

# SCHOOL AGE

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Week

8

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Smart Activities



SMART CHOICE. SMARTER CHILD.®

## Just Add Water

**Materials:** containers, food items (various sizes, water-resistant such as apples, potatoes, carrots, oranges), colored tape

### Introduction:

The amount of fluid moved by a floating or submerged object is called displacement. This is the principle that allows boats to float. In this activity, children can explore displacement by using food items for comparisons. They will observe, compare, and measure the amount of water displaced by various food items. The heavier the food item, the more water is displaced.

### Instructions:

1. Fill a container about  $\frac{1}{2}$  full of water.
2. Use the tape to mark water level on the outside of the container.
3. Select an object to put in the water. Mark the new water level with new piece of tape.
4. Compare these levels.
5. Remove the object and select a new one.
6. Put it in the water and mark this level with a third piece of tape.
7. Compare the levels of the two items.
8. Keep selecting and comparing water levels as you place different items in the water. Use different size containers for extra challenge.

### Challenge Questions:

- What objects displaced the most/least amount of water?
- Did any of items displace the same amount of water?
- How does the water relate to the size and weight of the food item?
- Will the level marked with the tape be the same as the same object placed in a different size container?
- What happens if a different liquid is used such as milk, carbonated drink, or juice?

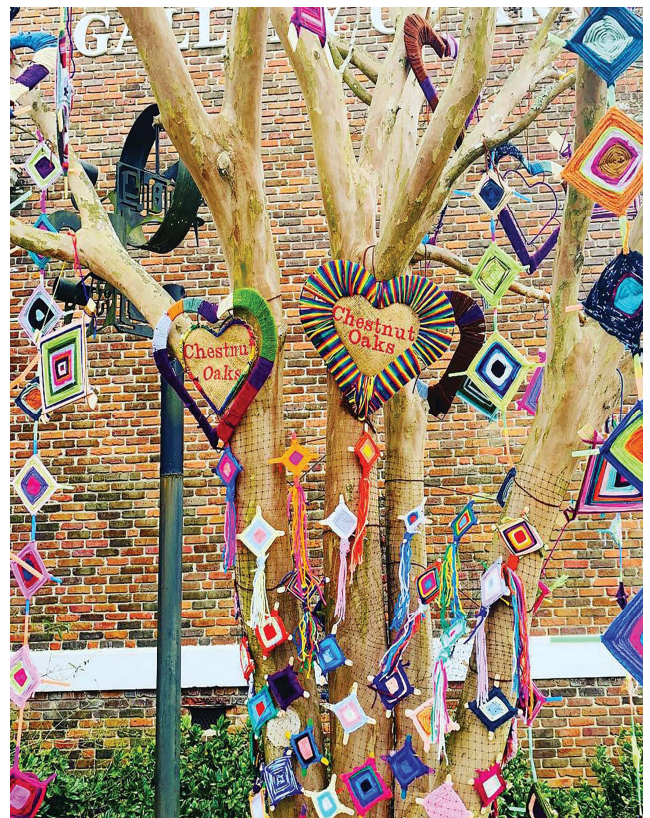
## Yarn Designs

**Materials:** yarn (various colors and types), sticks, stones, other natural materials

**Preparation:** Gather the natural materials you wish to use.

### Instructions:

Using the bits and pieces of yarn, create a unique art project wrapping the yarn around the sticks. Experiment using pinecones, stones, or other natural items. You might even try a mobile by disassembling an old baby one not being used now or create your own.



## Giant Tennis Shoes

**Materials:** white drawing paper, pencil, eraser, watercolor paints, paintbrushes optional

**Preparation:** One way Rene Magritte and other surrealist painters transformed everyday things was to change the size – making something much bigger or smaller than in the real world. Magritte once painted an apple so large, the painting filled the entire room. “Sur” can mean “beyond” in French. Sur-realist artists like Rene Magritte created works that were “beyond reality.”

**Instructions:**

1. Take off one of your shoes and set it on the table next to the sheet of drawing paper.
2. Carefully draw a detailed picture of your shoe.
3. Make it as realistic as possible and big enough to fill the entire sheet of paper.
4. Draw all the seams and stitches, the shoelaces, the texture of the sole and heel of the shoe.
5. When the drawing is finished, add tiny people or animals to the scene.
6. Suggestions: draw a family living in the shoe with doors and windows, a flower bed, driveway with a parked car, a few pets OR draw miniature mountain climbers scaling the side of the giant shoe.
7. Paint your shoe and people with watercolors if you have available.

**Variations:**

1. Draw an apple that fills the entire paper and add little farmers picking chunks from it.
2. Draw a leaf that fills the entire paper and add little spaceships with aliens coming out to explore.
3. Draw a pizza that fills the entire paper and add little ice skaters twirling through the cheese or ice hockey players scoring a goal!



## Easy Homemade Pop-Tarts

What is your favorite pop-tart flavor? Are you team strawberry or team brown sugar?

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

**Materials:** baking sheet, cooling rack, bowl, butter knife or pizza cutter, spoons, fork or whisk, parchment paper, pastry brush, index card

### Ingredients:

1 package refrigerated rolled pie crust

1 cup plus 2 tablespoons jam

1 egg

Optional: sprinkles

### Icing:

1 cup powdered sugar

2-3 tablespoons milk

2 tablespoons jam

½ teaspoon vanilla



**Preparation:** An adult will need to help with this project.

### Instructions:

1. Preheat oven to 400 degrees F. Line baking sheet with a piece of parchment paper. Unroll crust onto another piece of parchment paper.
2. Cut as many pieces of 3 x 5 dough as possible from each crust. Use an index card as template, if needed.
3. Knead the scraps together and roll out onto a flat surface and reuse to make more pop-tarts.
4. Beat the egg in a small bowl for an egg wash and set aside.
5. Lay out 8 rectangles on lined baking sheet.
6. Use spoon to add 1½ tablespoons of jam to each rectangle of dough.
7. When complete, use another spoon or pastry brush to brush edges with egg.
8. Place another rectangle on top of each to form the pop-tart. Pinch the edges to seal and gently press edges with fork to crimp the edges.
9. Use the fork to poke a few holes on top and brush the top and edges with egg wash.
10. Bake for 12-14 minutes - until golden brown.
11. When pop-tarts are cooled, mix icing ingredients together in small bowl and decorate.

\*Alternative filling – ½ cup brown sugar, 2 teaspoons ground cinnamon, 1 tablespoon flour. Also, brush bottom rectangle with egg wash BEFORE filling to help the mixture melt down nicely.



## STEAM Career Highlight - Food Scientist

Do you have creative ideas about the world around you? You may be headed for an occupation in Science in ways that you may not have thought about before!

**Materials:** paper, pencils, art materials, internet, website "Discover Your STEM Career: Food Scientist": <https://www.youtube.com/watch?v=19vHHFfLB2g>

**Preparation:** An adult will need to help with the internet.

**Instructions:** If you like to try new flavors, experiment with new ways to prepare food, and think chemistry is awesome, then you may want to learn more about the Food Scientist occupation.

A Food Scientist works with the ways a food product goes from the farm to the table. You could say Food Science ranges from agriculture, or farming, to nutrition, how the body uses food. There is a wide range of tasks that a Food Scientist does each day, and it is always different: studying ingredients for a new product, testing samples in the kitchen, visiting customers who use the product, or watching something you developed being created in the factory. Some different problems that a Food Scientist may solve are:

*Create new flavors for food and drinks*

*Invent food that astronauts can use in space*

*Design packaging to keep food from spoiling*

*Test a food's nutrition to see how healthy it is for your body*

Take a few minutes to write down your thoughts for what Food Science means to you. Don't spend time judging if your ideas are 'good' or 'bad' – just write down everything that pops into your head. This is called "brainstorming". Get all ideas down on paper, then focus on the ones that seem the most interesting.

## Food Scientist Challenge

**Materials:** paper, pencils, art materials, Food Scientist brainstorm

**Preparation:** Review the brainstorm list from above.

**Instructions:**

Talk about the items on the brainstorm list with someone else who is able to spend a few minutes listening without interruption. You can say to a family member, "Excuse me, do you have some time to listen to the ideas I have about Food Science?" Talking about your ideas with another person is a useful way to see the different ways you feel about a topic.

**Challenge:** Pick a problem from the list:

*Create new flavors for food and drinks*

*Invent food that astronauts can use in space*

*Design packaging to keep food from spoiling*

*Test a food's nutrition to see how healthy it is for your body*

Use art materials to create a solution and present it to a family member.

Some ideas are:

- Invent a new flavor of Pop-Tarts
- Invent a new flavor drink for a restaurant that has arcade games
- Create a package that can bring food to Mars
- Invent a healthy energy bar that athletes will use



## Wham! Ball

**Materials:** hula hoop or tape (or chalk outside), balls: one per two players

**Preparation:** Use any ball that bounces and can be caught safely. Make a circle the size of a hula hoop (about the size of a couch cushion). The objective is to catch the ball after it bounces in the hoop

**Instructions:**

Two players stand on opposite sides of the circle at least one step away. If there are more than two players, they will stand even spaces apart. One player holds the ball. To start, the player with the ball bounces it in the hoop or circle. The second player will try to catch it.

Scoring is as follows:

Ball misses the circle = point for receiving player

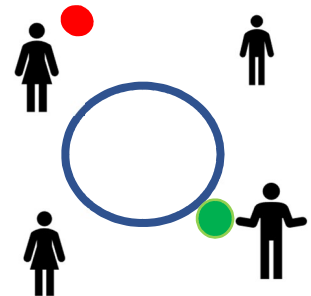
Ball hits inside the hoop but doesn't bounce at least one step away = point for receiving player

Ball hits inside the hoop but bounces above the head of the other payer = point for receiving player

Ball hits inside the hoop and is not caught by the receiving player = point for serving player

\*If four players are sharing a hoop and the 2 balls collide, this is a Wham! and the two serving players switch opponents.

**Tip:** Start with a cooperative version – how many can you catch in a row. Then move to competitive version. *Also, ping-pong balls are a good option for indoors and can be purchased at most grocery stores. However, they are very bouncy!*



## H-O-R-S-E Shootout

**Materials:** laundry basket (or chalk outside), ball, coin

**Preparation:** Two or more players needed. Use any ball that bounces and can be caught safely. Make a circle the size of a hula hoop (about the size of a couch cushion) or use laundry basket as target.

**Instructions:**

The idea is the same as the classic basketball game played by two or more people on the court who try to match each other's shots to the basket. Each time a player is not able to make the matching shot, he or she earns a letter. The first player to spell the word "horse" by missing shots, loses the game.

1. Flip the coin using "heads" and "tails" to see who will shoot first.
2. The starting player makes a shot into the basket, and the second player must duplicate exactly how the shot was made.
3. If the second player misses the shot, he or she may will take another shot any way he wishes, and the first player must duplicate that. If the second player misses duplicating the shot, he earns an "h."



Heart-rate challenge: How can you include physical activity to get your heart-rates up?

## Gratitude Scavenger Hunt

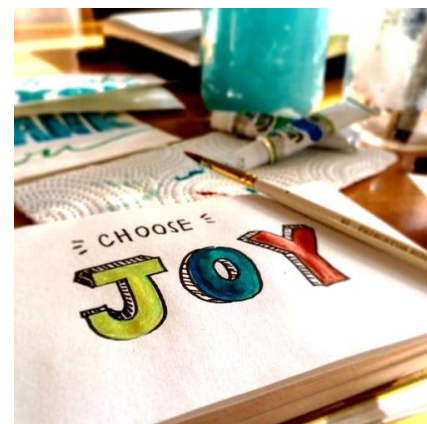
**Materials:** camera, paper, pencil, scavenger hunt list

**Instructions:**

It's time to go on a hunt to find things that bring us joy! Gratitude is one of many positive emotions. It is about focusing on the good in our lives and being thankful for the things we have. It is important to notice the things in life that we are grateful for, think about how gratitude for those things feel, and find ways to thank them or appreciate what each one brings to your life.

You don't have to find these in order, just mark down each one as you find it. Take a picture of or with each item you choose!

1. Find something outside you enjoy looking at \_\_\_\_\_
2. Find something that is useful for you \_\_\_\_\_
3. Find something that is your favorite color \_\_\_\_\_
4. Find something you know someone else will enjoy \_\_\_\_\_
5. Find something that makes you happy \_\_\_\_\_
6. Find something that tastes good \_\_\_\_\_
7. Find something that smells amazing \_\_\_\_\_
8. Find something that makes you feel safe \_\_\_\_\_
9. Find something that makes a beautiful sound \_\_\_\_\_
10. Find someone you are grateful for \_\_\_\_\_
11. Find something that is unique about you \_\_\_\_\_
12. Find something that makes you laugh \_\_\_\_\_
13. Find something in the night that you enjoy \_\_\_\_\_
14. Find something in the morning that you enjoy \_\_\_\_\_
15. Find a friend/pet that you love spending time with \_\_\_\_\_
16. Find your favorite place to spend alone time \_\_\_\_\_
17. Find something that reminds you of the people you love \_\_\_\_\_
18. Find something that you enjoy doing outside with friends \_\_\_\_\_
19. Find a place that you love \_\_\_\_\_



**Extension:**

Once you have filled in each line, make a virtual picture collage of the pictures you took during your hunt. You can look at this collage when you want to feel joy!

## Coffee Filter Art: Tie Dye Effect

**Materials:** newspaper or scrap paper, coffee filters, markers, empty spray bottle, water

**Preparation:** Fill spray bottle with water.

**Instructions:**

1. Lay newspaper or scrap paper down on the surface you will be working on. This will keep from getting marker on the table.
2. Flatten out your coffee filter and begin to color. You will color half of the coffee filter using your markers. You can leave some white space, but you don't have to. The marks that you make on your coffee filter do not have to be neat or careful. Make any type of mark or design you want. Make sure the color is saturated on the filter.
3. Once you have finished adding the colorful marks that you desire, you are going to fold the filter in half and then fold it again to create a wedge shape like pictured here.
4. Lightly spray both slides of the folder filter. Make sure you get it wet enough but do not soak it. You will start to see the colors spread! Once your filter is damp all the way through, open it up and lay it out to dry! Make as many as you would like and try out different designs!



## Cooking: Apple Donuts

**Materials:** apples, cream cheese, peanut or sun butter, sprinkles, chocolate syrup, caramel, cutting utensil, cutting board

**Preparation:** Gather apples, toppings you want to use, cutting utensil, and cutting board.

**Instructions:**

1. With the help of an adult, slice apples into circles (see picture) and remove the middle of each apple slice. It should look like the shape of a donut.
2. Choose your "frosting." Spread your "frosting" of choice across the top of your donut shaped apple. If you are using cream cheese, you can add a few drops of food coloring to it for a splash of fun color.
3. Now it is time to decorate your donut-shaped apples! Add sprinkles or a drizzle of chocolate syrup to make your donut-shaped apple complete!
4. Share with family and enjoy this delicious snack together!

