FRUITS, NUTS AND VEGGIES

CRAFTS • RECIPES • SCIENCE • GAMES • ART



Dear Educators,

The Oklahoma Ag in the Classroom program is committed to a healthier Oklahoma. It is our goal to provide you with quality resources to help encourage your students to eat more fruits and vegetables, especially those specialty crops that are grown in Oklahoma.

This resource is funded by a USDA Specialty Crop Block Grant, and we are required to report on its impact. Before you begin using these activities, please take a moment to answer a few questions by scanning the "Fruits, Nuts, and Veggies Initial Survey" QR code. We would also appreciate you reporting your students' growth after using this booklet by scanning the "Fruits, Nuts, and Veggies Final Survey" QR code. Your time is greatly appreciated!

If we can assist you in anyway, please contact us. We would love to visit your school and provide a FREE Professional Development workshop or see your class in action. Our contact information is at the back of this book!

Sincerely,

The Oklahoma Ag in the Classroom Staff







Final Survey

FRUITS, NUTS AND VEGGIES Oh my



IN THIS CLASSPOOM

- 1) LETTUCE be thankful.
- 2) We will grow PEAS of mind.
- 3) We will SQUASH selfishness.
- 4) We always TURNIP to help our classmates.
- 5) OLIVE us are kind.
- 6) All words are MINT to be helpful.
- 7) There is always THYME for learning.



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Q. Why did the grape stop in the middle of the road?

CRAFTS AHEAD

3D FRUIT DIRECTIONS ON PAGE 16

A. Because he han out of juice.

WATER MELON MOON SAND

- 4 c of white or red play sand
- 2 c of corn starch
- 1/2 to 1 c of water
- 1 packet of watermelon flavored drink mix

Combine the sand, flavored drink mix, and corn starch in a sensory bin or similar container and mix well. Slowly add the water a little at a time and mix. Slowly add more water until the desired consistency is reached.

The Moon Sand should be moldable, crumbly, and slightly moist but not too wet. If you accidentally add too much water just add more of the dry ingredients.

For a richer color, add another packet of flavored drink mix.

To make Pumpkin Moon Sand, use pumpkin pie spice and orange food coloring instead of flavored drink mix.

Store Moon Sand uncovered or it will grow mold. It will dry out but you simply add water to return it to the desired consistency.

TOOTHPICK TOWER CHALLENGE

- Apples or grapes (cut into small pieces)
- Flat toothpicks
- White paper
- Pencil
- Flashlight

To prepare, cut the apples in half and flip them upside down. This makes it really easy to slice the apples into relatively flat pieces and cut them into smaller building blocks. Students will then use the toothpicks to connect the fruit pieces to build a tower.

Shadow Tower - After students construct the towers have them pair up. Give each pair of students white paper, a flashlight, and a pencil. One partner will shine the flashlight onto the tower to create a shadow on the paper. The other partner will trace the shadow onto the paper with the pencil.

This is a great edible engineering project. Start creating!



BLUEBERRY DOUGH

- 2 c flour
- 2 c water
- 1/2 c blueberries (or more for an even brighter color)
- 1 c salt
- 2 Tbsp oil
- 4 Tbsp cream of tartar

Place the blueberries in a small saucepan with the water, bring to a boil, and then simmer on low for around 10 minutes or until the water darkens and becomes purple in color.

While that is simmering, add the dry ingredients to a heat-proof bowl and mix to combine.

Strain the purple water from the berries and put the berries in a small plastic container in the fridge to eat later as a snack or dessert.

Slowly add the hot liquid – it needs to be very hot – to the flour mixture and stir to combine until it becomes playdough.

Once the dough is cool enough to touch, take it out of the bowl and knead it until it becomes smooth.

Variation- *Grape Dough*- To make grape scented dough, reduce the cream of tartar to 2 Tbsp and instead of blueberries add packets of grape flavored drink mix. You will need to decide how many to add based on desired scent and color.

SEED NECKLACES

- Variety of seeds- sunflower, pumpkin, squash, watermelon
- Dried beans or peas
- Bowl of hot water
- Needle and thread

The first step is to soften up the seeds by soaking them in water. If you're using dried beans or dried peas (black and kidney beans work well), soak them overnight. For seeds—try sunflower, pumpkin, squash and watermelon. First rinse, then soak them in hot water for about 15 minutes or until soft enough to poke a needle through the center.

For a more colorful necklace, you can also add a few drops of food coloring to the seeds in a small cup or bowl.

Students can use the seeds to create patterns.



VEGETABLE STAMPS

- Vegetables such as bell peppers, cauliflower, okra, and sweet potatoes
- Paint on plates
- Construction paper
- Knife

Cut the vegetables to create a flat edge. Dip in paint and create!

Use a celery stalk to create a rose. Bell peppers will create clovers. Okra can be used to make small flowers. You can even try rolling corn on the cob through paint to create a textured look.

Challenge students to use the vegetables to stamp patterns. Students can also create math problems or fact families with the stamps.



FRUIT AND VEGGIE NATURAL DYE

Dye Ingredients:

- Beet Skins, Onion Skins, Red Cabbage Leaves, Spinach, Orange Peels
- Water
- Small saucepans

Fabric Suggestions: Muslin or cotton to make bandana squares, Cotton T-shirts

Fruit Fixative Ingredients:

Vegetable Fixative Ingredients:

- 1/4 c salt
- 4 c water

- 1 c vinegar
- 4 c water

Preparing the Fabric:

To create long lasting colored fabrics, you must prepare the fabric with either the fruit or vegetable fixative. For fruit dyes, simmer the fabric in 1/4 c salt and 4 cups water. For vegetable dyes, simmer in 1 c vinegar and 4 c water. Boil the fabrics in the fixtures for one hour, then rinse in cold water.

Preparing the Dye:

Gather leftover bits of fruits and vegetables to use for making the dyes. You'll want at least one chopped cup of each item to create a saturated dye. Blueberries, blackberries, and red cabbage create lovely blues. Raspberries and beets create red shades. Orange and lemon peels make light yellow or ochre dye. Spinach creates a nice green, and onion skins simmer into orange. You can also experiment with other items to see what colors you can create.

Add the chopped ingredient to a small saucepan and cover with twice as much water as the fruit or vegetable. Place over medium heat, and bring to a simmer for one hour.

Turn off the heat and let the water come to room temperature. Strain the cooled dyes into glass containers. Let the prepared fabric soak in the natural dye until it reaches the desired color.

SILLY PUMPKIN PUTTY

- 3/4 teaspoon of borax
- 1 1/3 cups very warm water
- 2 c of white school glue
- 1 1/2 c very warm water
- A few drops of orange food coloring
- Pumpkin pie spice enough for desired scent

Combine borax and 1 1/3 cups warm water in a small bowl. In a second bowl combine remaining ingredients.

Once the ingredients of each bowl are well mixed, combine both bowls. As the ingredients of both bowls are mixed the pumpkin putty will begin to form.

Once the ingredients are well enough mixed you will want to remove the slime substance from the bowl and finish working it by hand. This whole process is really fun for the kids.

You will have residual watery ingredients left in the bowl. Those are not needed. Continue to work the ingredients with your hands until you have an amazing and silly pumpkin putty.



APPLE SCENTED SODA DOUGH

- Neon green food coloring
- Baking soda
- Green apple conditioner

Empty one box of baking soda into a bowl. Then add in enough conditioner to make moldable dough. Add a few drops of green food coloring and mix together.

LAVENDER CALMING PLAYDOUGH

- 1 c flour
- 1 c water
- 2 tsps cream of tartar
- 1/3 c salt
- 1 Tbsp canola oil
- purple food coloring
- 3-5 drops lavender oil

Mix together all the ingredients, except the food coloring and lavender oil, in a 2 qt saucepan. Cook over low/ medium heat, stirring. Once it begins to thicken, add the food coloring and lavender oil. Continue stirring until the mixture is much thicker and begins to gather around the spoon. Remove the dough onto wax paper to cool. Store in a zip closing bag or sealed container.

BLACK-EYED NAMES

- Black-eyed peas
- Construction paper
- Glue

Have students glue black-eyed peas onto names as a fun beginning of year activity.

Students can use seeds to write sight words, vocabulary words, or even math facts.

Try using other seeds such as watermelon, squash, or corn.



BUILD YOUR OWN POTATO HEAD

- Sweet Potatoes or Regular Potatoes
- Variety of Vegetables Sliced bell peppers, cherry tomatoes, sliced cucumbers, sliced squash, carrots, etc.
- Toothpicks

Directions:

Students will use toothpicks to attach the vegetables to the sweet potato to create their own potato heads.

Writing Extension: Students will write creatively.

Suggestions:

- 1) Narrative- A day in the life of their potato head.
- 2) Compare/Contrast Their potato head with a classmate's
- 3) Opinion/Argumentative Why is their potato head the "best" in the class?
- 4) How To Step by step students will explain the process of building a potato head.



3D PAPER APPLES, PEARS, PUMPKINS

• At least five pieces of colored paper per student

(orange, red, yellow, or green depending on the fruit you wish to make)

- Glue sticks
- Scissors
- White paper and markers or crayons (optional)
- Green or brown paper; real twigs, green straw for stem (optional)
- Green paper for leaves (optional)
- Teacher created template for cutting the fruit shapes (recommended)
- 1. Students will stack their pieces of paper and fold them in quarters.
- 2. Draw or trace half of the desired fruit on the fold line (like making a paper heart).
- 3. Cut on their line to produce symmetrical fruit.
- 4. Separate fruit pieces and fold each piece in half.
- 5. Apply glue to one side of each piece of fruit and stick together to make a folded stack.
- 6. Apply glue to the top piece, open the stack and glue the top and bottom piece together to form a circle.
- 7. Add a paper stem (or a real twig if you wish) by rolling a piece of paper into a tube. You could also use a green straw.
- 8. Cut green leaves and glue to the stem.
- 9. Add white flesh (or red for watermelon) to one of the folds and add seeds. (optional)

Variation:

After completing step 5, open the fruit and glue the top and bottom pieces inside of a folded card to make a pop up fruit card.

Students can write facts about the fruit, illustrate the life cycle of the fruit, or write vocabulary words on each fold.

See photo on page 5

COLORED PUMPKIN SEEDS

- Clean dry pumpkin seeds
- 1/2 2/3 cup warm water per color
- 1 tablespoon of vinegar per color
- food coloring

For each color of pumpkin seeds you want to make, pour the warm water in a cup and then add the vinegar. Add food color of choice and mix. Pour in dried pumpkin seeds and stir. The longer you leave the pumpkin seeds in the food color mixture the darker the color will be.

When the pumpkin seeds have reached the desired color drain the water and let them dry on a paper towel. After a couple of hours you can place the pumpkin seeds on a wax paper lined cookie sheet or tray. Dry completely. Now students can use the colored seeds to create sight words, patterns, vocabulary words, or any other art that they desire to create.



PUMPKIN BIRD FEEDER

Halloween, harvest festivals, and general autumnal celebrations lead to an abundance of everyone's fall favorite: pumpkins. While you partake in pumpkin spice lattes and jack-o-lantern carvings, why not share some gourd indulgences with the birds? This bird feeder is the perfect use of an extra or post-trick-or-treat pumpkin.

- Pumpkin slices from leftover pumpkin
- Seeds (sunflower seeds add color, but pumpkin seeds could be used)
- String (biodegradeable)
- Stick or spoon to make a hole for the string
- Popsicle sticks
- 1. Have an adult slice the pumpkins.
- 2. For young children, use the craft stick to make holes for the seeds. Older children can poke holes themselves or can push the seeds through the pumpkin without holes.
- 3. Insert seeds into the holes.
- 4. Using a stick, dowel, or spoon handle, poke a hole through the pumpkin on one end.
- 5. Insert the string through the hole and tie it into a loop.
- 6. Poke popsicle sticks or real sticks into the pumpkin for perches.

7. Place the pumpkin slice outside for birds, squirrels and other critters to enjoy. Q. Why shouldn't you tell a secret on a farm?

DELICIOUS DISHES



A. Because the potatoes have eyes and the corn has ears.

Cerro

STRAWBERRY WATERMELON SMOOTHIE

Yield 1 Smoothie

1/2 c vanilla flavored yogurt
1/4 c fresh or frozen strawberries
1/2 c seedless watermelon, cut into small pieces
Quart size zip closing bag
Small cup
Scissors

- 1. Students use measuring cups to measure ingredients and place them in plastic bag.
- 2. Zip tightly.
- 3. Use your fingers to "puree" the mixture until fruit is thoroughly blended with yogurt.
- 4. Use scissors to snip off the bottom corner of the bag and squeeze smoothie into a cup.
- 5. Enjoy!



FRESH BERRY PECAN SPINACH SALAD

Yield 10-12 servings

2 c pecan halves
24 oz fresh spinach, chopped
16 oz fresh strawberries, halved
8 oz fresh blueberries
8 oz fresh blackberries
Raspberry poppyseed dressing (or dressing of your choice)

- 1. Students can prepare the spinach and berries by slicing carefully with plastic knives.
- 2. In a large bowl, combine spinach, pecans and berries.
- 3. Toss gently.
- 4. Before serving top with raspberry poppyseed dressing.



BLACK-EYED PEA CONFETTI SALAD

Yield 6-8 servings

- 2 c fresh black-eyed peas cooked and cooled; or 1 can of black-eyed peas, rinsed and drained.
- 1 c green bell pepper, chopped
- 1 c orange bell pepper, chopped
- 1 tomato, chopped
- 1/4 tsp chili powder
- 1 tsp onion powder
- 2 tsp lime juice
- Cilantro, to taste
- Salt and pepper if desired
- 1 c grated Cheddar cheese (if desired)
- 1. Students will use plastic knives to carefully chop the peppers and tomato.
- 2. Stir together chopped bell peppers, chopped tomato, chili powder, onion powder, lime juice, cilantro, salt, and pepper.
- 3. Add black-eyed peas and top with cheese (if desired).
- 4. Serve with corn chips or veggies.



FRESH CUCUMBER SALSA

- 5 large tomatoes (diced into small pieces)
- 1 bunch of green onions (diced)
- 3 bell peppers (diced)
- 1 cucumber (diced)
- 1/2 red onion (diced)
- 2 Tbsp of chopped fresh cilantro
- 1. Students will use plastic knives to carefully chop the tomato, onions, peppers, cucumber, onion and cilantro.
- 2. Mix all ingredients together
- 3. Serve with whole-wheat chips



CUCUMBER-RADISH SALAD

Yield 12 servings

2 cucumbers, thinly sliced4-6 radishes, thinly sliced1 bunch scallions, chopped16 oz sour cream

- 1. Carefully slice the cucumbers and radishes.
- 2. Combine sliced cucumbers, sliced radishes and chopped green onion.
- 3. Stir the sour cream into the salad just before serving.

Feeling adventurous? Try adding diced tomatoes or shredded carrots.



SPINACH BALLS

Yields about 35 balls

2 (10 oz) packages frozen chopped spinach, defrosted
2 c Italian seasoned breadcrumbs
1 c Parmesan cheese, grated
1/2 c butter, melted
1 bunch green onions, chopped
3 eggs
1 c Cheddar, shredded
1 tsp garlic powder
1/2 tsp salt
1/2 tsp black pepper

Preheat oven to 350°F.

- 1. In a large bowl mix together spinach, breadcrumbs, Parmesan, butter, green onions, eggs, cheddar, salt, pepper, and garlic.
- 2. Form into balls and place on a greased baking sheet.
- 3. Bake for 20-25 minutes, or until spinach balls are golden brown and cooked through.



HONEY-BAKED PECANS

Yields 2 Cups

2 c pecans 2 Tbsp butter, melted 1/3 c honey parchment paper

- 1. Preheat oven to 400°
- 2. Line a cookie sheet with parchment paper.
- 3. Mix butter and honey until well blended; add pecans.
- 4. Once pecans are evenly coated spread out on parchment-lined cookie sheet.
- 5. Bake 5-7 minutes
- 6. Cool and serve.



FRESH PEACH SALSA

- 1 lb tomato, diced
- 1 bell pepper, seeded and finely chopped
- 2 jalapenos, seeded and finely chopped
- 1 medium onion, finely chopped
- 1 1/2 lb peaches, diced
- 1 bunch of cilantro
- 2 Tbsp lime juice
- 1 1/2 tsp salt
- 1 tsp pepper

Directions

- 1. Students will use a plastic knife to carefully dice the tomatoes and bell pepper and put them in a large bowl.
- 2. An adult will finely chop the onion and jalapenos and add them to the bowl.
- 3. Students will dice the peaches and add them to the bowl.
- 4. Add chopped cilantro, lime juice, salt and pepper. Mix everything together until mixed well.
- 5. Serve with chips.



RAINBOW ROASTED VEGETABLES

1/2 c chopped red bell peppers
2 c chopped carrots
1/2 c chopped yellow bell peppers
1/2 c chopped zucchini
1 c broccoli florets
1 c chopped red onions
1 Tbsp dried thyme
Balsamic vinegar to taste

Preheat the oven to 400° F.

Place the chopped vegetables onto a baking sheet, add the thyme and balsamic vinegar to taste.

Bake for about 25 minutes or until the vegetables are cooked.



PECAN CRUNCH GRAPE SALAD

2 c green seedless grapes, washed & stemmed
2 c red seedless grapes, washed & stemmed
8 oz sour cream
8 oz cream cheese, softened
1/2 c granulated sugar
2 tsp vanilla extract

TOPPING: 1 c brown sugar, packed 2 c chopped pecans

In a large sized bowl, mix sour cream, cream cheese, sugar, and vanilla extract until smooth and creamy.

Stir grapes into mixture, and pour into large serving bowl.

In a small bowl, combine brown sugar, and chopped pecans. Sprinkle topping over top of grapes.

Cover and place in refrigerator for at least 2-4 hours before serving.

For a variation try using 4 cups of sliced strawberries or 4 cups of diced apples instead of grapes.



THREE SISTERS SALAD

Yields 4 Servings

2 Tbsp lemon juice
1/4 c extra virgin olive oil
1/2 tsp salt
1/4 tsp fresh ground black pepper
1 can garbanzo or black, red or kidney beans
2 fresh zucchini
1 c frozen (thawed) corn
1/2 red onion
1 bag Romaine lettuce, torn into strips
1 oz fresh Parmesan cheese

- 1. Mix together fresh lemon juice, olive oil, sea salt and fresh ground black pepper in a small bowl.
- 2. Open a can of garbanzo beans. Use any bean of your choice, black beans, kidney, Great White Northern, red beans, etc.
- 3. Pour beans into a colander and rinse under cold running water. Drain and add to a mixing bowl.



- 4. Wash the zucchini and dice into 1/4 inch pieces.
- 5. Finely dice the red onion and add it to the bowl with the zucchini, beans, corn and lettuce.
- 6. Add the lemon, olive oil dressing to the bowl.
- 7. Toss and refrigerate until ready to use. Serve topped with cheese.

FROZEN PEACH YOGURT

1 (16 oz) bag peaches, frozen 1 Tbsp lemon juice, fresh 1/2 c yogurt, plain non-fat or whole

Add the frozen peaches, yogurt and lemon juice to the bowl of a food processor. Process until creamy, about 5 minutes.

Serve the frozen yogurt immediately or transfer it to an airtight container and store it in the freezer for up to 1 month.



STRAWBERRY ICE CREAM IN A BAG

Yield 4 small servings

c heavy whipping cream
 c 2% milk
 tsp vanilla
 c frozen sliced strawberries
 c sugar
 c sugar
 c vock salt
 gallon size zip closing bag
 quart size zip closing bag
 spoons and 8 oz plastic cups
 Measuring spoons and cups
 Duct tape
 Scissors
 Kitchen towel and/or oven mitts

- Pour milk, whipping cream, sugar, vanilla, and strawberries in the quart size bag. Close the bag and be sure it is completely sealed. Tape the seal with duct tape. (Be careful not to get any ingredients in the zippers.)
- 2. Place the quart sized bag with ice cream ingredients inside the 1-gallon zip closing bag.
- 3. Pack ice around the small bag.
- 4. Add rock salt.
- 5. Seal the gallon size bag with duct tape.
- 6. Have students shake or toss the bags between them while protecting their hands with the towel and/or oven mitts.
- 7. Continue until the ice cream is ready, probably for 5 to 10 minutes.
- 8. Open the outer bag and discard the ice and salt. Do not pour it onto grass.
- 9. Rinse the bag of ice cream so no salt gets into the ice cream. Then cut off the bottom corner and divide the ice cream into cups.

Q. Why was the cucumber mad?

SPECIALTY SCIENCE



DOES COLOR AFFECT THE TASTE OF FOOD OR DRINKS? PAGE 42

A. Because he was in a pickle.

DANCING BLUEBERRIES

SUPPLIES FOR EACH STUDENT OR GROUP:

- a clear glass container
- 10-15 dried blueberries (or raisins)
- clear soda pop

QUESTION:

What will happen when dried blueberries are added to the soda?

HYPOTHESIS:

Students will predict what will happen when they put the fruit in the glass and record their predictions.

EXPERIMENT:

- 1. Fill glass half full of soda
- 2. Add 10-15 dried blueberries or raisins.
- 3. Observe the fruit and record your observations.

CONCLUSION:

What happened to the berries when they were placed in the soda? Why?

EXPLANATION:

Tiny bubbles of carbon dioxide gas are attached to the berries. These bubbles increase the volume of the berries, but contribute little to its mass. Therefore, the overall density of the berries is lowered, causing it to be carried upward by the more dense fluid surrounding it. Archimedes' Principle states that the buoyant force exerted on a fluid is equal to the weight of fluid displaced. Since the berries now have a greater volume, they displace more water, causing the fluid to exert a greater buoyant force. The buoyant force of the surrounding fluid is what pushes the berries to the top. Once the berries reach the top, the bubbles pop upon exposure to the air. This makes the berries denser, causing them to sink. As more bubbles adhere to the berries, the density of the berries decreases, and they rise to the surface again.
SPINACH DNA EXTRACTION

SUPPLIES FOR EACH STUDENT OR GROUP:

- 1/2 cup of Fresh Spinach
- 1 cup Ice Cold Water
- 1/4 tsp Salt
- 2 Tbsp Dish Washing Soap
- Meat Tenderizer (one pinch)
- Blender
- Strainer
- Stop Watch or Timer
- Small Stir Stick or Straw
- Ice Cold Rubbing Alcohol

QUESTION: Does spinach contain DNA?

HYPOTHESIS:

Students will predict if they can extract DNA from spinach.

EXPERIMENT:

- 1. Blend 1/4 tsp. salt, 1 cup ice cold water (no ice) and 1/2 cup fresh spinach together in the blender at a high speed until you see formation of a soup like substance.
- 2. Use a strainer and pour the blended substance into a measuring glass, then discard the pulp. Carefully stir 2 Tbsp dish-washing soap into the liquid and wait for 10 minutes.
- 3. Slowly and carefully stir in one pinch of meat tenderizer so that the DNA is not broken apart because it will be harder to see. (If you don't have tenderizer, one or two drops of pineapple juice or contact lens cleaning solution can be used.)
- 4. Record the volume of liquid in the measuring cup. Slowly stir in enough ice-cold rubbing alcohol to double the volume.
- 5. After adding rubbing alcohol, wait for about 3 minutes. The liquid mixture will turn murky and there will be an appearance of a cobwebby substance which will be the DNA.

CONCLUSION:

Students will extract the DNA and record if their hypothesis was correct.

EXPLANATION:

DNA is the blueprint for life. Everything living (including spinach) contains DNA (Deoxyribonucleic Acid). DNA is a long, stringy molecule. Blending the spinach breaks it down to its simplest cellular structure. The salt helps it stick together. DNA normally stays dissolved in water, but adding soap to the blended spinach helps further access the DNA. When salty DNA comes in contact with alcohol it makes the strands hold onto each other and it becomes undissolved. This is called precipitation. The physical force of the DNA clumping together as it precipitates pulls more strands along with it as it rises into the alcohol. In this experiment, meat tenderizer acted as an enzyme to cut proteins away from the DNA, just like a pair of scissors. The DNA in the nucleus of the cell is molded, folded, and protected by proteins.

ROTTING FRUIT LAB

SUPPLIES FOR EACH STUDENT OR GROUP:

- Fresh fruit or vegetables (apples, pears, carrots, cucumbers, potatoes, etc)
- 6 clear plastic jars with lids with paper labels taped on them
- Water
- Vegetable Oil
- Vinegar
- Sharp knife
- Science journal; Colored pencils; Magnifying glass

QUESTION:

How fast will fruit or vegetables rot in open air? In water? In oil? In vinegar? In a sealed jar? After being held in a dirty hand?

HYPOTHESIS:

Students will predict which jar will rot the quickest and give at least three reasons to support their hypotheses.

EXPERIMENT:

- 1. Label the jars: Open Air, Water, Oil, Vinegar, Sealed Air, Dirty Hand
- 2. Carefully slice the fruit and vegetables and place one piece in each jar being careful to only handle the piece that is going into the "Dirty Hand" jar with dirty hands.
- 3. Before placing the fruit or vegetable into the "Dirty Hand" jar, pass it around.
- 4. Record the experiment in the science journal and then observe the jars daily for two weeks recording any changes. Use colored pencils to best record the changes.

CONCLUSION:

Students will compare their observations with others in the classroom. Did all of the fruit and vegetables rot at the same rate? What variables could have changed the results? How many students were correct in their hypotheses? What changes did they observe?

EXPLANATION:

Fruits and vegetables have thick cell walls, which keep them in an edible state. Over time those cell walls break down. When this happens, the food becomes less solid, turns colors, smells bad, and tastes even worse! Some of the primary culprits causing these changes are air, moisture, light, temperature, and microbial growth. When two or more of these culprits get together, they can accelerate the spoiling process even further. Over time, microorganisms use the water within food to fuel the chemical reactions they need to dissolve the food for energy and growth. Moisture on the outside of food allows molds and other microorganisms to grow on the outside of food, as well as within any cracks or holes in the surface of the food, further contributing to increased decay. Mold produces chemicals that make the food break down and start to rot. As the food is broken down into small, simple parts, the mold absorbs them and grows.

SEED TAPE

SUPPLIES FOR EACH STUDENT OR GROUP:

- Roll of 1-ply Toilet Paper
- Small Fruit or Vegetable Seeds (carrots, radishes, beets, lettuce, strawberries)
- Water in a Spray Bottle
- Ruler
- Container Garden or Outdoor Garden

QUESTION:

Will seed tape change the amount of time that it takes for seeds to germinate?

HYPOTHESIS:

Students will predict which seeds will germinate more efficiently: those in seed tape or those planted traditionally.

EXPERIMENT:

- 1. Roll out the toilet paper and tear off strips of 2-4 squares.
- 2. Lightly mist the toilet paper with water.
- 3. Place seeds along the center of the toilet paper, spacing them about an inch apart. Use the ruler to help guide spacing. Save some seeds to plant traditionally.
- 4. Fold the top third of the paper over the seeds, then fold the bottom third over to cover the seeds completely. Lightly tamp the paper, misting it again to secure the seeds.
- 5. Allow to dry completely and either plant immediately or store in an airtight container in the refrigerator.
- 6. To plant, lay the seed tape in the garden or container, cover with 1/4-1/2" soil. Plant seeds traditionally at the same depth.
- 7. Water well to help get the seeds started growing and the toilet paper breaking down.

CONCLUSION:

Students will discuss the benefits/negative aspects of seed tape vs. traditional gardening. Did the seed tape allow the seeds to germinate and sprout? Did the plants grow at the same rate? What unexpected results occurred? Try making seed tape using other paper products such as paper towels, newspaper, copy paper, etc.

EXPLANATION:

Seed tapes made from toilet paper quickly decompose leaving the imbedded seeds spaced at regular intervals. Seed tapes are used to make dispersal and spacing of difficult-to-handle seeds easier. The tapes also make it easier to make straight rows. Additionally, seed tapes often mean less thinning of seedlings later which saves time, effort, and seeds. Traditional planted seeds may be sown at different depths, may shift during watering, and the tiny seeds may be difficult to plant at the proper spacing ratio, especially if planted on a windy day.

RED CABBAGE PH INDICATOR

SUPPLIES FOR EACH STUDENT OR GROUP:

- Head of red cabbage, water, blender, strainer
- Jar or measuring cup; measuring spoons
- Pipette or eye dropper
- Clear cups with labels filled half full of: vinegar, lemon juice, clear soda pop, baking soda, washing detergent, cream of tartar, effervescent tablet, antacids, milk, water
- Colored pencils and science journal or paper

QUESTION:

Can red cabbage be used as a pH indicator?

HYPOTHESIS:

Students will predict if cabbage will indicate the pH of various household substances. They will also predict which of the substances will be acidic, neutral or basic.

TO MAKE INDICATOR SOLUTION:

- 1. Fill the blender half full of water. Add cabbage leaves and blend until smooth.
- 2. Pour the cabbage water through a strainer into a jar or large measuring cup. The dark purple liquid in the jar is your indicator. Discard the pulp.

EXPERIMENT:

- 1. Fill one cup half full of water (this is neutral, or your control), one cup half full of vinegar (this is acidic), and one cup with 1 Tbsp of baking soda (this is basic).
- 2. Use a pipette to drop the Red Cabbage Indicator into the cups. Notice how the colors change in each cup. Record how many drops were added before the color changed. Draw a picture of what you see.
- 3. Repeat with other cups predicting acidic, neutral, or basic before adding indicator.

CONCLUSION:

Which of the tested items were acidic, neutral, or basic? How many students' hypotheses were correct?

EXPLANATION:

Some substances are classified as either an acid or a base. Water (a neutral) has a pH of 7 on a scale of o-14. Red cabbage contains a water-soluble pigment called anthocyanin that changes color when it is mixed with an acid or a base, therefore it can be used as a pH indicator. The pigment turns red in acidic environments with a pH less than 7 and the pigment turns bluish-green in alkaline (basic) environments with a pH greater than 7. You can make your own pH indicator strips by soaking coffee filters in concentrated cabbage juice, remove, and hang to dry. Cut the dried paper into thin strips. Dip the strips into various substances to test their pH. Redder strips indicate more acidic substances.

SPECIALTY CROP DENSITY

SUPPLIES FOR EACH STUDENT OR GROUP:

- Oil
- Water
- Honey
- Grapes, Celery, Carrot, Apple, Pears, Zucchinis, Potatoes, Sweet Potatoes, Turnips
- Tall Clear Cup, Knife and Cutting Board
- Colored Pencils and Science Journal or Paper

QUESTION: What is density?

HYPOTHESIS:

Students will predict which liquids have the highest and lowest density. They will also predict which fruits and vegetables have the highest and lowest density.

EXPERIMENT:

- 1. Fill 1/3 of the tall clear cup with honey.
- 2. Fill the next third with oil.
- 3. Fill the last third with water.
- 4. Wait a minute and let all three liquids settle. Record: What layer is the honey, the oil, the water?
- 5. Carefully chop the fruits and vegetables and drop the pieces into the center of the cup. Record: Which pieces stay in the honey, the oil, and the water.
- 6. Students will draw what they observe.

CONCLUSION:

Students will compare the results to their predictions and answer these questions: What substance has the highest density? (bottom liquid) What substance has the lowest density? (top liquid) What food has a higher density than honey? What food has a higher density than water? What food has the lowest density? Do the results change if you do not chop the food into pieces?

EXPLANATION:

Density is simply the measurement of how solid something is. Lighter liquids are less dense than heavier liquids. Different fruits and vegetables will also float or sink depending on their density. In general, apples, pears, and zucchinis will float, while potatoes, grapes and carrots will sink. Others like turnips, celery and sweet potatoes sometimes sink and sometimes float. Why the difference? The densities and masses of the objects you drop into the liquids vary. If the layer of liquid is more dense than the object itself, the object stays on top of that liquid. If the layer of liquid is less dense than the object, the object sinks through that layer until it meets a liquid layer that is dense enough to hold it up.

EDIBLE APPLE BUBBLES

SUPPLIES FOR EACH STUDENT OR GROUP:

- 3 Large apples
- Apple Juice (or water or any other juice)
- Milk
- Straws
- Ruler; Colored Pencils; Science Journal or Paper
- Knife and Cutting Board; Measuring Spoons

QUESTION:

What liquid makes the largest bubbles?

HYPOTHESIS:

Students will predict which liquid will make the largest bubbles: apple juice, milk, or a mixture of the two.

EXPERIMENT:

- 1. Cut the core out of the apples with a sharp knife.
- 2. Pour 2 Tbsp of apple juice in an apple.
- 3. Use straws to blow bubbles in the apple juice. Use a ruler to measure the height of the tallest bubble. Draw a picture to illustrate the results.
- 4. Pour 2 Tbsp milk into a second apple. Now blow bubbles in milk and measure the height of the bubbles. Draw a picture to illustrate the results.
- 5. Finally, pour 1 tablespoon of milk and 1 tablespoon of apple juice into the third apple. Repeat the bubble blowing and recording.

CONCLUSION:

After blowing bubbles using all three liquids, students will compare the results to their hypothesis. Students will also compare their results to others in the class to see if the results are consistent.

EXPLANATION:

Because of the shape of water molecules, water has a very high surface tension, it tends to stick to itself very tightly. If you blow a bubble into plain water, it will pop quickly. Most juices are mostly water, so bubbles blown into them also have high surface tension and pop quickly. Milk has a lot of proteins in it that connect together, creating a type of film that can stretch. Milk has less surface tension than water because of these proteins. The milk has enough protein in it that you can even make juice/milk bubbles easily!

TURNING GRAPES TO RAISINS

SUPPLIES FOR EACH STUDENT OR GROUP:

- Fresh Red or Green Seedless Grapes
- Tray With Slats; Small Bowl; Twine
- Parchment Paper or Kitchen Towel
- Sun

QUESTION:

How many days does it take for grapes to turn into raisins?

HYPOTHESIS:

Students will predict which method of drying grapes will produce raisins the fastest: Drying on a slatted tray; Drying in a small bowl; or Hanging to dry.

EXPERIMENT:

- 1. Wash and gently dry the grapes.
- 2. Spread 1/3 of the grapes on the slatted tray, place 1/3 in a bowl, leave the final third on the vine and hang in a sunny location using twine.
- 3. Make sure the grapes aren't touching each other.
- 4. Cover the grapes up with kitchen towel or parchment paper. Make sure whatever you're covering the grapes with won't blow away. Weigh it down if needed.
- 5. Take the grapes outside and leave them for at least three days. The cover should prevent bugs getting to the grapes. If the nights are damp, take the grapes inside at night and put them out again the next day. If the grapes start to rot remove them, they should dry but not rot.

CONCLUSION:

Students will monitor the grapes and record their changes. They will discuss which method produced grapes quicker. How many days did it take? Were any predictions correct?

EXPLANATION:

Drying grapes in the sunshine turns them into raisins. The heat from the sun causes the water to evaporate from the grapes. It also heats up the sugar, causing it to caramelize. Because the water has evaporated, raisins are smaller and lighter than grapes. The caramelized sugar makes the raisins taste sweet. Most raisins are small, dark, and wrinkled. They have a flavor similar to the grapes from which they are made, but the drying process, which creates them, concentrates the amount of sugar making them taste much sweeter. They are a naturally stable food and resist spoilage due to their low moisture and low pH. Raisins are composed of important food elements such as sugars, fruit acids, and mineral salts. The sugars provide a good source for carbohydrates. Vitamin B6 is found in raisins and is an essential part of human nutrition.

DOES COLOR AFFECT THE TASTE OF FOOD OR DRINKS?

SUPPLIES FOR EACH STUDENT OR GROUP:

- Food dye (Red, Blue, Green)
- Applesauce; Apple Juice; White Grape Juice;
- Bowls; Spoons; Cups
- Water
- Blindfold

QUESTION:

Does the color of a food or drink affect the taste?

HYPOTHESIS:

Students will predict which color of applesauce, apple juice, and grape juice will taste best.

EXPERIMENT:

- 1. Start by pouring applesauce into four large bowls.
- 2. Mix red food coloring into one bowl, blue into another and green into another. (The fourth bowl will be the control because the color will not change.)
- 3. Have each subject taste each color with a different spoon in each and wash their mouths out with water after each taste.
- 4. Record the results of each color to determine if the color affected the taste.
- 5. Repeat and record results with each color.
- 6. Repeat the experiment with apple juice and white grape juice.
- 7. Repeat the experiment with the subject blind folded.

CONCLUSION:

How did the taste test results vary/stay the same for the different foods? Were the results the same when the subject was blindfolded?

EXPLANATION:

Bright colors in fruits and veggies are associated with nutrition and flavor. It makes the whole eating experience seem much more healthy and fulfilling. When we see colored food or drink, we associate it with past experiences. When it doesn't match the flavor we associate with it, we get a little confused. Some studies have shown that people legitimately mistook cherry-flavored drinks dyed orange to taste like an orange drink.

BEANS: A NATURAL SPONGE

SUPPLIES FOR EACH STUDENT OR GROUP:

- 50 grams Dried Lima Beans and 50 grams Dried Black-eyed Peas
- 200 mL Water in a Metric Measuring Cup
- 4 12 oz Plastic Cups; Plastic Wrap
- Scale, accurate to 1 gram (g)
- Science Journal or Paper; Pencil; Marker
- Strainer or Colander; Paper Towels
- Timer or Stop Watch

QUESTION:

Do large beans absorb more water than small beans?

HYPOTHESIS:

Students will predict if the size of the bean determines the amount of water it will absorb.

EXPERIMENT:

- 1. Put one plastic cup onto the scale and zero the scale. Then weigh out 50 grams (g) of the dried lima beans into the cup. Repeat with the dried black-eyed peas.
- 2. Add 100 mL of water to each cup and cover with plastic wrap, set the timer for 10 minutes and check on the cups every 10 minutes for the next 30 minutes.
- 3. When you check on them, make a small line on each cup where the top of the beans are. Write the time next to the mark.
- 4. After 30 minutes pour the dried lima beans into a strainer. Shake as much water as you can off of the beans in the strainer. Repeat with black-eyed peas.
- 5. Pour the lima beans onto several sheets of paper towels. Gently dry them with the paper towels. Repeat with black-eyed peas.
- 6. Put a clean dry cup on the scale and zero the scale. Record the weight of the beans.
- 7. Calculate the average masses for each type of bean. How did the masses of the lima beans change over time? The black-eyed peas?

CONCLUSION:

After calculating the data, which beans absorbed more water? Did the size of the bean affect the water absorption? How can you prove your findings?

EXPLANATION:

As beans soak in water they absorb water through a process called osmosis causing their volume and mass to increase. The outer covering of the bean is water permeable and the inside of the bean is porous. Water is absorbed through the outer membrane, which causes it to swell. Beans stay viable for long periods of time if they are kept dry. This feature lets them survive long periods of drought in natural settings and allows us to store them for long periods of time before cooking them.

LONG LIVE THE EVERGREENS

SUPPLIES FOR EACH STUDENT OR GROUP:

- 5 Fresh Cut Evergreen Branches each 4" long from the same tree,
- 5 Plastic Cups with Labels; Marker
- 1 Quart Jar with Lid containing Plain Tap Water
- 1 Quart Jar with Lid containing Tap Water with 1 tsp White Vinegar added
- 1 Quart Jar with Lid containing Tap Water with a half-cup of Light Corn Syrup dissolved in it
- 1 Quart Jar with Lid containing Tap Water with 1 tsp Household Bleach added
- 1 Quart Jar with Lid containing Clear Soda Pop
- Measuring Cup; Measuring Spoons; Mixing Bowl

QUESTION:

Will adding other liquids to the water help keep Christmas Trees fresher longer?

HYPOTHESIS:

Students will predict what the solutions will do to the life of the Christmas Tree Branch.

EXPERIMENT:

- 1. Trim the bottom of each branch at an angle and place each branch in a separate cup so that the trimmed end rests on the bottom and the foliage is clear of the cup.
- 2. Label the Jars #1-5 and the Cups #1-5 so that you can keep them straight.
- 3. Pour just enough liquid from Jar 1 into Cup 1 so that the trimmed angle of the branch is completely submerged in the liquid but most of the branch is above the surface of the liquid. Repeat with each of the other solutions.
- 4. Place the cups in a secure location at room temperature.
- 5. Observe the branches every two days over a period of at least 4 weeks, adding appropriate liquid from the jars to keep just the cut tip of the branches submerged. Look for changes to the foliage and for signs of mold or mildew at the base.
- 6. Record your observations.

CONCLUSION:

Were their predictions correct? Were they surprised by the results?

EXPLANATION:

When a Christmas tree is cut, more than half its weight is water. With proper care, you can maintain the quality of your tree. Keeping a Christmas tree fresh is very important, not only for preserving its beauty, but also to prevent it from becoming a fire hazard. With proper care, a Christmas tree can stay fresh for a month or even longer. Too little water causes resin to form over the cut end of the trunk. Once that happens, the tree stops absorbing water and dries out quickly. The jury is still out on whether or not additives in the water, like bleach, aspirin, and sugar, are really necessary to keep a tree fresh. They likely won't hurt, but most experts agree that plenty of plain water is really all you need to keep a tree fresh.

Pepper legetables onion Q. Why did the cabbage win the race?

GARDEN GAMES



A. Because he was ahead.

COLOR CALL

Students form a circle, with one player in the center.

The student in the center throws a beanbag to a player on the rim, and calls out a color.

The player who catches the beanbag responds by naming a fruit or vegetable of the color called, and then throws the beanbag back to the center player while calling a new color.

Now the student in the center must name an appropriate fruit or vegetable.

The game goes on in this manner, with colors repeated, if necessary.

When a player on the rim fails to catch the beanbag or cannot name a fruit or veggie of the color called, he or she is eliminated.

When the student in the center drops the beanbag or answers incorrectly, he or she leaves the game, and the questioner moves to the center.

The game continues until one player remains—the winner.

FRUIT AND VEGETABLE PAIRS (MIXER)

Cut an assortment of fruits and vegetables in half, or cut pictures from magazines or the Oklahoma Fruit or Vegetable Templates (can be accessed on p.58) and cut them in half.

Each player is given half the fruit or vegetable or picture.

On signal, all scurry about to find their partners.

FRUIT BASKET

Students sit in a circle with one player in the center.

The teacher assigns the name of a fruit to various circle players. There should be multiple students for each fruit named.

The center player calls out "All apples change places with all pears," or similar.

While the two groups scramble to change places, he or she tries to get one of the seats.

The center player may also call out the name of several kinds of fruits at once.

"Fruit basket turn over" means all students must change seats.

CAPTURE THE FRUIT OR VEGGIE

Divide players into two equal lines, one called "Fruit" and the other called "Veggies."

Teams stand about five feet apart, facing each other on opposite sides of a center line.

Behind each group of players and about 25 feet away, is a goal line. When the game leader calls out "Fruits!" that group turns and runs toward its own goal line, with the Veggies in pursuit.

Any Fruit tagged before crossing the line joins the other side.

The action continues with the leader giving each side a fairly even number of chances to chase their opponents.

FRUITS, NUTS, AND VEGGIES FREEZE TAG

Identify the boundaries and inform the players that they may run in any direction, but must stay within the boundaries.

Select 1 or 2 "Nuts" to be "It."

On "Go" the "Nuts" will chase the players and try to tag them. When a player is tagged, he/she stands frozen until he/she is rescued.

Another player who serves as the "rescuer" calls out a color while crawling under the frozen player's legs; the frozen player must name a fruit or vegetable to match the color.

OKLAHOMA STONE SOUP GAME

Set out a large cooking pot. Have your children stand around the pot. Tell them that you are going to make some Oklahoma Stone Soup but that you need their help.

Taking turns, each child pretends to toss a vegetable into the pot, naming their pretend vegetable.

The hard part of the game is that when it is your turn, you have to name all the other vegetables that have been placed into the pot and then add your own, in the proper order.

Example: There have already been carrots, green beens, and tomatoes put into the pot and you want to add peas. You must say, "We're making Oklahoma Stone Soup today and we're adding carrots, green beans, tomatoes and peas".

Continue as long as abilities or interest lasts.

FRUIT, NUT, VEGGIES

Players sit in a circle, with one student (the caller) in the center.

The caller points to any other student and says, "Fruit, Nut, Veggies - Nut!"

By the count of ten, the student must then name a nut (or fruit or vegetable) not previously mentioned. If successful, he or she sits in the center of the circle. If not, the same student remains in center, calling on a different student to name a specific food.

Variation: Root, Leaf, Fruit, Stem—The student in the center calls out "Root," "Leaf," "Fruit" or "Stem." By the count of ten, the student called upon must name a vegetable or fruit that meets the criteria called. Example: Root - Carrot; Leaf - Spinach

CARROT TOSS

- Several bags of carrots
- At least 2 buckets

Divide the students into at least two teams. Each team will need the same number of carrots and an empty bucket.

Students will stand 5 feet from the bucket and try to toss a carrot into the bucket. As soon as a student gets a carrot in the bucket it is the next persons turn.

The game ends when the team has all of their carrots in the bucket. You can vary the time allowed for each team to accomplish the task or the distance from which they throw to make the game more difficult.

FRUIT OR VEGETABLE ONE MINUTE CHALLENGE

- 1 Fruit or Vegetable per team
- Several Rubber bands

Each team has one minute to get as many rubber bands on their fruit or vegetable as possible.

At the end of one minute teams will count their rubber bands.

Trade fruit or vegetables and continue to play as long as interests last.

SPECIALTY CROP SCOOT

Have all of the players stand in a line in the middle of the room.

The teacher will announce the name of either a fruit or a vegetable.

When the teachers names any fruit, everybody has to run towards the left side of the room and when they name any vegetable, everybody has to run towards the right side of the room.

The one who runs towards the wrong side will be out of the game. The last three players are the winners!!

Variation: Instead of running, players can hop, skip, crawl, etc.

HOT POTATO

- 2 Baskets of Potatoes (make sure there are the same number in each basket)
- 2 Empty Baskets

Divide the players into two teams. Mark a starting line and a finishing line about 20 feet apart. Each team has a basket full of potatoes at the starting line and one empty basket at the finishing line.

Each team stands in two vertical columns facing each other in a zig zag way.

The players have one minute to pass the "Hot Potatoes" one by one by tossing them from one player to another (making a zig zag as they toss) from the starting basket to finishing basket.

The last player will put the potatoes in the empty basket. If a potato is dropped while tossing, it will not be counted. The team with the most "Hot Potatoes" in the basket at the finish line in one minute wins.

TOOTHLESS TOMATO

The fun part of this game is that students will be saying the name of their fruit or vegetable without showing teeth; they must speak with their lips over their teeth.

Have each player choose a fruit or vegetable and draw a picture of it or write its name on a card to hold. The first player says their chosen fruit or veggie two times and then another player's fruit or veggie twice.

For example, if the first player has chosen potato and they want to pass the play to someone who chose celery, they would say, "Potato, potato, celery, celery." Player number two would say, "Celery, celery, squash, squash."

If someone shows their teeth, the player who sees them tells the group by screaming, "Teeth, teeth!" and flapping their arms like wings, without showing their teeth in the process. Play continues with people eliminated when they show their teeth.

GUESS MY NAME

Cut out pictures of fruits or vegetables from magazines or Oklahoma Fruit or Vegetable Templates (can be accessed on p.58).

Without letting the players see the pictures, pin one to each player's back.

The players circulate around and ask each other questions to try to identify what fruit or vegetable they are representing.

Any question may be asked except the direct one, "What am I?"

The first player to guess his or her fruit or vegetable is the winner, but the game continues until all or most of the players have guessed what they are.

OBSERVATION

Place several different vegetables on a table.

Have students stand around the table for one or two minutes and try to memorize the vegetables.

Cover the vegetables with a table cloth, and have students write down as many as they can remember.

After three or four minutes, call time and collect the lists.

The player who has written correctly the greatest number of vegetables wins.

POLLINATION TAG

Students start by drawing their favorite fruit on a piece of paper. On the other side of the paper, they will draw a large flower. In the center of their flower, place a piece of double-sided tape, and attach a cotton ball to the flower. This is the pollen! Students may choose to color the cotton ball with marker to distinguish their pollen from the other flower's in the class.

Next, choose three students to be pollinators. The pollinators chase the flowers in a game of pollination tag.

When a flower is tagged, it must give its pollen to the pollinator. If the pollinator is already carrying a cotton ball, he/she hands the pollen to the flower to pollinate it.

When this happens, the flower turns over his/her piece of paper to show that he/she turned into a fruit. This player then comes out of the game to sit down. The game ends when most of the flowers have been pollinated and turned into fruits!

MAKING HONEY

Children sit in a circle on the floor.

The Queen Bee walks around the circle tapping children on the head and saying, "Buzz, buzz" with each tap. Each child tapped gets out of the circle and follows the Queen around.

When the Queen calls, "Go make honey" those tapped and the Queen Bee run to an empty spot.

The last one to an empty spot is the new Queen Bee.

FRUIT AND VEGETABLE RELAY

- Variety of Fruits and Vegetables (real, plastic, pictures, empty boxes or cans)
- 2 Large Boxes for Each Team; Label One Box "Fruit" and One Box "Vegetable"

Arrange group in 2 or more teams and have each team line up on opposite sides of a gym/field/large open space.

Place fruits, vegetables, pictures, or containers in the middle of the space, between the teams.

On "Go!" each team member takes turns running to grab a fruit/ vegetable and returning to their team to place the item in the correct box.

The team with the most items, correctly sorted, wins.

Variation: Search for an item that meets the description called out by the leader. For instance, the leader calls out "orange vegetable" and the team members in line run out and find an orange vegetable to return to their teams. The next person in line searches for a different item, such as "green fruit."

For older students who have been introduced to key nutrients, categories may include options like "lots of vitamin C" or "little vitamin C"

PUMPKIN PICKIN'

- Cones
- Miniature Pumpkins (can use orange yarn balls, basketballs, or beanbags)

The object of the game is for players to get pumpkins from the pumpkin patch and deliver them to the houses. Each corner of the gym is a pretend house.

Make a circle area in the middle of the gym to be the pumpkin patch (mark with cones). Place LOTS of miniature pumpkins inside the circle area. Choose 2-3 players to be Scarecrows (taggers).

Scarecrows stay inside the pumpkin patch and try to tag players while they are taking a pumpkin out of the patch. Players who are tagged sit down and wait for someone to help them (any other player can touch their back to help them). Players may only take one pumpkin from the patch at a time.

CHRISTMAS TREE TAG

Ask children what shape a Christmas tree is (triangular). Can they stand up and make that shape with their bodies? (Stand with feet apart, arms above head with hands together). In this game, they will pretend to be Christmas trees and presents will go under their trees!

To begin the game, select 4 taggers. When teacher yells "CHRISTMAS TREE TAG" the game begins.

If a player is tagged, they turn into a Christmas Tree (standing with feet apart and arms up with hands together above head). For a player to be untagged, another player has to pretend to be a present and go under the tree (crawl between their legs).

PUMPKIN MAN

Preparation: A large open area is required for the movement.

Teach the following song: Pumpkin man, pumpkin man, catch an apple if you can, Yes I will, Yes I will, if the apple will stand still.

Divide students into two groups - a pumpkin group and an apple group.

Form a circle, facing inward.

Have the pumpkins step forward and put their palms together to make "windows." (Don't weave fingers.)

As all sing the song, have apples go in and out of the windows at least twice.

When teachers says "stop," pumpkins should lower the "windows." All apples inside the circle become pumpkins and join the circle. Play two times so that everyone who started out as a pumpkin gets the opportunity to become an apple.

Background: The pumpkin is a warm-season vegetable that can be grown throughout much of the United States. Besides being used as jack-o'-lanterns at Halloween, pumpkins are used to make pumpkin butter, pies, custard, bread, cookies and soup. Pumpkin is a very tender vegetable. The seeds do not germinate in cold soil, and the seedlings are injured by frost. Pumpkins can be harvested whenever they are a deep, solid color (orange for most varieties), and the rind is hard.



ART ABOARD



A. Because his mom was in a jam.

apple

FRUIT AND VEGETABLE TEMPLATES FOR ART PROJECTS

Some of the art projects in this section use fruit and vegetable coloring sheets or templates. These can be found by scanning the QR Codes on this page or by going to www.agclassroom.org/ok and searching for "Oklahoma Grown."

Feel free to create your own templates, too!



Fruit Templates



Vegetable Templates

Q. Why do watermelons have fancy weddings? A. Because they cantaloupe.

BUBBLE WRAP PAINTED FRUIT AND VEGGIES

- Fruit or Vegetable Shaped Templates
- Construction Paper
- Pencil or Crayon
- Scissors
- Bubble Wrap Pieces
- Paint and Paintbrushes

- 1. Students will select a fruit or vegetable template to trace onto construction paper.
- 2. After tracing, they will cut out their fruit or vegetable.
- 3. They will then paint bubble wrap and press the bubble wrap onto their fruit or vegetable.

STRAWBERRY ART

- Paint Brush
- Red Construction Paper
- White Construction Paper
- Black Paint; Green Paint
- Glue
- Scissors

- 1. Students will cut out a strawberry shape from the red construction paper.
- 2. Students will dip a fingertip in black paint and create seeds on the strawberry.
- 3. Paint the students hand with green paint and make a handprint on the white construction paper.
- 4. When the handprint is dry, the student will cut it out and glue it to the back of the strawberry.
- 5. On the back of the strawberry, students will write facts about strawberries that they have learned in class.



CARROT FOOTPRINTS

- Orange Paint
- White Construction Paper
- Green Construction Paper
- Scissors
- Glue

Directions:

- 1. Paint student's foot with orange paint and press onto white construction paper. Allow to dry.
- 2. Students will cut out their footprint.
- 3. Students will trace their hand onto green construction paper and cut it out.
- 4. They will glue their handprint onto the back of their footprint to make a carrot with carrot greens on the top.

Extension:

Research other colors of carrots. Students will be surprised to learn that carrots naturally grow in purple, yellow, red, white, and even black!

WATERCOLOR ART WORK

- Variety of fruits and vegetables such as: beets, carrots, asparagus, lettuce, pepper, peas, cauliflower
- Pencils
- Watercolors and Paint Brushes
- Watercolor Paper
- Crayons

Background:

Discuss what parts of plants we eat and where they grow. Bring a variety of vegetables to class for students to explore. Some suggestions: Rootsbeet, carrots, radishes; Stem- asparagus; Leaves- cabbage, spinach, lettuce; Fruit- peppers, tomatoes; Seeds- corn, peas; Flowers- cauliflower. Have students sort the vegetables into the correct categories. Discuss if they grow above or below the ground.

Directions:

- 1. On watercolor paper, students will use a pencil to draw a horizontal line across the middle of the page to represent the ground.
- 2. They will then draw a variety of vegetables, being mindful of where they grow- above or below the ground. For instance, carrots below the ground with the greens above the ground; lettuce above the ground

with the roots below.
3. Then they will trace all pencil lines with a crayon, using pressure to create dark lines.

4. Students will use the watercolors to paint the vegetables, the ground, leaves or roots, and the sky.



FRUIT AND VEGETABLE MOSAIC ART

- Wallpaper Paint Color Strips or Scraps of Paper
- Markers; Pencils
- Scissors
- Construction Paper
- Glue

- 1. Students will use a pencil to draw the shape of a fruit or vegetable and then trace their shape with a marker.
- 2. Students will cut the wallpaper strips or scrap paper into small pieces.
- 3. Glue the pieces inside the drawing, making sure that none of the pieces touch another to create a mosaic.
- 4. Encourage students to look at their mosaic pieces and think about the highlights and shades that would add dimension to their mosaic.

CORNSTALK FOOTPRINTS

- Yellow Paint
- White Construction Paper
- Green Construction Paper
- Crayons
- Glue
- Scissors

Directions:

- 1. Paint the student's foot yellow and make two footprints on the white construction paper.
- 2. Let the footprints dry and then students will cut them out.
- 3. Cut out corn leaves and a stem from the green paper. Add details to the leaves with the crayons.
- 4. Glue the leaves onto the front of the footprint to create an ear of corn in the husk.
- 5. Glue the corn onto the stem to create a cornstalk.

Extension:

Discuss the many uses for corn: sweet corn to eat; plastics; corn syrup; corn meal, etc.



GRAPES BY THE BUNCH

- Toilet Paper Rolls
- Purple Paint, Red Paint, Green Paint
- Paper Plates
- White Construction Paper

- 1. Pour the paint onto the plate and spread thin.
- 2. Dip the end of the toilet paper roll into the paint and stamp onto the white paper.
- 3. Repeat to make a bunch of grapes in the shape of a triangle.
- 4. Use paint to add details, such as a stem at the top.

SPECIALTY CROP SELF PORTRAITS

- Copies of Fruit and Vegetable Coloring Pages
- Crayons, Markers, Watercolor
- Scissors
- Construction Paper
- Glue

Background:

Giuseppe Arcimboldo was an Italian painter best known for creating imaginative portrait heads made entirely of such objects as fruits, vegetables, flowers, fish, and books - that is, he painted representations of these objects on the canvas arranged in such a way that the whole collection of objects formed a recognizable likeness of the portrait subject.

Portraits by Giuseppe Arcimboldo:





- 1. Students will color or paint the fruit and vegetable templates or draw their own.
- Students will cut a piece of construction paper into the shape of a fruit or vegetable, and it will become their head- perhaps an apple, pumpkin, or watermelon.
- 3. They will cut out the fruit and vegetable templates and arrange them to make a self-portrait similar to one created by Giuseppe Arcimboldo.



JUST PEACHY

- Orange, Pink, and Yellow Tissue Paper
- Glue
- Paper Plates
- Paintbrushes
- Scraps of Brown and Green Paper

- 1. Paint the paper plates with glue.
- 2. Rip tissue paper into small pieces and stick all over the paper plate to create a peach.
- 3. Use the scraps of green and brown paper to make a stem and leaves and glue to the top of the peach.

CHALK ART SPECIALTY CROPS

- Fruits or vegetables to display such as: apples, pears, peaches, pumpkins, etc
- Pencils
- Chalk
- Drawing paper

Directions:

- 1. Display fruit on a table or in a bowl. Discuss the shapes, colors, shadows, and shades of color that the students notice.
- 2. Students will use pencils to draw the fruit or vegetables.
- 3. Then they will use chalk to color in their drawings. Ask them to use their fingers to blend colors to create shades and shadows.
- 4. Students can complete their artwork by coloring in the background of their picture as well.

Q. What kind of apple isn't an apple? A. A pineapple.



POCKET GARDENS

- Fruits and vegetables to look at or a book with pictures of them
- Brown construction paper
- Variety of other colors of construction paper
- Stapler
- Scissors
- Crayons

DIRECTIONS:

- 1. To create the Pocket Garden, start with a sheet of brown construction paper. Fold the bottom up leaving about 2 inches on the top. Fold the bottom part up again, leaving another 2 inches. This makes 2 pockets.
- 2. Staple the sides to hold them in place and to create the pocket edges.
- 3. Students will create their own fruits and vegetables using the construction paper, scissors, and glue.
- 4. They will finish their gardens by tucking their fruits or vegetables into the pockets.

ABSTRACT SPECIALTY CROP ART

- White Drawing Paper
- Pencil
- Black Marker
- Crayons

- 1. Begin by sketching your favorite specialty crop—fruit, nut, Christmas tree, or vegetable
- 2. Then divide it into sections with the pencil
- 3. Fill in each section with a different design—squiggles, dots, lines, hearts, stars, etc.
- 4. When each section is complete, trace over the lines with a black marker.
- 5. Students can color in their artwork with crayons or leave it as black and white art.






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