.

THE THREE BEARS

Read or tell the story of "The Three Bears." Afterwards, each child may prepare a bowl of porridge (oatmeal). Each child will need a small bowl (such as a margarine container), and a spoon. Provide a supply of instant oatmeal in a bowl. Also provide warm (not hot) water or milk in a pitcher. Each child may measure two tablespoons oatmeal in her bowl, and add four tablespoons water or milk. Stir with the spoon. When thick, it is ready to eat—just like Goldilocks did! (Sugar and milk may be added to make the oatmeal more palatable.)

DRIED FRUIT

Provide a variety of dried foods and their fresh counterparts for the children to taste and compare. Try raisins and grapes, prunes and plums, dried and fresh apricots, dried and fresh apples, etc. Discuss the difference in taste between the fruits which are dried and the fruits which are fresh.

APPLES

Provide apples in many different forms, including raw apples, applesauce, apple butter, apple juice and dried apples. Compare the difference in taste among these forms of apples. Use words such as sweet, sour, salty, bitter, etc.
CAMOMILE TEA

Read or tell the story of Peter Rabbit to the children. A follow-up activity may involve making and tasting Camomile Tea. Tea leaves for Camomile Tea may be purchased at natural food stores. Place two tablespoons of Camomile Tea leaves in a tea ball. Heat four cups of water to a safe temperature (luke warm) for children. Put the water in individual cups and place the tea ball in each cup long enough to flavor the water. The tea does not need to be boiled and steeped.

A variation would be Camomile Sun Tea. Place two tablespoons of Camomile Tea leaves in four cups of luke warm water. Place in direct sun until flavored (approximately one hour).

TASTING PARTY

Provide a small sample of three or four different foods for the children to sample and compare. Use foods with which the children will be familiar, as well as more unusual items. Include fresh, raw, dried and cooked fruits and vegetables. Also try as many ethnic foods as possible. Some suggestions are carrots, lettuce, parsley, chives, sunflower seeds, peanuts, avocados, kiwi fruit, pomegranates, fried eggplant, egg rolls, raw turnip, kohlrabi, brussel sprouts and potato pancakes. Make use of natural resources in your area or specialty items from the community.

HAWAIIAN TASTING PARTY

Provide fresh and canned pineapple, pineapple juice, whole coconut, shredded coconut, and poi (tapioca pudding). Discuss the taste of each; compare the tastes. All of these foods are native to Hawaii.

SNACK TIME

Provide a toaster and, if possible, several varieties of bread. The children may taste the bread before it is toasted and then compare it after toasting. Butter and jam may also be provided. This may be used as part of the class snack or lunch.

VEGETABLE DIP

The children may clean and scrape carrots. Cut them into chunks. Each child may then prepare a dip to eat with the carrots. Compare the taste of the carrot with and without the dip. To make the dip, each child will need a small margarine container
and a fork. Each child may measure one tablespoon of cream-
style small curd cottage cheese; mash with a fork. Each child 
may then add a sprinkle of dill weed, a sprinkle of onion or 
garlic salt, a dash of Worcestershire sauce. Mix thoroughly.

CARROTS AND MORE CARROTS

Provide enough small carrots for each child to clean and scrape 
one. Cut into chunks; allow each child to taste one of her 
chunks. Cook the rest of the carrots; allow each child to taste 
the cooked carrots. Discuss the taste of the raw and cooked 
carrots. Use the remainder of the cooked carrots to make carrot 
cookies.

CARROT COOKIES

1 cup sugar
1 cup butter
1 tsp. vanilla
2 Tbsp. orange juice
1 egg, beat well
½ tsp. salt

1 jar canned strained 
baby carrots or ½ cup
mashed cooked carrots 
2 cups flour 
1 tsp. soda 
1 cup coconut

Mix well and put in refrigerator one hour. Drop by teaspoon on 
cookie sheet and bake for 10-12 minutes at 375 degrees.

TASTY WORDS

Discuss with the children some of the words which tell how things 
taste, such as sour, sweet, salty, spicy, bland, peppery, tangy, 
tart, nutty, bitter, oily, fishy, icky, etc. Then identify 
and discuss foods whose taste would be described by one of these 
words. Finally, group together foods with similar tastes, such 
as cookies and candy for sweet foods. Include foods, such as 
lemonade, cookies, dill pickles, orange juice, pretzels, milk, 
peanuts, peanut butter, sardines, chocolate and bitter chocolate.

FINGER JELLO

Make finger jello. Taste the powdered unflavored gelatin before 
dissolving. Compare this taste with the taste of the finger 
jello. To make the finger jello, sprinkle 4 envelopes of unfla-
vored gelatin over 1½ cups cold fruit juice. Let stand for 
one minute. Add 1½ cups hot fruit juice. Stir until gelatin 
is completely dissolved. Pour into an 8" baking pan; chill 
until firm.
ICE CREAM

Each child may make her own ice cream. For each child, use a small container, such as a baby food jar. Each child will put in her container ½ cup milk and 2 tablespoons instant pudding mix. Put each container into a half gallon milk carton with the top cut off. Pack crushed ice around the jar within the milk carton. Pour 4 tablespoons of salt on the ice, add another layer of ice, and more salt as needed. (Do not get ice and salt in the ice cream mixture.) Keep stirring the mixture until desired consistency. Remove the small container from the ice. Each child may eat and enjoy the taste of her ice cream!

INDEPENDENCE DAY KEBOBS

Each child may make a kebob of red, white and blue fruit. Use blueberries, apples and strawberries for these colors. Eat and enjoy the taste!

MUFFINS

Using muffin batter, have the children add blueberries, mashed bananas, peanut butter, dates and nuts. Bake the individual muffins in the microwave oven so the children can observe the muffins baking, smell them cooking, and then eat the finished product.

HARVEST FESTIVAL

Plan a fall harvest festival with different foods for children to prepare and to taste. Apples are very popular in the fall. Children may taste raw and cooked squash; compare the difference. Pumpkin may be tasted raw and in a pie. This harvest festival may be scheduled around Thanksgiving time, which makes it even more of a special occasion.

WHITE SUBSTANCES

A discussion of the color of ingredients will lead children to experience the fact that the color does not determine the
flavor of foods: Five white substances will be presented in containers so children may taste each. Include items such as granulated sugar, powdered sugar, salt, baking powder, baking soda, cornstarch or white flour.

SPINACH WRAPPERS

Children will taste and compare leafy vegetables as they prepare Spinach Wrappers. Provide fresh, raw spinach. Wash thoroughly. Combine 1 tablespoon cream cheese with 3 shelled, broken peanuts. Spread on a spinach leaf. Roll. Eat and enjoy!

TONGUE TASTE

A bulletin board may be made depicting a tongue; identify the areas of the tongue where the various types of taste buds are located. Discuss with the children their favorite foods; identify which part of the tongue represents those flavors. Note that some foods may be easily identified as one type or another, while other foods are more difficult to identify. Note also that the texture, temperature and odor of the food influence its taste.

TASTE COLLAGE

Make a group collage using the sense of taste as the major theme. Different foods and flavors may be represented.

TASTE BOOKLET

Each child may make a booklet of foods which are nutritious. The foods may be categorized according to taste: sweet, sour, bitter, etc. Children may obtain pictures from magazines or may make their own pictures of foods.

SOMETIMES FOODS VS. EVERY DAY FOODS

Collect pictures of nutritious foods, as well as junk foods. Help children decide which foods should be eaten only sometimes, and which foods should be eaten every day. Children will begin to develop knowledge of nutritional value.
BAKERY

Children may establish a bakery. Peanut rolls, pretzels, muffins, bars and cookies make tasty bakery items. Spread peanut butter on soda crackers or cut shapes from bread and spread with butter and jam for items to sell at the bakery. Some children may be the bakers; others can be salespeople; and others the customers. Provide coins for the sales transactions.

GAME: "NAME THAT TASTE--COME ON DOWN"

Prepare in advance a box of foods to be used in the game. Each item should have a distinctive taste. Put pieces of each item in plastic bags inside the box. Select two children to "come on down" to the box. Blindfold both children. They will take a piece of food from one plastic bag, taste it, and identify it by its taste. When correct, the child selects another person to take her place. NOTE: CHECK BEFOREHAND TO BE SURE NO CHILD HAS A KNOWN ALLERGY TO ANY OF THE ITEMS USED.

TASTING FIELD TRIP

A field trip to someone's garden may reveal information about various vegetables and their taste. Perhaps the owner will allow the children to harvest some foods. Take them to the classroom to be cleaned and eaten. Or a trip may be taken to the grocery store to purchase foods.

GUESS WHAT?

Describe a food. Be sure to include its taste. For example, say "It is yellow, smaller than an orange, and tastes sour. What is it?" Let the children have turns describing foods.

GAME: "INSIDE-OUTSIDE FOODS"

Children will be able to match the inside with the outside of an identical fruit. On 7" x 14" oaktag, glue pictures of five fruits, showing their outer appearance. Include common fruits, such as banana, apple, orange, strawberry and pear. On 3" x 5" cards, glue pictures of the inside of these same fruits. Place the individual cards face down. The first player turns up one card. If she correctly identifies its counterpart on the oaktag, she places it in the pile in front of her. The next player takes a turn. The game ends when all small cards have been correctly matched with the larger card.

Patterns for some foods appear on the following pages.