

SCHOOL AGE

Week

24

Smart Activities



SMART CHOICE. SMARTER CHILD.®

Magic Floating Ink Person

Materials: water-soluble marker, dry erase marker, clear glass bowl or plate, cup for pouring water

Preparation:

Vocabulary:

Pigment – a substance that gives color to a material, like the ink in a marker

Alcohol – a colorless, odorless substance that is used in science and manufacturing

Solvent – a liquid in which other substances can be dissolved

A dry erase marker is used to write on non-porous surfaces like a white board or a mirror. The solvent in the marker is alcohol which helps the ink attach to the surface and dry quickly.

Instructions:

Have you ever tried drawing with a marker on wet paper? What happened?

Use the water-based marker to draw some marks inside the bowl. Slowly add water by tilting the bowl towards you and pouring a cup of water on the low end. Then, slowly tilt the bowl back in place.

Can you describe what happens to the ink?

Predict - Now, think about what you know about the dry erase marker. Think about how the ink reacts to the surface when you draw on a whiteboard with it. How do you think it react differently with the water?

Draw a person inside the bowl using the dry erase marker. Add water using the same method of tilting the bowl and adding water to the low end, then slowly putting it back in place. Can you describe what happens to the ink? Why do you think this happens?

The science explained:

The dry erase marker leaves a mark of pigment and alcohol mixed together. When the alcohol dissolves, it leaves behind the pigment as a solid. The glass is very smooth, so the solid pigment lifts off of it in the water easily.



Slurping Science

Heat Transfer and the Effects of Salt on Ice

In this experiment, we are applying the principles of heat transfer and the effect of salt on ice. The salt causes an endothermic reaction that pulls heat from around it to melt the ice. It does this aggressively and drops the temperature around it below freezing which allows our drink to go below freezing. *Patience with this experiment is key.*

Materials: small plastic cup, large bowl, spoon, ice (lots!), coarse salt, juice

Optional: no-contact digital infrared thermometer

Preparation: Gather materials.

Instructions:

1. Set your plastic glass in the center of your bowl filled with your juice, then add the ice all around the outside until the ice covers at least 3/4 up the side of the glass. Carefully, sprinkle salt on the ice. Be very careful not to get any salt in the juice. *This is very important! Liberally cover the ice with salt.*
2. Now you wait. Keep checking on it and watch how the ice breaks down from the salt. Stir the juice gently every 30 minutes. It can take anywhere from 1 to 2 hours for the freezing to start, but once it does, start stirring regularly or it will form into an ice cube. *Make sure you scrape the freezing juice off the sides of the glass and mix it all together.*
3. When it is thick enough for you to pick it up with a spoon, it is ready to eat/drink. Enjoy!



Disc Slam

Materials: flying disc, 2 cones, place markers/hoops, tennis ball or plastic ball, 2 or 4 players needed

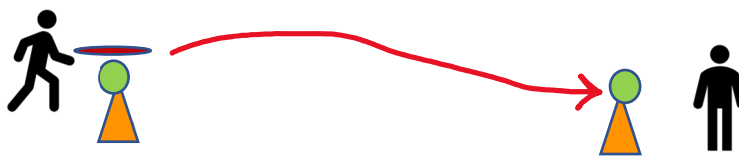
Preparation: Set the 2 cones about 10-20 feet apart, depending on ability. Set a ball on each cone. Players will throw the disc to the opposite target to knock the ball off the cone. Partners can work together to use the disc to knock the opponents' ball off the cone.

Instructions:

Each player will stand behind his/her cone and throw the disc to knock the ball off the opponent's cone.

Scoring:

- 3 points for directly hitting the ball off
- 2 points for hitting the cone to knock the ball off
- 1 point for knocking ball down with a teammate assist



Broccoli Cheese Cups

**Wash hands before and after activity.*

Materials: medium mixing bowl, extra bowl, measuring spoons and cups, cheese grater, mini muffin tin

Ingredients:

3 cups cooked chopped broccoli, 1 large egg, 12 Ritz crackers (crushed), 1 heaping cup of cheddar cheese (plus more for topping), 1/2 tsp garlic powder, 1/2 tsp salt

Preparation: Preheat oven to 375 degrees. Crush the crackers. Grease the muffin tin.

Instructions:

In the medium bowl, mix all of the ingredients together until blended well. Fill the muffin tin evenly with the mixture in about 16 of the cups. Press mixture down slightly into each muffin tin cup. Top with more cheese and bake about 14 minutes until the cheese is starts to melt and turn brown. Let cool, then remove from pan. Serve and enjoy!



From: www.thelazydish.com

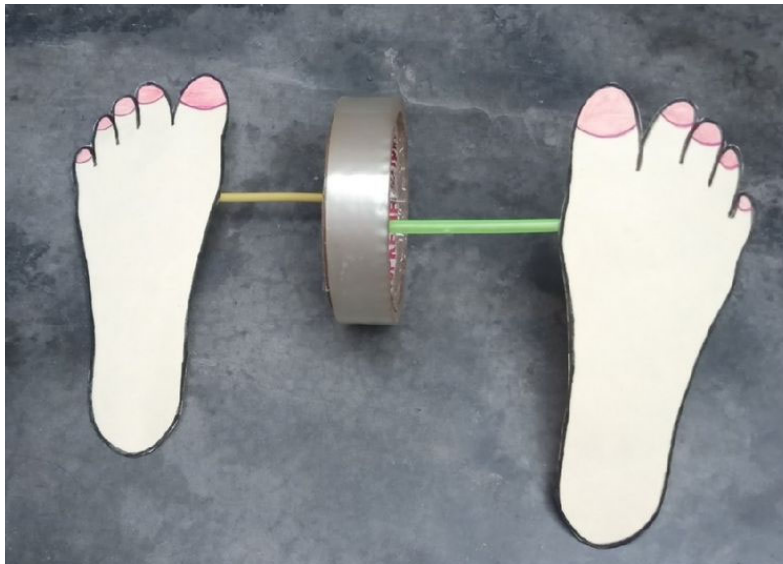
Pedaling Feet

Materials: large roll of tape, 2 straws, construction paper or foam sheets, markers, 2 skewers, scissors, glue

Preparation: Trace your feet on the construction paper and foam sheets and cut them out. (Decorate if you would like.)

Instructions:

1. Place each foot on a foam sheet and trace it. Then cut it out. You may decorate your feet adding nail polish or make patterns on your feet.
2. Now, take the roll of tape and put a skewer inside the tape and secure by taping it down to the inside of the tape roll on top. Then, do the same taping the other skewer on the inside of the tape roll on the bottom. Insert the straws over the skewers and secure with tape on the inside of the tape roll.
3. Next, take your feet and tape or glue (let glue dry) them to each straw, as close to the end of the straw as possible.
4. Then, push your tape roll away from you and watch your feet pedal away.
5. Try it on a hill and see how much faster your feet will pedal. Have races with friends and time the amount of time it takes for your pedaling feet to cross the finish line.



Tessellation Creation

Materials: square piece of paper (sticky note), scissors, tape, paper, pencil

Preparation:

<https://www.youtube.com/watch?v=WBVzoaFi90E>

Instructions:

Tessellation is an arrangement of shapes closely fitted together, especially of polygons in a repeated pattern without gaps or overlapping. Watch the video above on how to create your own tessellation! Follow the steps below and create your own!

1. On your small piece of paper, Draw a simple shape on two sides of your paper from corner to corner.
2. Carefully cut out one side, then slide it all the way to the other side.
3. Carefully cut out the other shape, then slide it all the way to the other side and fix in place.
4. Now that you have your tessellation template. Place it somewhere on your larger white piece of paper. Trace it.
5. Align the template with the one you just drew and trace it again. Continue until your entire paper is covered in tracings of your shape.
6. Choose colors for your design and color it with crayons, colored pencils, or markers.
7. After you have colored the entire paper, trace the pencil lines with a black pen or marker.

Now your tessellation is complete! Have endless fun making a new shape template and trying again!



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Hopscotch Calculator

Materials: chalk, flat stones or small items for tossing

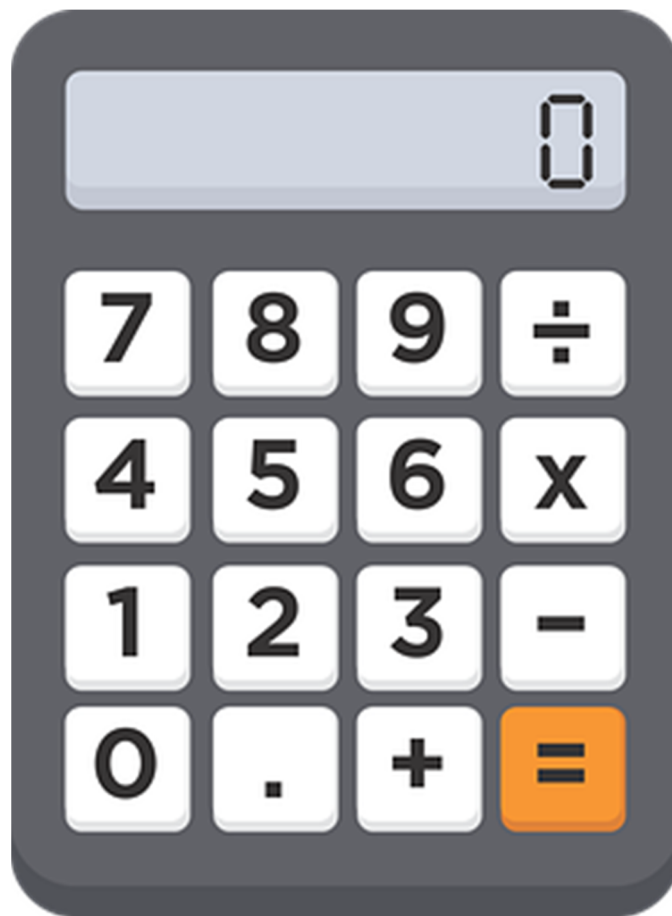
Preparation: Clear a large open space outside on a sidewalk or driveway. Draw a calculator grid large enough to hop from space to space. For younger children, substitute the "greater than" and "less than" signs for the division and multiplication signs.

Instructions:

Throw the stone to one of the numbers on the grid. Hop to the number and toss the stone to one of the function signs. Hop to the sign and toss the stone to another number. That is the math equation that needs to be solved.

Add an additional challenge by including a number of exercises that need to be repeated according to the answer.

What other challenges can you create?



Blind Contour Line Drawing

Materials: paper, markers, paintbrush, water, towel or large paper bag, mirror

Preparation: A blind contour drawing means that the artist doesn't look at the paper while drawing but keeps his/her eyes on the object being drawn. This is the key to using observation for drawing rather than drawing what *you think* you see. And a contour drawing just means the lines of the outside shapes in a continuous line. This means the artist does not take the pen or pencil off the paper at all.

Observation: the act of careful watching or listening.

Instructions:

You are going to imagine a snail is moving the marker to make this drawing!

Sit in front of a mirror or a partner.

Have a marker and piece of paper ready on the table.

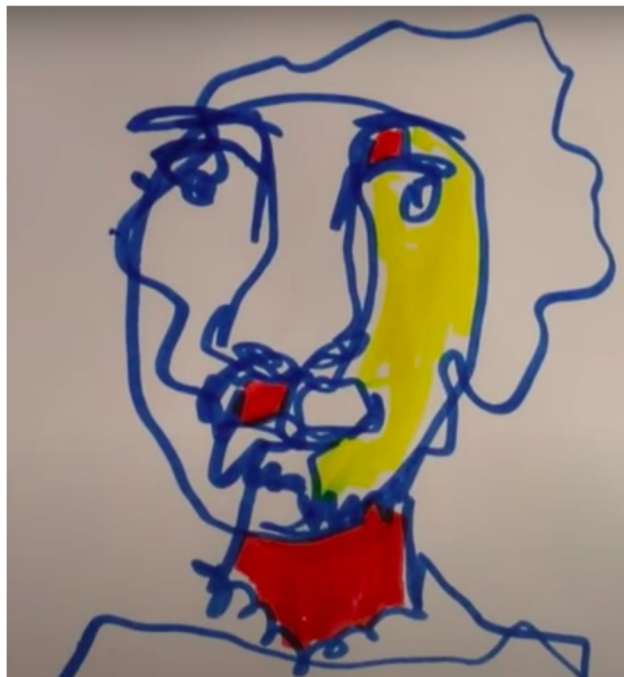
Cover your hands over the paper with the towel.

Try to draw the face in front of you without lifting the marker off the paper.

Pay close attention to notice the details and move the marker v-e-r-y s-l-o-w-l-y over the paper.

Fill in some of the shapes with color.

Use a wet paintbrush over some of the marker lines to fill in some shapes, too.



Video demonstration

<https://safeshare.tv/x/ss5f0de0e61205b#>

More information

<https://www.britannica.com/art/contour-drawing>

Symmetry Sculptures

Materials: 6 different colors of paper, stapler, scissors, ruler

Preparation: Gather all materials.

Instructions:

1. Cut 2 strips from each color paper. The strip should be about 5 cm wide and the entire length of the paper.
2. Arrange your paper strips like a symmetrical sandwich, using only one strip of the middle color. Keep in mind the color combinations - it looks best to have lighter colors next to darker ones for a more dramatic effect.
3. Staple the stack of strips in the center. Secure with three staples.
4. Now, it's time to start sculpting your paper strips. You can do anything: fold, cut, roll, stamp, etc. the paper. You must do to one side of the strip that you did to the other side of the strip. This is what will create your symmetrical look.

Use your creativity and have fun! Make one, two or three! Hang them in your room or favorite place at home!



<https://babyccinokids.com/blog/2016/06/09/symmetry->

Banana S'more

***CAUTION:** Wash hands for 20 seconds before and after this activity.

Materials: bananas, graham crackers, chocolate bars, sun or peanut butter, plate, butter knife

Preparation:

Instructions:

1. Cut your banana into one-inch round pieces.
2. Place a graham cracker on your plate.
3. If you choose to use sun butter or peanut butter, spread it on your graham cracker.
4. Place the chocolate as the next layer.
5. Next, place your banana on top of the chocolate.
6. Last, add your top graham cracker.

Add more ingredients to your Banana S'more or change up the layers! Make it your favorite way! Include your family! Discuss how each of you prefer your Banana S'more and your favorite combination of ingredients!



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