

Make Your Own Musical Instrument



Grade Three

**(Please return instrument package when you
are finished – Thank you)**

Outcome: I can demonstrate ways to produce sounds.

Make Your Own Musical Instruments

1. Choose an instrument you would like to make
2. Have Mom and/or Dad help you get supplies organized.
NOTE: Your parents may need to supervise or help you with more difficult instrument projects.
3. BE CREATIVE AND HAVE FUN TOGETHER!!
4. Return this package and bring your instrument to school on the due date.

Parents and Guardians,
Please feel free to call the school if you have any questions. If you find other instruments at home or on the Internet that you would like your child to try – GREAT! Remember: Keep it Simple Sweeties! This is a project for you and your child to do together. Thank you for your help and cooperation in our Hearing and Sound Unit.



Jingle Sticks

Materials :

- o six metal bottle caps for each stick
- o six inch dowels or sticks
- o common nails, approx. 1 3/4" long
- o one nail larger in diameter, to use to punch holes in bottle caps
- o Polyurethane or other clear finish
- o optional: different colored electrical tape, and permanent black marker

Instructions :

Coat dowels with 2 coats of polyurethane, and allow to dry. Using larger nail, hammer holes in the centers of the bottle caps. Using common nails, hammer 3 sets of 2 bottle caps each along one side of the dowel, leaving enough dowel for handle. If desired, decorate handle end of dowel with bands of electrical tape, and draw design on tape with marker



Jingle Bracelets

Materials:

- o elastic ponytail holders or Chinese jump rope (one jump rope will make 7 jingle bracelets)
- o elasticized gold thread
- o scissors
- o jingle bells (available by the handful at craft and fabric stores, or on cards at variety stores)

Instructions:

If using Chinese jump rope, cut into seven inch lengths, and form bracelets by tying ends in a knot.

Using elasticized thread, tie 4 jingle bells on each bracelet, Space them equally around the bracelet.



Juice Can Shakers

These are fun ethnic-looking shakers- very easy to make!

Materials:

Juice cans with paper labels (Dole Pineapple is the only one I have found, but you may find others).

Duct tape

Waxed paper

Rice or other similar filling

Hot glue

Electrical tape in different colors (available from hardware stores for under \$2)

Instructions:

Drink the juice, remove the paper labels and pull tab, and wash and dry the cans. Put a small amount of rice in each can. You can hold your finger over the top and shake it, to see if it seems like the right amount. Place a strip of duct tape on waxed paper (the waxed paper is just to act as a backing for the tape while you cut it). Trace a circle using the bottom of the can, and cut out enough duct tape circle to have one for each can. Peel the waxed paper off, and carefully apply the tape over the top of each can. Then make a ring of hot glue around the edge of the duct tape to further seal the top. Lastly, put one piece of electrical tape around the middle of each can. If you use all four colors, red, blue, yellow, and green, and have 12 cans, you will end up with 3 cans of each color.

Make a Rainstick

Materials

Cardboard tube (from paper towels, wrapping paper, fabric, mailing)
straight pins (for thin tubes like paper towel or wrapping paper)
nails (for thick tubes - nails should be shorter than the diameter of the tube)
popcorn, seeds, beads for filling
hammer (if using nails)
masking tape
materials for decorating the outside (fabric, colored masking tape, papier mache, paint)

Instructions

1) Insert pins or nails into the side of the tube in a spiral pattern. Cover the nail or pin heads with tape to keep them in place.



2) Close off one end by taping on a circular piece of cardboard.



3) Pour in filling (Try different ingredients for different sounds)

4) Close off the other end of the tube.

5) Decorate the outside of the tube with colored tape, fabric, markers, paint or papier mache.





Quilting Hoop Drum

Materials :

- o 14" quilting hoop (available at craft and fabric stores)
- o white glue
- o heat-shrink nylon fabric (sold at airplane supply stores- you can order from Aircraft Spruce & Specialty Co. PH. 1-877-477-7823. Specify item # 09-00500. One yard of fabric will be enough for 8 14" drums, and is under \$4 a yard).
- o clear polyurethane and brush to apply it
- o acrylic paint or permanent markers for making design on drum
- o wooden dowel
- o wooden ball with pre-drilled hole the same size diameter as the dowel

Instructions:

Cut a 17" square of dacron. Spread a bead of glue on opposing faces of the two hoops. Place the inner hoop on a flat surface and overlay the fabric square so that the sides overhang evenly. Loosen the nut on the outer hoop so you can spread it enough to fit it over the inner hoop. Tighten the wing nut as you adjust the fabric, working out any wrinkle and puckers. Let glue dry. Heat-shrink the fabric by running an iron at the nylon setting repeatedly over the fabric. (each drum will tighten a little differently and have a slightly different sound). Trim the excess fabric with an exacto knife. Paint a design on the drum, if desired, and finish by sealing all surfaces with a coating of clear polyurethane.

Make the drumstick by cutting a dowel in 8" piece. Glue small wooden ball on the end.



African Tambourine

Materials :

- jar to set balloon in while forming paper mache
- 12" balloon
- masking or other tape
- awl or ice pick for punching holes
- hot glue and glue gun
- newspaper torn into 1" strips
- white glue and water mixture (1 part glue to 3 parts water)
- acrylic paint
- 1 3/4" wide cloth or duct tape (vinyl or electrical tape won't stick well)
- yarn or string
- cowry shells, buttons, or beads (shell necklace is less expensive than individual shells)

Instructions :

Blow up balloon to about 2/3 full size (this is arbitrary). Set the balloon in jar, and lightly tape it to keep it from rolling around. Dip strips of newspaper in glue and water mixture, and pull off excess by running paper through fingers. Cover top half of balloon with several layers of newspaper, and allow to dry for 2 days. When paper mache is dry, remove balloon from jar, and pop it. Using scissors, cut an even edge around the bottom so you have a bowl shape. Fold cloth or duct tape over the cut edge of the bowl.

Using an awl or an ice pick, punch holes all around the bowl, just below the cloth tape, and a couple of inches apart. Thread yarn or string through the holes, and attach shells or buttons on the outside of the bowl, allowing them to hang loosely making a sound when the tambourine is moved back and forth.

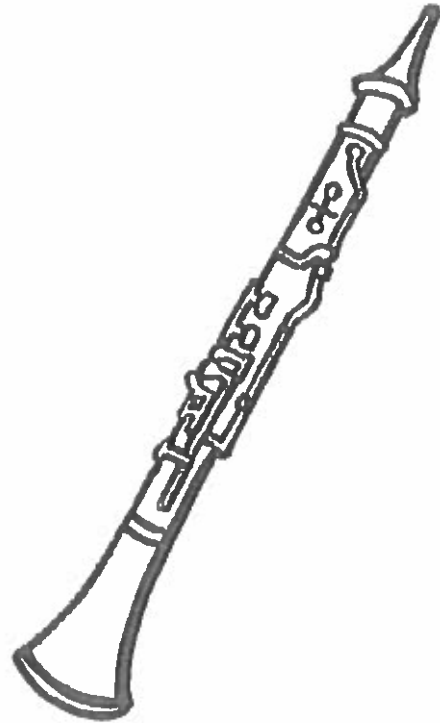
Comments: to play the tambourine, hold it in both hands, with fingers up, and twist wrists back and forth. Once you have mastered this, you can gently toss it while twisting your wrists.

MAKE YOUR OWN MUSICAL INSTRUMENTS

You can create your own orchestra at home! Make several of these instruments and invite your friends to make music with you. The following activities require adult supervision. Make each instrument special by decorating it with color and sparkles if you so choose.

A WOODWIND INSTRUMENT

makes sound when you blow air into it in a special way. Sometimes the player blows across an open hole. At other times, the player uses a reed to blow sound into the instrument. In an orchestra, the woodwinds are the flute, piccolo, clarinet, oboe, English horn and bassoon. Here are some woodwinds you can make at home:



BOTTLE FLUTE

Materials:

- Plastic or glass bottles of various sizes

Directions:

1. Blow across the top of each bottle until you get a "hooty" sound.
2. Notice how the sound changes as the size of the bottles change.
3. Put some water in the bottles and notice how the sound changes with different amounts of water. This instrument demonstrates how flutes and piccolos make sound.

COMB CLARINET

Materials:

- A small hair comb
- Squares of thin paper cut into 2" x 2" sizes

Directions:

1. Hold the comb so that the teeth point toward you.
2. Use your thumbs to hold a small piece of paper loosely on the comb.
3. Put your lips lightly on the comb and the paper so that they hold the paper on the comb.
4. Blow air across the paper and hear the sound it makes as it vibrates. This instrument demonstrates how clarinets, oboes, English horns and bassoons make sound.

STRAW OBOE

Materials:

- Plastic or paper drinking straws (paper works best)

Directions:

1. Flatten one end of a straw by pinching about 1/2 to 1 inch between your fingers.
2. Clip the corners off the flattened end so that it ends in two points.
3. Insert the trimmed end of the straw into your mouth with the flaps just inside your lips.
4. Apply very light pressure with your lips as you blow through the straw. The two flaps or "reeds" will vibrate against each other and produce a tone.
5. Try this with straws of different lengths and note how the pitch will change with the different sizes. This instrument demonstrates how the "double reed instruments", i.e., oboes, English horns and bassoons, make sound.

BRASS INSTRUMENTS are usually made of brass. However, you can make a substitute brass instrument out of some items you can find easily around your house. Brass players make their instruments sound by buzzing their lips together into a mouthpiece (some people refer to this sound as a “raspberry”). Practice this buzzing sound with your lips before you continue with the rest of this activity. This instrument demonstrates how trumpets, trombones, tubas and French horns make sound.

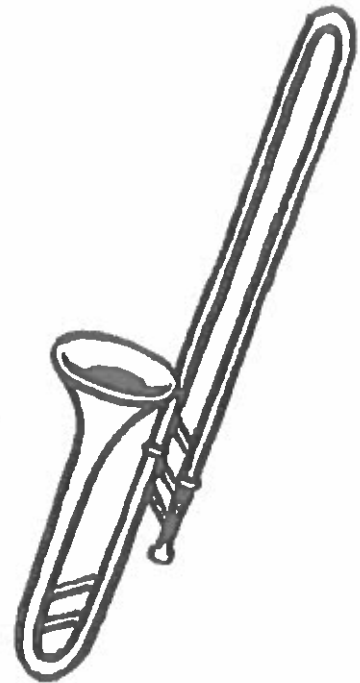
GARDEN HOSE HORN

Materials:

- For the bell, a pointed plastic cup or small funnel
- An 18"-24" length of garden hose
- For the mouthpiece, a smaller pointed cup, a piece of larger diameter garden hose or a plastic snap-on hose connector
- Duct tape

Directions:

1. Cut about 1-2" of the pointed tip off a pointed plastic cup. Discard the tip. If you prefer, you can use a small funnel instead. Insert the small end of the plastic cup or the funnel into the length of garden hose. Wrap duct tape around the connection to secure it. This will be the “bell” end of your instrument.
2. Cut about 2" off the tip of another pointed plastic cup. Cut the bottom point off the segment and discard the pointed tip. Insert the smaller end of the segment into the other end of the garden hose. If you prefer to use the snap-on hose connector, insert the smaller end of the connector into the garden hose. Wrap duct tape around the connection to secure it. This will be your mouthpiece for your instrument.
3. Coil the hose so that you can hold both ends as you play.
4. Put your lips into the mouthpiece end and buzz them together. The length of hose will determine how high or low your instrument sounds.



STRING INSTRUMENTS all have one thing in common—strings! The strings are stretched across a wooden body. Players use a bow or their fingers to make the strings vibrate and produce sound. The wooden body amplifies the sound (makes it louder). In the orchestra, the string instruments are the violin, viola, cello, double bass and harp. Here is a string instrument that you can make at home:

RUBBER BAND GUITAR

Materials:

- A small, sturdy cardboard box
- An assortment of rubber bands that can stretch around the box (choose a variety of lengths and thicknesses)
- A paper towel tube
- Duct tape

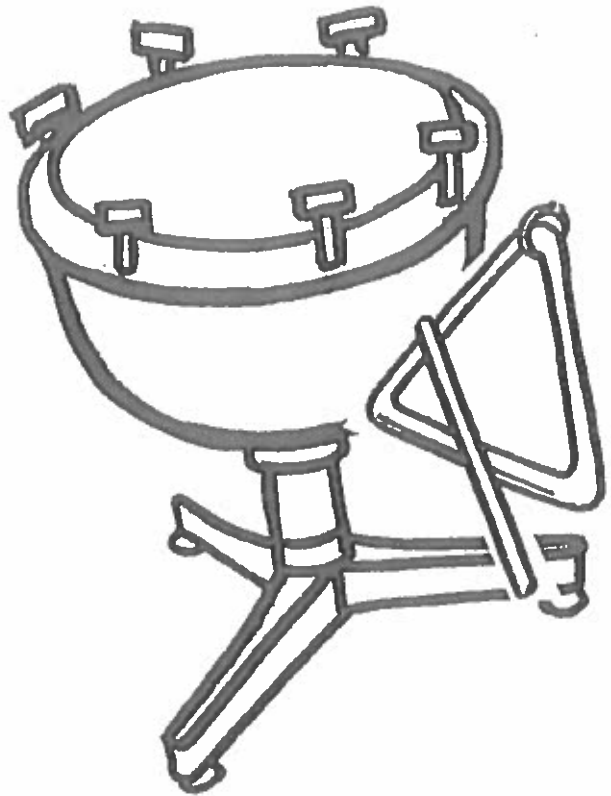
Directions:

1. Cut a hole about 4 inches in diameter in the top of the box.
2. Stretch 4-6 rubber bands around the box and situate them over the hole, lined up like guitar strings.
3. Slide a pencil in under the rubber bands on one side of the hole.
4. Tape one end of the paper towel tube on the end of the box opposite the side with the pencil. This becomes the "neck" of the guitar.
5. Pluck or strum the rubber bands. Notice how thinner and tighter bands make higher-pitched sounds while thicker and looser bands make lower-pitched sounds.



PERCUSSION INSTRUMENTS

represent the largest variety in the orchestra. They are beaten, scraped or shaken, and they give the orchestra a mixture of tone colors and rhythms. Most percussion instruments are either solid or have a stretched membrane (thin material) over a hollow shape. They can be either pitched or unpitched. Pitched instruments play specific notes just like the other orchestral instruments. These include the xylophone, marimba, vibraphone, glockenspiel, chimes and timpani to name a few. Unpitched instruments produce a sound without a specific note, like the sound you make when you hit a table. These include the many kinds of drums, maracas, castanets, claves, tambourine and cymbals among others. Here are some percussion instruments you can make at home:



MARACAS

Materials:

- Small lidded containers such as yogurt containers, baking-powder cans, specialty-coffee tins, butter containers, drink bottles
- Dried beans, seeds, uncooked rice or pasta, nuts or other such loose items
- (Optional) Small dowels cut to 6-8" lengths (or a pencil)
- Duct tape

Directions:

1. Partially fill the containers with the small dried items
2. Drill or cut an opening in one end of the container and push in the dowel or pencil. (Do this if you wish to have a handle. Otherwise, the maracas can be held in the hand without a handle.)
3. Use duct tape to secure the lid and the handle.

BOTTLE-CAP TAMBOURINES

Materials:

- A strong, Y-shaped tree branch (hand sized), preferably hardwood
- 10-15 Metal bottle caps
- Strong wire
- Hammer and a nail

Directions:

1. Decorate the tree branch first if you plan to do so.
2. Remove the rubber liners from the bottle caps by having an adult heat them for a few minutes on a grill or in the oven. (This isn't required, but it does greatly improve the sound.)
3. Flatten the caps with a hammer.
4. Use the nail to punch a small hole in the center of each cap.
5. Thread the caps onto the wire and string it tightly between the arms of the Y.

DRUM

Materials:

- An empty oatmeal or coffee can (sturdy)
- A sheet of heavy plastic, like a plastic garbage can or a large balloon
- Ruler
- Marker
- Scissors
- Large rubber band
- Spoon, stick or pencil

Directions:

1. Measure the diameter of the can.
2. Mark a circle 2-3" larger in diameter on the sheet of plastic and cut it out.
3. Stretch the plastic tightly over the can and secure it with the rubber band. If you wish to make a simpler version of a drum, use the plastic lid that came with the oatmeal or coffee.
4. Use the spoon, stick or pencil to hit the drum.

CYMBALS

Materials:

- Two similar-sized pot covers
- Yarn or ribbon

Directions:

1. Tie the ribbon or yarn around the handles of the pot covers.
2. Loop the ribbon or yarn around the wrists.
3. Play by striking the two covers together.

COPPER-PIPE GLOCKENSPIEL

Materials:

- A 10-foot length of $\frac{1}{2}$ -inch copper pipe
- Yardstick
- Pipe-cutter (you can use a tubing cutter with no exposed blades or a hacksaw)
- 2 Strips of foam rubber, each about 20" long

Directions:

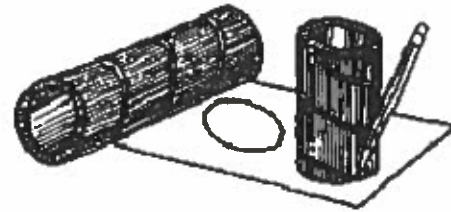
1. Measure and cut the pipe to the following lengths in inches: 11, $10\frac{1}{4}$, $9\frac{3}{4}$, $9\frac{1}{2}$, $8\frac{7}{8}$, $8\frac{1}{2}$, $7\frac{7}{8}$, $7\frac{5}{8}$. (Start with the longest first. If you make a mistake, you can cut them down to a shorter size and not waste the pipe.)
2. Lay the strips of foam rubber parallel to each other on a flat surface.
3. Arrange the pipes in order from the shortest to the longest. Lay them across the foam rubber like the ties of a train track.
4. Experiment with various types of strikers to get the best sounds, then begin playing.



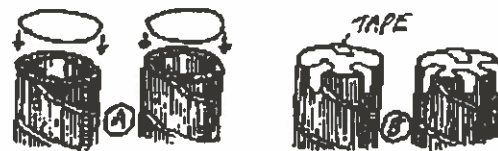
How To Make Carpet-Tube Bongos

Saw two lengths of carpet tubing (one 1 foot long, the other 8 inches or so). The longer tube will produce a lower pitch.

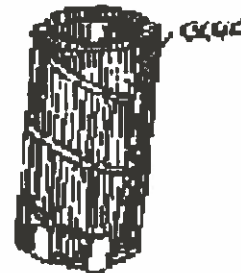
Use the end of the tube for a pattern and draw two circles on a piece of 1/8-inch paneling or plywood. Then saw out the circles for the drumheads with a coping saw.



Glue the Disks on the tubes. To hold the heads on the tubes tape them with masking tape.



Run a line of glue down one side of your short drum and stand it on its head. Press the longer drum (also standing on its head) against the glue line.



Tape the two drums together and let the glue dry. To make the drums look nice and to hold them securely together wrap them with string or colored yarn. For further decorations use paint, markers, and your imagination. To play your bongos hold them between your knees and slap the heads with your fingers and thumbs.



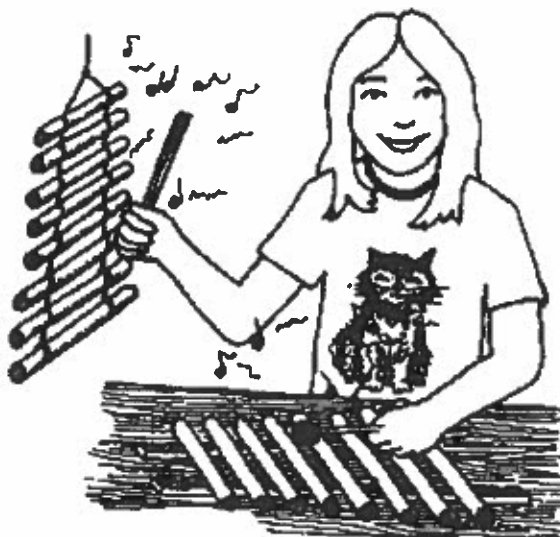
A Tubular Glockenspiel

The tubular glockenspiel has a brilliant ringing tone. It is made from electrical conduit (pipe). The one we'll make uses 1/2-inch diameter conduit. You can buy a 10-foot piece of conduit in a hardware store for a couple of dollars. You can make glockenspiels from other sizes of conduit or metal pipe, too. But you will have to tune them by ear.

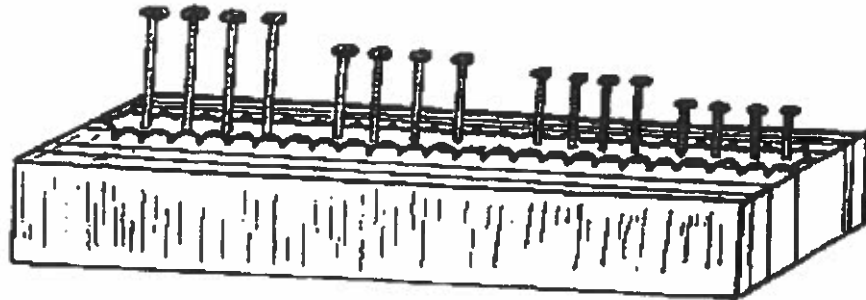
With a hacksaw cut your tube to these exact lengths: 11", 10 1/4", 9 3/4", 9 1/2", 8 7/8", 8 1/2", 7 7/8", and 7 5/8".



Now you have a set of tubes already tuned to a major scale. Set the tubes on two strips of foam rubber or felt. Place the strips under the nodes to allow the tubes to vibrate freely. You can make a good beater by wrapping the end of a scrap of your conduit with three or four layers of tape. Make additional tubes if you like. Remember the shorter the tube the higher the pitch will be.



Nail Rasp



This makes a soft, bell-like sound.

Materials:

1 block of wood 10" x 2" x 2". Try to have the grain of the wood going across rather than lengthwise (this keeps the wood from splitting when hammering nails).

nails of different sizes (16 were used in the diagram)

1 large nail for strumming

hammer

paint or marking pens (optional)

To make:

1. Draw a line the length of the wood in the center (A).



2. Mark where to place nails (B). The nails are grouped according to sizes (C).



3. Hammer the nails in the marked spots.

4. If desired, the block of wood may be decorated with paint or marking pens.

To play:

Use the large nail to run down the line of nails in a rhythmic fashion. The different lengths of the nails make different bell-like sounds.

Egg Maracas

What you need:

- Plastic eggs (readily available around Easter)
- Rice
- Ribbon
- Glue
- Plastic spoon
- Scissors



What you do:

1. Before beginning, measure the circumference of the plastic egg and cut lengths of ribbon to go around the seam area;
2. Show the children how to separate the plastic eggs;
3. Demonstrate how to scoop two spoonfuls of rice and place the rice in one side of the plastic egg;
4. Carefully attach the other end of the egg;
5. Run a bead of glue around the seam of the plastic egg;
6. Glue ribbon over the seam, sealing the egg shut;
7. Enjoy shaking your eggs!



Think about it!

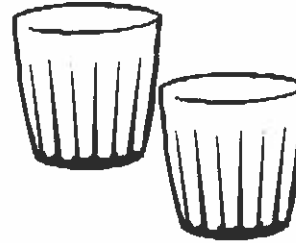
How would changing the material inside the plastic egg change the sound?

Jazzy Water Jingles

Create jazzy water jingles with this homemade instrument. Notice that the more water in the glass, the deeper the sound.

What you need:

- 8 glasses of the same size
- Food colouring
- Water
- Spoons



What you do:

1. With adult assistance, carefully fill each of the glasses with water at different levels.
2. Put a different colour of food colouring in each glass.
3. Arrange the glasses in horizontal order, from the least amount of water to the most amount of water.
4. Use a spoon to explore the sounds made when you tap the glasses.



Think about it!

Which glasses make the highest sounds?

Which glasses make the lowest sounds?

Rhythm Blocks

What you need:

- 6 cm. blocks of woods (Cut a 2' X 4' into sections. Most hardware stores have left-overs they will donate)
- Medium to heavy grained sandpaper
- Glue
- Pencil
- Scissors



What you do:

1. Before beginning, make sure the wood blocks are splinter free by sanding lightly;
2. Demonstrate for the children how to trace around the block of wood on the back of the sandpaper;
3. Cut the sandpaper on the pencil lines;
4. Glue the sandpaper to the wooden block;
5. Rub the sandpaper sides together to keep the rhythm!



Think about it!

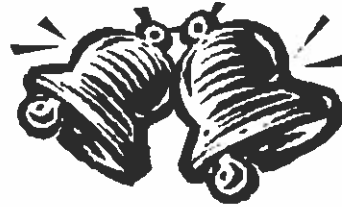
What surprised you about your rhythm blocks?

Pick a partner who has a different instrument, and play the rhythm cards.

Jingle Jangle Bracelets

What you need:

- Round elastic
- Small bells



What you do:

1. Before beginning, cut the round elastic into approximately 16 cm. lengths;
2. Demonstrate for the children how to slip a bell onto the round elastic;
3. Tie a knot on each side of the bell so that the bell stays in place and does not slip on the elastic;
4. Tie the ends of the elastic lengths together;
5. Slip over wrists to make music!



Think about it!

What do you think would happen if you used different sized bells?

Jingle Jangle Sticks

What you need:

- Paint stir stick
- One large nail
- Hammer
- Metal bottle caps
- Brad tacks (longer shanks will work best)
- Paint or markers



What you do:

1. Demonstrate for the children how to use the hammer and nail to make 3 holes down the centre of the paint stir sticks;
2. Use the hammer and nail to put a hole in the middle of each of the metal caps;
3. Secure two of the metal caps together by threading the brad tack through the holes in the middle;
4. Push the brad tack ends through the holes in the paint stir sticks, being sure that the metals caps are not too tight; (they should "rattle" when shaken)
5. Open the ends of the brad tacks to attach the metal caps;
6. Decorate the stir sticks with paint or markers;
7. Shake your jingle sticks to the beat!

Think about it!

Why did you need to use metal caps?



Jingle Jangle Mitten

What you need:

- Felt squares
- Small Bells
- Fabric glue
- Scissors
- Pencils
- Stapler



What you do:

1. Have the children trace their hand, with fingers closed, on a piece of Bristol board;
2. Show the children how to carefully cut out the mitten;
3. Using this as a tracer, have children trace the mitten onto a piece of felt;
4. Staple another piece of felt behind the traced mitten; (this will keep the felt from slipping and make it easier to have two pieces the same shape and size.)
5. Cut along the traced lines of felt forming the mitten shape;
6. Demonstrate for the children how to run a bead of glue around the edge of the mittens;
7. Place mittens together, glued side inside;
8. Show the children how to place a dab of glue at even spaces along the outside of the mitten;
9. Attach a bell on top of the dabs of glue;
10. Allow mittens to dry;
11. Slide your hand inside the jingle jangle mitten and enjoy playing!



Think about it!

What would happen if you got glue in the wrong places?

Satisfied Mind

Make a Rainstick

Materials

Cardboard tube (from paper towels, wrapping paper, fabric, mailing)
straight pins (for thin tubes like paper towel or wrapping paper)
nails (for thick tubes - nails should be shorter than the diameter of the tube)
popcorn, seeds, beads for filling
hammer (if using nails)
masking tape
materials for decorating the outside (fabric, colored masking tape, papier mache, paint)



Instructions

1) Insert pins or nails into the side of the tube in a spiral pattern. Cover the nail or pin heads with tape to keep them in place.



2) Close off one end by taping on a circular piece of cardboard.



3) Pour in filling (Try different ingredients for different sounds)

4) Close off the other end of the tube.

5) Decorate the outside of the tube with colored tape, fabric, markers, paint or papier mache.