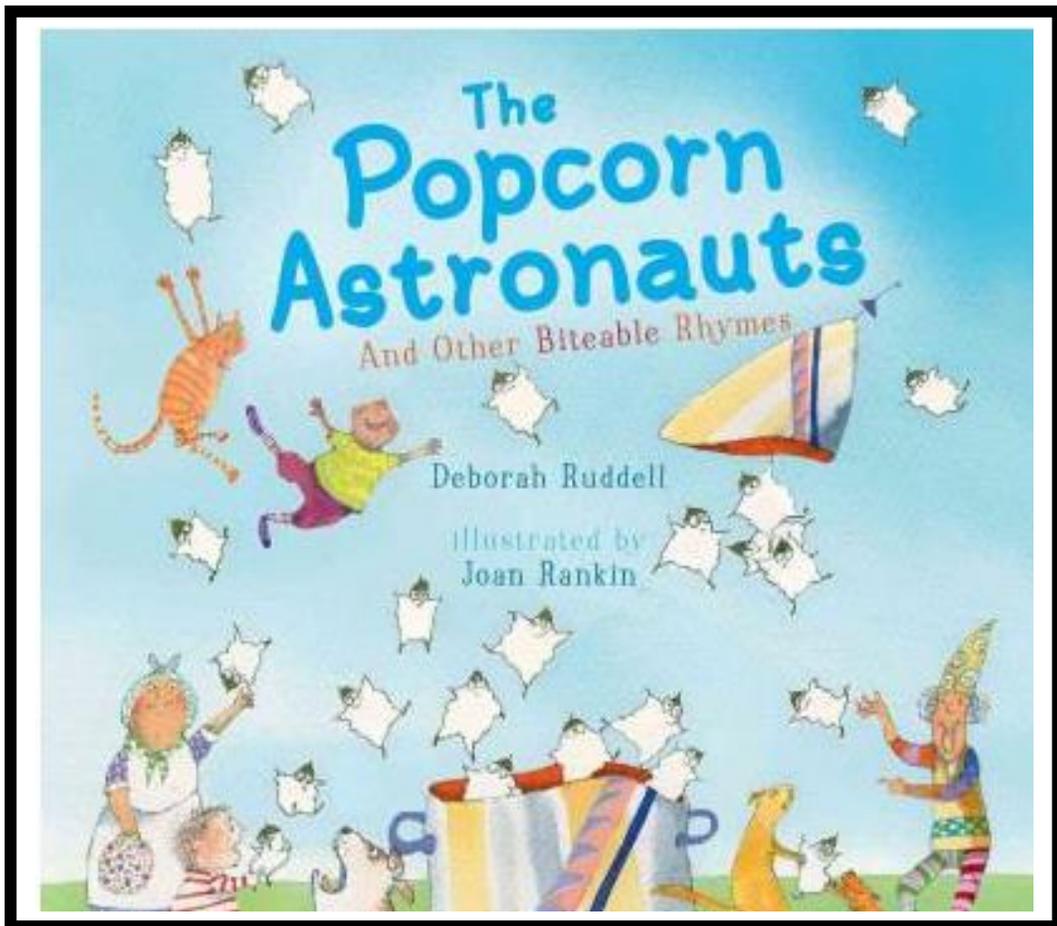


The Popcorn Astronauts



A Complementary Lesson Booklet for
The Popcorn Astronauts

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Journey Across the United States

Grade Level: 1-5

Objective: Students will have a better understanding of reading maps as well as the diversity of crops in the United States.

Common Core: CCSS.ELA-Literacy.RI.4.1; RI.4.7; RF.4.4; W.5.7

Illinois Social Science Standards: SS.G.1.3; SS.G.1.4; SS.G.3.3; SS.G.3.4; SS.G.2-4.5

Suggested Reading Materials:

The Popcorn Astronauts by Deborah Ruddell ISBN: 9781442465558

There's a Map on My Lap by Tish Rabe ISBN: 0375810994

What You Will Need:

Access to the Internet

United States Maps (found on next page)

Markers or Crayons

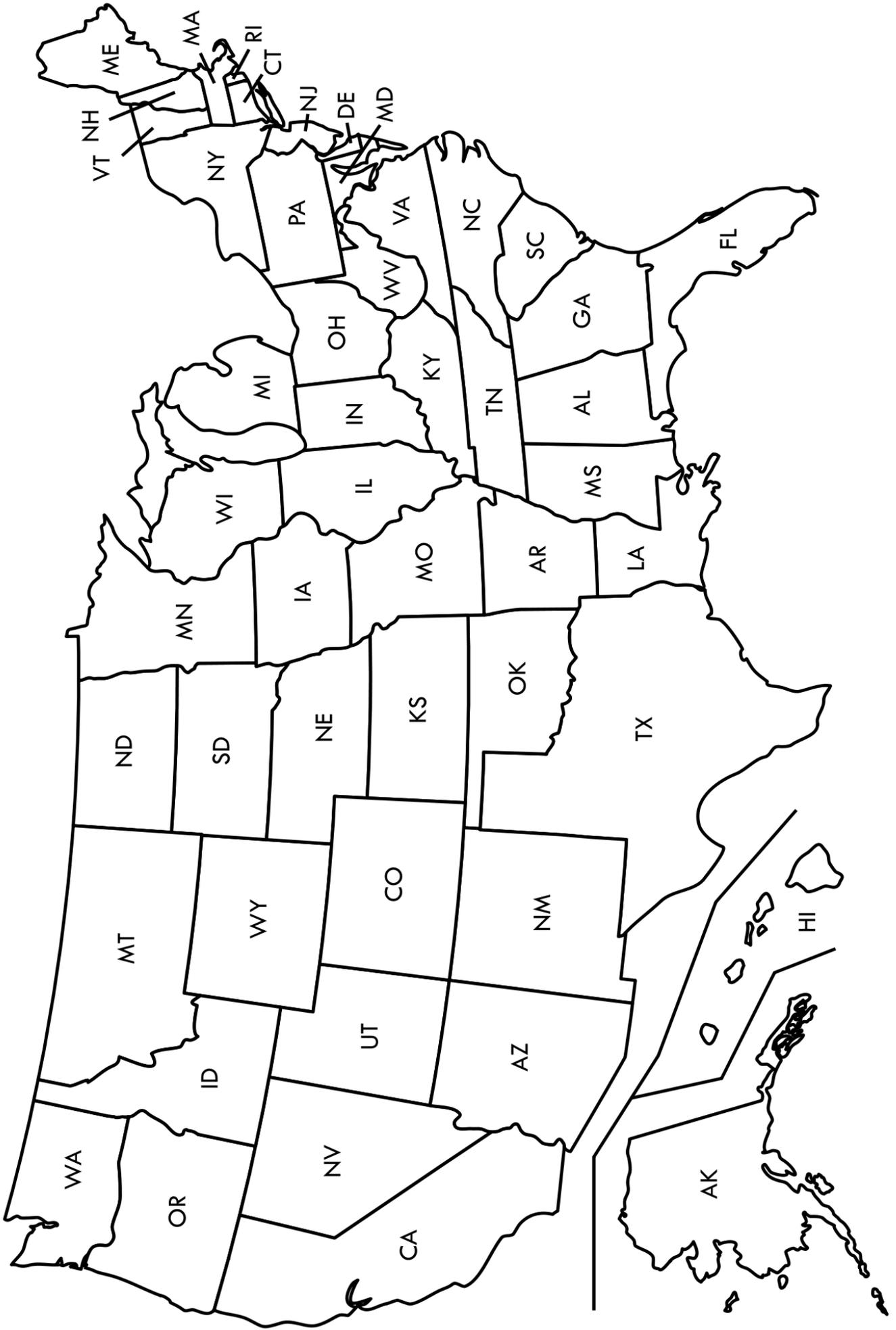


Directions:

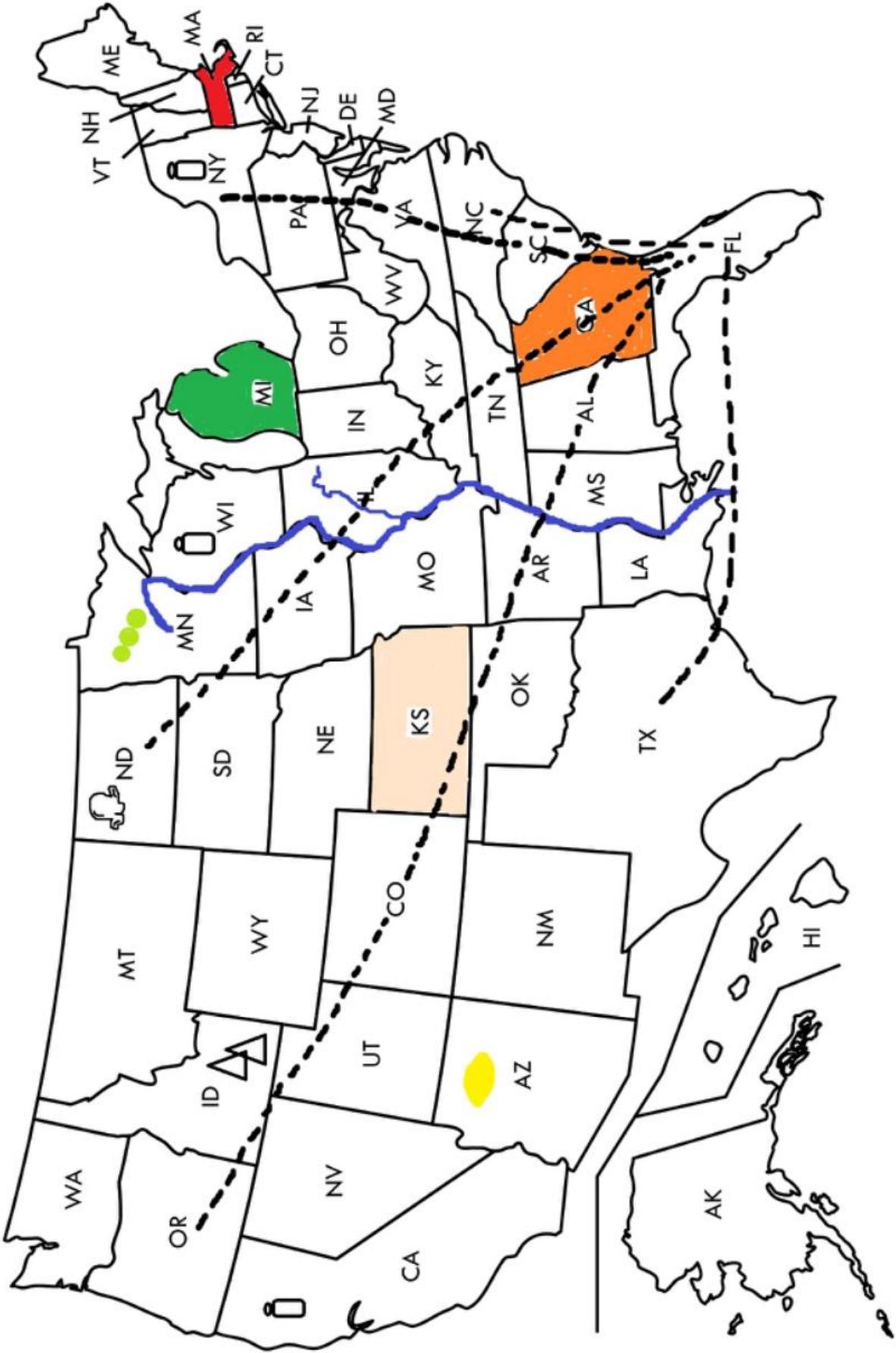
Using the United States map on the next page, follow the directions below:

1. The first apple orchard in North America was planted in Boston, Massachusetts in 1625. Find Massachusetts and color it red.
2. Using blue markers or crayons, draw the Illinois and Mississippi Rivers on the map. Illinois is a great place to grow corn. The Illinois and Mississippi Rivers play a very important role in exporting corn from Illinois and the rest of the United States.
3. Potatoes grow best in cool weather and are an important crop in mountainous parts of the country like Idaho. Find Idaho and draw two overlapping triangles inside.
4. Wheat is in many foods such as pastries, bread products, and cookies. In 2016, Kansas led the nation in wheat production. Find Kansas and color it tan.
5. California, Wisconsin, and New York lead the nation in milk production. Locate California, Wisconsin, and New York. In each of the three states draw a milk chug.
6. Florida is a leading producer of citrus such as oranges and grapefruit. The majority of Florida citrus is processed into juice and shipped all throughout the United States. Draw dashed lines from Florida to a state in the Midwest, Southwest, West, Northeast and Southeast to show that Florida citrus is shipped throughout the United States.
7. Michigan ranks number one nationally for the production of pickling cucumbers. Find Michigan and color it green.
8. Minnesota leads the nation in producing green peas. Locate Minnesota. Inside the state boundaries, draw three green circles and color them in.
9. In 2014, Nebraska ranked 1st in popcorn production. Use a black crayon or marker to draw a popped popcorn kernel inside Nebraska.
10. Arizona is a leading producer of lemons. Find Arizona and draw a yellow football-shaped lemon inside.
11. Georgia is called the peach state. Locate Georgia and color it orange.

United States



United States Answer Key



Strawberry Leather

Grade Level: K-3

Objective: Students will demonstrate measuring skills as they make a strawberry treat.

Common Core: CCSS.Math.Content.K.MD.A.1; K.MD.A.2; 1.MD.A.1; 2.MD.A.1; 3.MD.A.2

Next Generation Science Standards:

Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment: K-LS1-1; K-ESS3-3
Structures and Properties of Matter: 2-PS1-1

Suggested Reading Materials:

The Popcorn Astronauts *The Strawberry Queen* by Deborah Ruddell ISBN: 9781442465558

Strawberries Commodity Fact Sheet at www.learnaboutag.org/resources/fact/strawberries.pdf

What's In A Strawberry at www.californiastrawberries.com/welcome/8-a-day/whats-in-a-strawberry/

What You Will Need:

Strawberries (1 ½ cups per group of 4 students)

Light Corn Syrup

Lemon Juice

Jelly Roll Pan

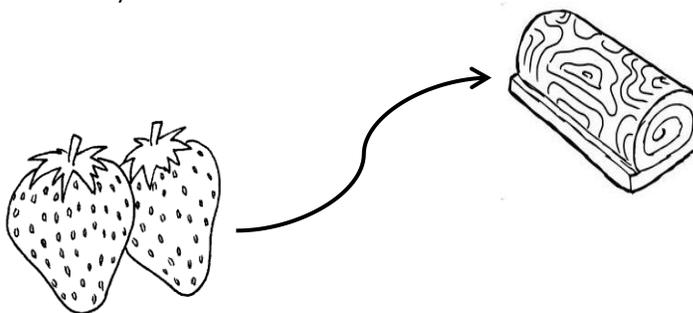
Blender or Food Processor

Masking Tape

Plastic Wrap

Measuring cups and spoons

Oven



Directions:

1. Place 1 ½ cups of clean strawberries in a blender or food processor and process until smooth.
2. Stir in ½ teaspoon lemon juice and 1 ½ teaspoons light corn syrup.
3. Line a jelly roll pan with heavy-duty plastic wrap, taping the plastic wrap to the corners of the pan with masking tape.
4. Pour the strawberry mixture into the pan, spread evenly. Leave at least a one-inch margin on each side.
5. Dry in an oven at 150 degrees Fahrenheit for seven to eight hours or until the surface is dry and no longer sticky.
6. Remove the leather and plastic wrap from the pan while still warm (hands must be clean and dry) and roll up in a jelly roll fashion. Cut into logs and store in plastic wrap for a maximum of five days.
7. Have a class discussion about alternate ways to make the measurements for this lesson. Discuss other real-world examples where measuring is essential.

Extension:

- Use this lesson to introduce the topic of conversions from one unit of measure to another. For example, have students convert the strawberry leather dry time from hours to minutes.

Adapted from California Ag in the Classroom

From Plant to Pickle

Grade Level: K-3

Objective: Students will be able to order a sequence of events.

Common Core: CCSS.ELA-Literacy.W.K.3; W.1.3; W.2.3; RI.2.3; RI.3.3

Suggested Reading Materials:

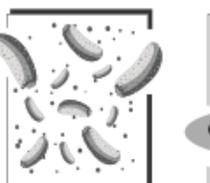
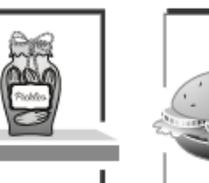
The Popcorn Astronauts *A Smoothie Supreme* by Deborah Ruddell ISBN: 9781442465558

Pickling Cucumbers Fact Sheet at <http://www.learnaboutag.org/resources/fact/cucumbers.pdf>

What You Will Need:

Plant to Pickle Images (found on next page)

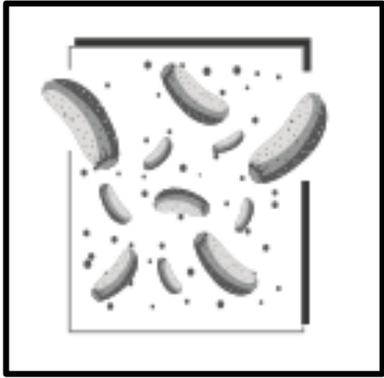
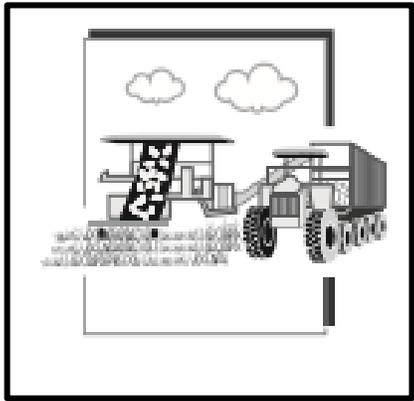
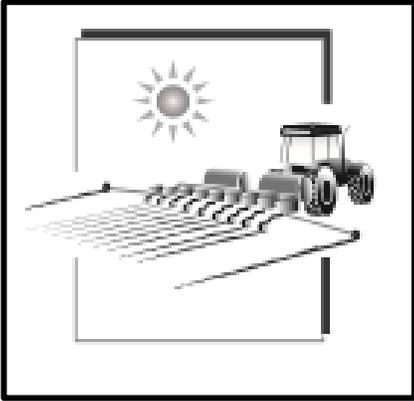
From Plant to Pickle Sequence:

					
<p>Cucumber planting takes place from March to August.</p>	<p>Mechanical harvesting takes place from May to November.</p>	<p>Perfect cucumbers are selected for pickling based on size, shape, and color.</p>	<p>Cucumbers are processed in a brine bath of vinegar, salt, garlic, and spices for 6 to 8 weeks.</p>	<p>Additional seasoning is added and pickles are packaged and ready to be shipped to stores and restaurants.</p>	<p>Ready to eat! Enjoy pickles on your sandwiches or hamburgers!</p>

Directions:

1. Distribute pre-cut Plant to Pickle images to students.
2. Share the following Plant to Pickle events chronologically with students. Have students locate the image that corresponds with each fact.
 - a. Cucumber planting takes place from March to August.
 - b. Mechanical harvesting takes place from May to November.
 - c. Perfect cucumbers are processed in a brine bath of vinegar, salt, garlic, and spice for six to eight weeks.
 - d. Additional seasoning is added and pickles are packaged and ready to be shipped to stores and restaurants.
 - e. Pickles are ready to eat! Enjoy pickles on sandwiches or hamburgers!
3. Tell students to shuffle their Plant to Pickle images.
4. Have student pairs arrange Plant to Pickle images in chronological order. Then, direct them to take turns describing what is happening in the picture.
5. Discuss additional events that could be added to the Plant to Pickle process. Identify where the additional events would fit into the sequence.

Adapted from California Ag in the Classroom



The Poetry of Agriculture

Grade Level: K-3

Objective: Students will create free verse poetry through an exercise that features agriculture items.

Common Core State Standards:

CCSS.ELA-Literacy.RL.K.5; RL.K.6; RL.K.10; RL.1.4; RL.1.7; RL.1.10; RL.2.4; RL.2.10; RL.3.5; RL.3.7; RL.3.10; W.3.10

Next Generation Science Standards:

Structures and Properties of Matter: 2-PS1-1

Suggested Reading Materials:

The Popcorn Astronaut *Only Guacamole!* by Deborah Ruddell ISBN: 9781442465558

IAITC Apple, Corn, Dairy, and Pumpkin Ag Mags

What You Will Need:

Paper Bags

Slips of Paper

Agriculture Items



Directions:

1. Collect a group of agriculture items or pictures of items (avocado, pumpkin, apple, corn, dairy, etc.).
2. Create stations around the room with the agriculture item, a brown paper bag and several blank slips of paper. Students will be moving around classroom so make sure to space the bags far enough apart.
3. Explain that agriculture has long inspired artists and writers. Read aloud some examples of poetry with agricultural themes from The Popcorn Astronaut. Additional samples of poetry can be found on the next page.
4. Instruct students to visit each station around the room and record their impressions of each agricultural product on the slips of paper. Each student should write a single word or short phrase describing the item on the slip of paper then place it in the station's bag. Encourage them to record whatever stands out about the item – color, shape, smell or texture. Have them use their senses and creativity. If you have a large class you can have the students only go to two or three stations.
5. Once everyone has had a chance to visit all the stations, break students into small groups. Give each a bag. Explain they will be using the words and phrases inside the bag to create a piece of free verse poetry about their item.
6. Challenge them to not mention the item by name in their poem. Then, from their writing, the rest of the class will guess the subject of each poem.

Extension:

- Have students write an imaginative story with descriptive details and event sequencing about one of the featured agriculture items.

Adapted from Florida Agriculture in the Classroom

The Cow is of the Bovine ilk

By Ogden Nash

The cow is of the bovine ilk;
One end is moo, the other is milk

Watermelon

By Charles Simic

Green Buddhas
On the fruit stand.
We eat the smile
And spit out the teeth.

Pigs

By Charles Guigna

Pigs are playful
Pigs are pink
Pigs are smarter
than you think.
Pigs are slippery
Pigs are stout
Pigs have noses
Call a snout.
Pigs are pudgy
Pigs are plump
Pigs can run
But never jump.
Pigs are loyal
Pigs are true.
Pigs don't care for
Barbecue.

Star Magic

By Margaret Hillert

Take an apple round and red.
Don't slice down.
Slice through instead.
Right inside it you will see.
A star as pretty as can be.

Farm Animals

By Helen H. Moore

Cows and pigs and horses.
Chickens on the nest.
Which of these farm animals
Do you like best?

The sheep are wooly,
Some white and some black.
The ducks are funny,
When they go quack quack!

Corn Plants

By Amy Ludwig VanDerwater

Every morning
the corn plants
are taller.

By Fourth of July
they'll be
up to my knee.

It seems like
just yesterday
they were so tiny.

I wonder
if this is how
Grandma sees me.

Watermelon Mosaic

Grade Level: K-3

Objective: Students will practice informative/explanatory writing by describing observations of a watermelon.

Common Core: CCSS.ELA-Literacy.W.K.2; W.1.2; W.1.8; W.2.3; W.2.8; W.3.10

Suggested Reading Materials:

The Popcorn Astronauts Welcome to Watermelon Lake! by Deborah Ruddell ISBN: 9781442465558

J. Slice Saves the Planet found at <https://goo.gl/JgEDfT>

What You Will Need:

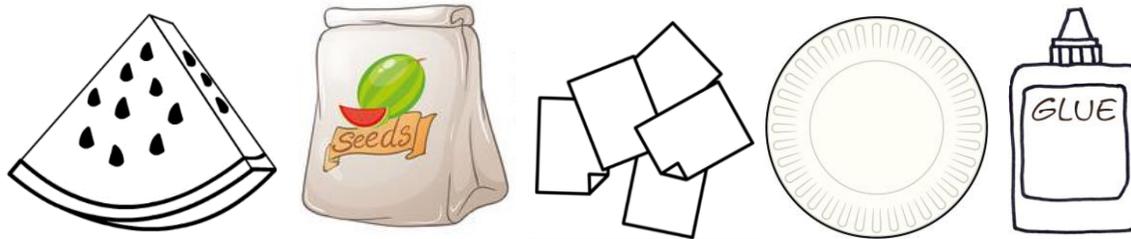
Watermelon slices to taste

Watermelon seeds

Torn green, white, and red construction paper (roughly one inch)

Paper plate

Glue



Directions:

1. Give each student a watermelon slice on a paper plate. Discuss watermelon nutrition.
2. Direct students to think about the sound, taste, smell, look and texture of their watermelon as they enjoy eating it.
3. Have students fold clean paper plates in half.
4. Guide students to glue torn green construction paper pieces around the outside curved edge of their plates to represent watermelon rind.
5. Tell students to add just enough torn white construction paper pieces to make a line of white next to the green.
6. Instruct students to glue small red construction paper pieces to fill in the remaining space.
7. Have students glue watermelon seeds on the red pieces.
8. Tell students to open their plates and write descriptions about the watermelon they have eaten, using the following guidelines: outside color, inside color, seeds (yes, no), outside feel, inside feel, outside smell, inside smell, and inside taste.

Extensions:

- Have students use watermelon seeds for counting, grouping, addition and subtraction practice.
- Use cookie cutters to cut watermelon into kid-friendly shapes. Then, have students write a story about the watermelon figures.

Adapted from Oklahoma Ag in the Classroom

Sweet Corn Patterns

Grade Level: K-3

Objective: Students will be able to create pattern sequences and practice fine motor skills while learning about sweet corn.

Common Core: Mathematics: Practice.MP.7
ELA-Literacy.RL.2.4; RL.3.5

Suggested Reading Materials:

The Popcorn Astronauts *The Picky Ogre* by Deborah Ruddell ISBN: 9781442465558

Corn by Gail Gibbons ISBN: 978823421695

Combines by Holly Dufek ISBN: 9781937747541

Corn (an A to Z book) by Susan Anderson and JoAnne Buggey ISBN: 9781926781020

IAITC Corn Ag Mag

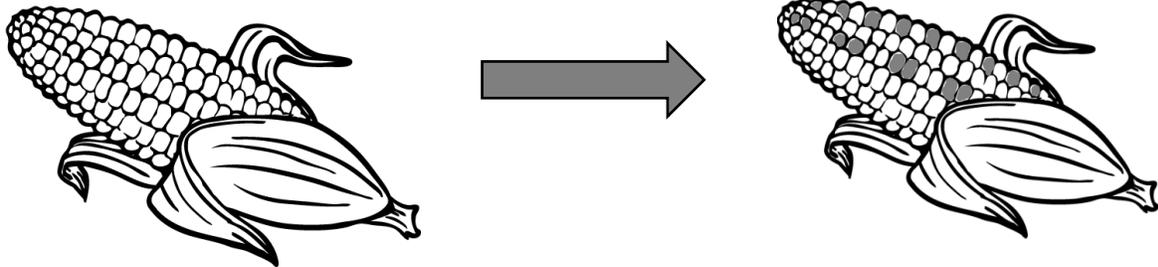
What You Will Need:

Crayons

Black Marker

Cardboard (paper could be substituted)

Internet Access



Directions:

1. Create a sweet corn handout using the black marker and cardboard. To make the corn shape, use the black marker to draw a long oval shape. Add horizontal lines for rows of corn kernels. Then add curved lines on each row to make the individual corn kernels.
2. Teach students patterns such as ABAB, AAB, and even AABCC.
3. Have students practice pattern work on white boards, or alternate platform, as directed by teacher.
4. Give students harvest corn handout. Have students fill in the kernels with the crayons in patterns. Use an ABAB pattern, an AAB pattern, and even an AABCC pattern to fill in the rows of corn kernels with different colors.
5. Connect patterns in mathematics to patterns in writing.
6. Examine how regular beats, alliteration, rhymes, and repeated lines can be used to make rhythmic patterns in text. Further information on the topic is available at <https://goo.gl/uykZF4>.
7. Have a class discussion about why writers use patterns in poetry.

Dancing Raisins

Grade Level: 2-3

Objective: After completing this experiment, students will have a better understanding of density and buoyancy.

Common Core State Standards: CCSS.ELA-Literacy.W.3.1; W.3.7; SL.3.1
CCSS.Math.K.CC.A.1; K.CC.B.4.A; 1.NBT.A.1; 1.MD.C.4; 2.MD.D.10; 3.MD.B.3

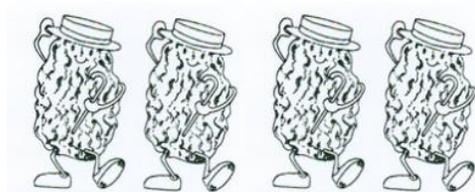
Next Generation Science Standards: Structures and Properties of Matter: 2-PS1-1; 2-PS1-3

Suggested Readings Materials:

The Popcorn Astronaut *Recipe for Raisins* by Deborah Ruddell ISBN: 9781442465558

What You Will Need:

Student Scientific Method Sheet (found on next page)
Individual Student Predictor
Classroom Graph
7-Up
Glass
Raisins



Background: Raisins are denser than water, so they sink. The 7-Up contains bubbles of carbon dioxide which are less dense than water. When the carbon dioxide bubbles attach themselves to the raisin, they create buoyancy which causes the raisins to rise to the top of the liquid. When the raisin reaches the surface, the bubbles break causing the raisin to lose buoyancy and sink back to the bottom of the glass where the process starts again. Use regular 7-Up, not diet. The experiment works more quickly if one shakes the can first. Be careful when you open the can.

Directions:

1. Show students materials to be used in the experiment and state the problem – What will happen to the raisins when you mix them with 7-Up?
2. Pass out individual student predictors and method sheet. Students mark their hypothesis.
3. Chart the student predictions on a class graph. Ask volunteers to explain the reasons for their predictions.
4. Discuss the graph with the class focusing on reasons why it is helpful to organize data in a data display.
5. Conduct the experiment - see “Procedure” on the Scientific Method sheet.
6. Discuss results as explained in the objective.
7. Have the class complete the student Scientific Method sheet.

Extensions:

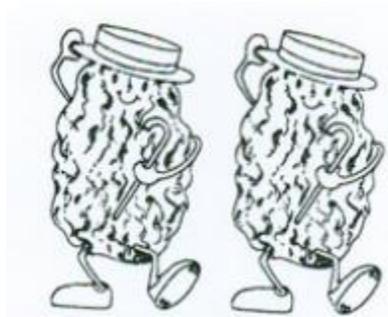
- Give each student a small box of raisins and have students count the number of raisins inside. Record individual raisin counts on a class line plot.
- Use raisin data to introduce students to statistics such as mean, median, and mode.
- Practice reading comprehension using the topic of raisins. A ready-made resource is available at <https://goo.gl/z5Jcqv>.

Adapted from betterlesson.com

Student Predictor and Methods Sheet

Scientific Method

Dancing Raisins



Problem: What will happen to the raisins when you mix them with “7-Up”?

Collect Materials:

1. _____
2. _____
3. _____

Hypothesis: The raisins will _____.

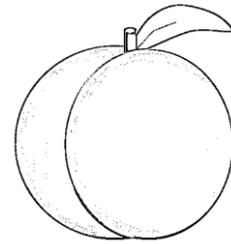
- A. Dissolve
- B. Sink and explode
- C. Dance up and down
- D. Float

Procedure: Pour “7-Up” into a clear glass. Drop several raisins in the glass and watch what happens.

Conclusion: The raisins will _____

Draw a picture of your experiment.

3-D Peaches



Grade Level: K-3

Objective: Students will be able to demonstrate knowledge of peach nutrition, appearance, and growth.

Common Core: CCSS.ELA-Literacy.RI.K.1; RI.K.2; RI.1.1; RI.1.2; RI.2.1; RI.2.2; RI.3.1; RI.3.2

Suggested Reading Material:

The Popcorn Astronauts *Speaking of Peaches* by Deborah Ruddell ISBN: 9781442465558

From Pit to Peach Tree by Ellen Weiss ISBN: 9780531185384

Tall and Tasty: Fruit Trees by Meredith Sayles Hug ISBN: 0822528371

What You Will Need:

Orange Construction Paper (pre-cut 1-inch wide down the short side of the paper)

Brown Tissue Paper

2 Paper Fasteners for each Peach

Hole Punch

Scissors

Directions:

1. Teach about peach nutrition, appearance, and growth using the “Peach Tree Orchard” booklet found at <https://goo.gl/KnJymh> as a guide.
2. Have students state reasons why peaches are nutritious. Record student responses on the board.
3. Have students describe the appearance of a peach. Record student responses on the board.
4. Have students explain how a peach grows. Record student responses on the board.
5. Give each student 3 strips of orange construction paper.
6. Direct students to write 1 fact per strip for each of the following:
 - a) Peach nutrition
 - b) Peach appearance
 - c) Peach growth.
7. Holding the strips together in a stack, use a hole punch to make 3 holes in the strips – 1 in the middle and 1 at ½ inch from each end.
8. Still holding the strips together, put a paper fastener in the middle hole. Then, bring up the ends of the orange strips and fasten them together.
9. Spread out the strips to form your peach.
10. Give each student a piece of brown tissue paper. Have students crumple the paper into a ball.
11. Gently separate two orange strips and nudge the tissue paper into the center of the peach to represent the pit.

Extensions:

- Research the characteristics of cling and freestone peaches. Hypothesize the benefits of each and why both are important to the agriculture industry.
- Develop a flow chart showing the innovative and technical processes used to get peaches to homes throughout the country.

Potato Patterns

Grade Level: 1-3

Objective: Upon completion of this activity, students will have a better understanding of patterns and the many foods that are made from potatoes.

Common Core State Standards:

CCSS.Math.1.MD.C.4; 2.MD.D.10; 3.MD.B.3; Practice.MP.7

Suggested Reading Materials:

The Popcorn Astronaut Voyage of the Great Baked Potato Canoes by Deborah Ruddell ISBN: 9781442465558

Potato A Tale from the Great Depression by Kate Lied ISBN: 0-7922-3521-5

What You Will Need:

Nutrition Infographics at <https://idahopotato.com/infographics>

Pictures of foods made from Potatoes

Potatoes coloring page, 1 per student

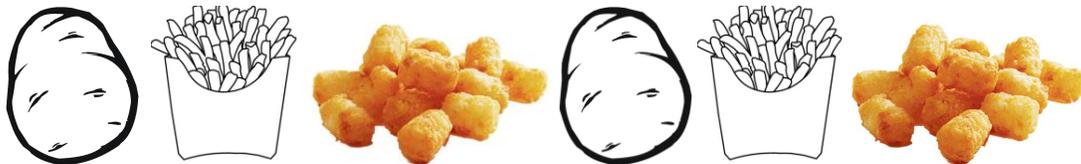
French Fries coloring page, 1 per student

Tater Tots coloring page, 1 per student

Crayons or markers

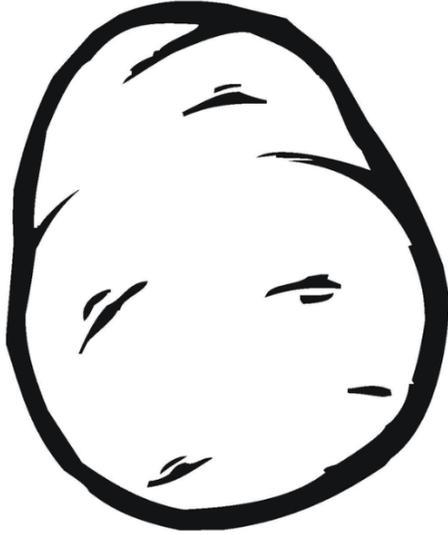
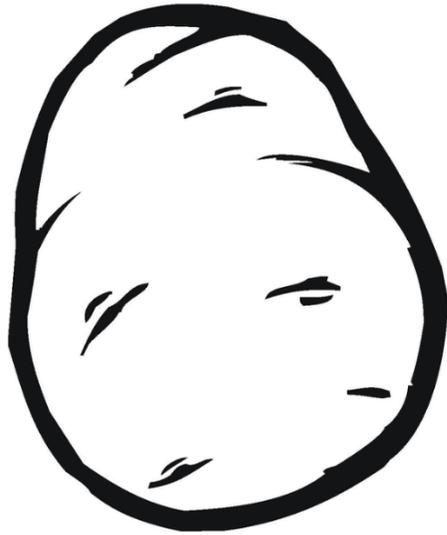
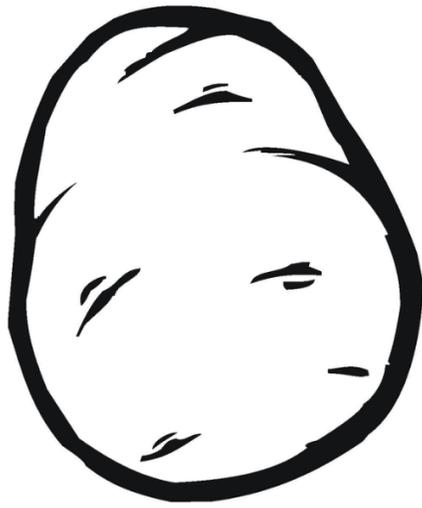
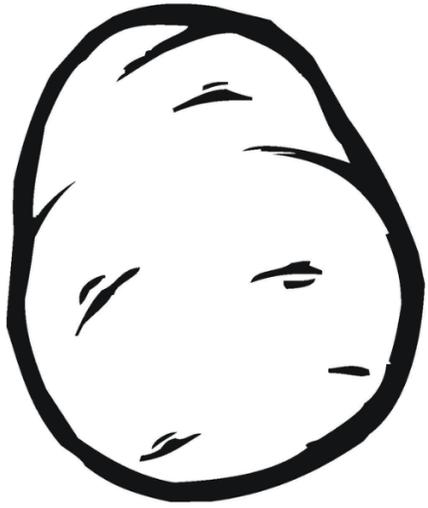
Scissors

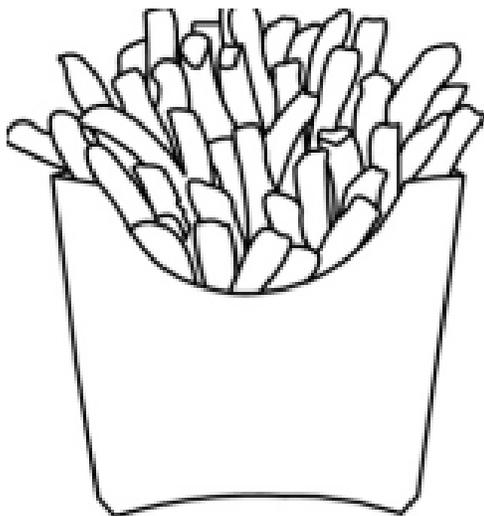
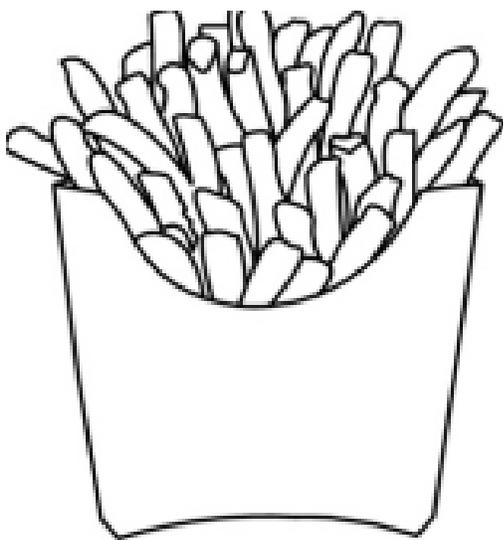
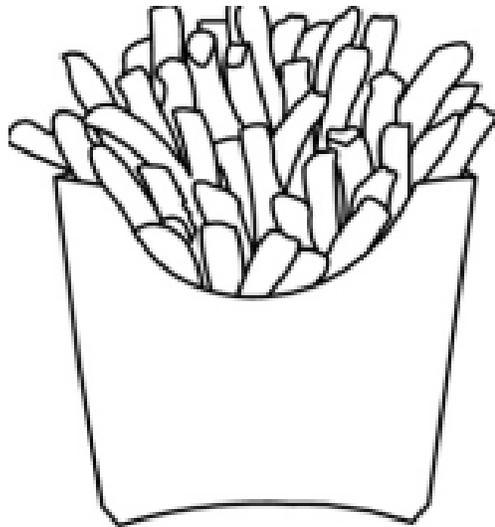
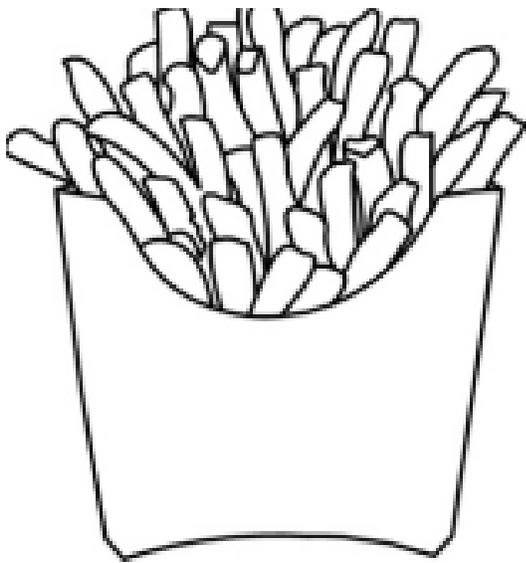
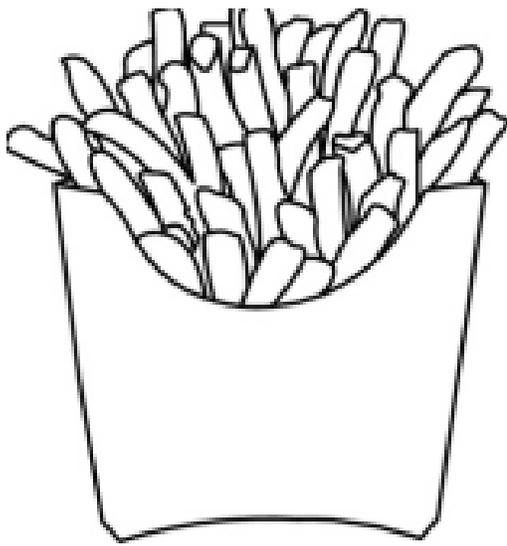
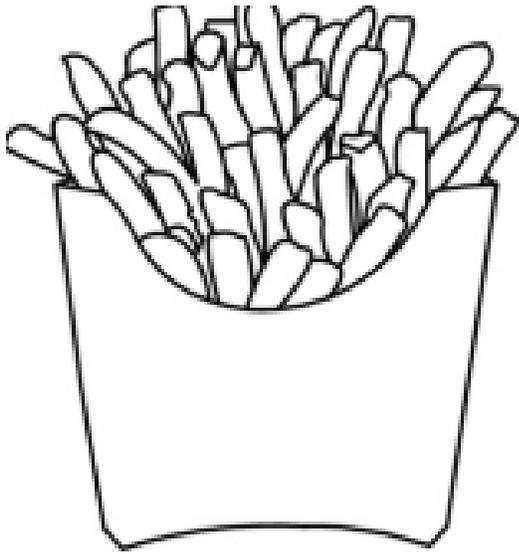
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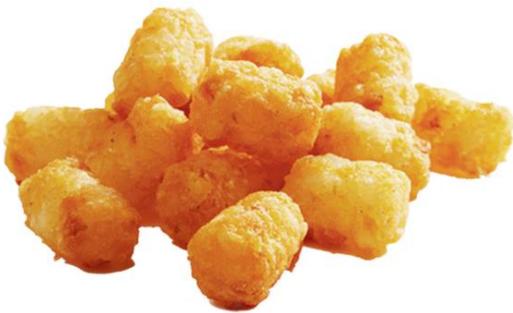


Directions:

1. Discuss nutrition benefits of potatoes with students. Use Nutrition Infographics to guide discussion.
2. Show students pictures of several different foods made from potatoes.
3. Tell students they are going to use different types of potatoes to make patterns.
4. Give each student the French Fries, Tater Tots, and Potatoes coloring pages.
5. Have students color the pages and cut the potato images out.
6. Work as a class manipulating the potato cutouts to create sequential patterns (AB, ABA, ABC, etc.)
7. Allow students to independently create patterns as specified.
8. Have students choose their favorite potato option and graph the results.
9. Discuss why graphing data is useful in the real world.







Wheat Is Tasty (and Graphable!)

Grade Level: K-3

Objective: Students will be able to collect and display data on a bar graph using literature with a wheat focus.

Common Core State Standards: CCSS.Math.Content.1.MD.C.4; 2.MD.D.10; 3.MD.4
CCSS.ELA-Literacy.RL.3.1; RL.3.9; RL.3.10



Suggested Reading Materials:

The Popcorn Astronaut *Your Choices at the Totally Toast Café* by Deborah Ruddell ISBN: 9781442465558
IAITC Wheat Ag Mag

What You Will Need:

Picture of a dining table
Picture of a bar graph
Bar graph checklist

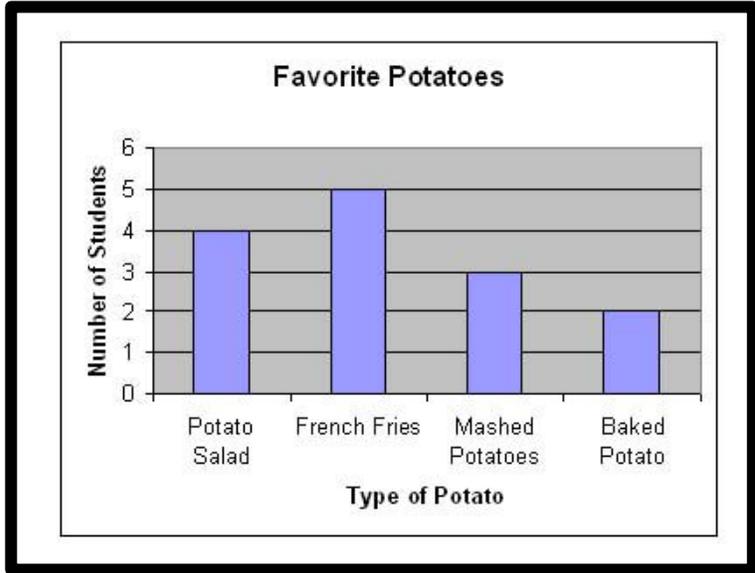
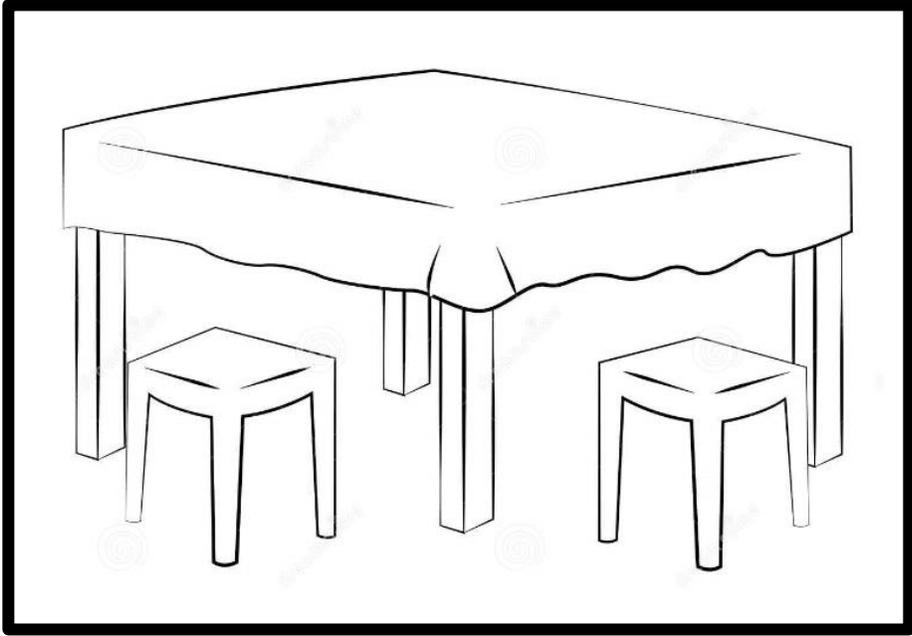
→ found on following pages

Directions:

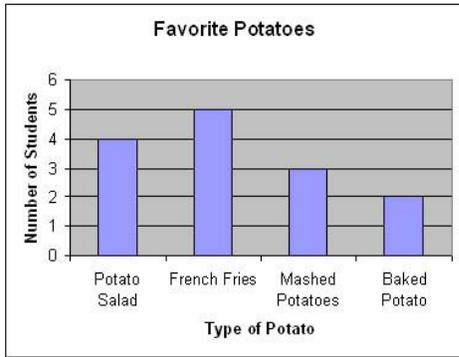
1. Asks students: What is your favorite dinner (macaroni, spaghetti, or pizza)?
2. Show a picture of a dining table. Say: “this is a table. This is also a table. This is a table that we will use to collect and organize data.”
3. Provide students with the “Things A Bar Graph Must Have Checklist”. Read the chart that bar graphs must have a title, x-axis label, y-axis label and value.
4. Tell students that the x-axis runs horizontal. Make a horizontal line with your finger. The y-axis runs vertical. Make a vertical line with your finger. Tell students let me see you make a horizontal line. Let me see you make a vertical line.
5. Explain that we get the labels from the table. A good title would be “Our Favorite Dinner”. A good name for the x-axis label would be “Names of Dinners”. A good name for the y-axis label would be “Number of People”.
6. Ask everyone that said _____ was their favorite dinner to stand. Repeat until all results have been recorded in the table with tally marks.
7. Model for students how to create a bar graph using the collected data.
8. Read Popcorn Astronaut *Your Choices at the Totally Toast Café*.
9. Use IAITC Wheat Ag Mag to connect favorite dinner survey responses and *Your Choices at the Totally Toast Café* to wheat.
10. As a class, write 3-4 survey questions from *Your Choices at the Totally Toast Café* (e.g. What’s your favorite bread? White? Wheat? Blueberry Swirl? Pumpkin-Banana?)
11. Have students collect data for survey question and display results on a bar graph.

Extensions:

- Have students research types of data displays and recommended uses of each type of data display.
- Present students with misleading data displays. Discuss why the given data displays are misleading and share suggestions for improvement.



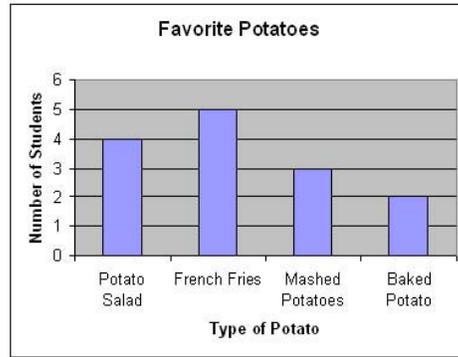
Things a Bar Graph Must Have Checklist



Bar graphs must have the following.

- _____ Title
- _____ X-axis label
- _____ Y-axis label
- _____ Values
- _____ Equal intervals
- _____ Color in cells

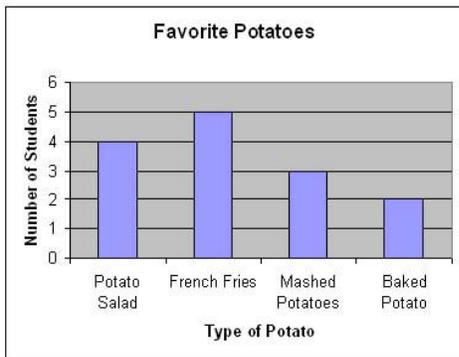
Things a Bar Graph Must Have Checklist



Bar graphs must have the following.

- _____ Title
- _____ X-axis label
- _____ Y-axis label
- _____ Values
- _____ Equal intervals
- _____ Color in cells

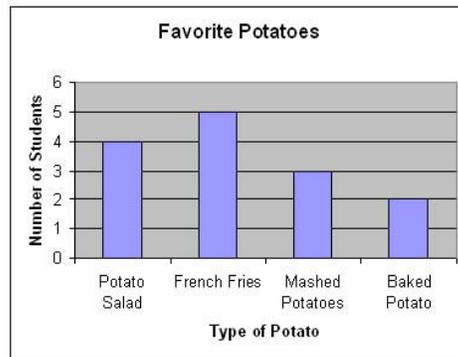
Things a Bar Graph Must Have Checklist



Bar graphs must have the following.

- _____ Title
- _____ X-axis label
- _____ Y-axis label
- _____ Values
- _____ Equal intervals
- _____ Color in cells

Things a Bar Graph Must Have Checklist



Bar graphs must have the following.

- _____ Title
- _____ X-axis label
- _____ Y-axis label
- _____ Values
- _____ Equal intervals
- _____ Color in cells

A Is for Apples

Grade Level: K-3

Objective: Students will use the five senses to make observations of apples.

Common Core State Standards: CCSS.ELA-Literacy.RL.1.10; RL.2.5; RL.2.10; RL.3.10; W.3.10; L.K.1; L.1.1; L.2.1; L.3.1

Next Generation Science Standards: K-PS3-1; K-ESS3-1; 1-LS3-1; 2-LS4-1

Illinois Social Science Standards: SS.G.1.K

Suggested Reading Materials:

The Popcorn Astronaut *21 Things to Do with an Apple* by Deborah Ruddell ISBN: 9781442465558

Apples by Gail Gibbons ISBN: 9780823416691

Apples, Apples Everywhere! by Robin Koontz ISBN: 9781404863880

The Legend of Johnny Appleseed by Martin Powell ISBN: 978434218957

IAITC Apple Ag Mag

What You Will Need:

Red, yellow, and green apples

Cutting board

Knife

5 Senses Chart, one per student (found on next page)

Red, yellow, and green interlocking cubes

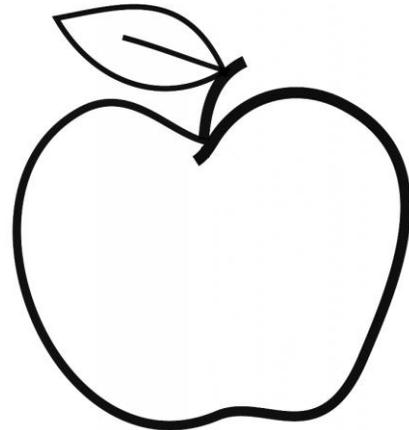
Apple book template (found on following page)

Red, yellow, and green card stock, two pieces per student

Lined paper, five pieces per student

Hole punch

Ribbon



Directions:

1. Ask students to identify their five senses – see, smell, feel, hear, taste. Explain that they will be using their five senses to observe apples. Give each student a *5 Senses Chart*.
2. Show students the three different types of apples. Point out the skin, stem, and calyx. The calyx is the remaining part of the apple blossom located on the end of the apple opposite of the stem. Cut an apple in half crosswise. Ask the students to describe what they see. Point out the shape of the star, the seeds in the star pockets, and the flesh. Write their descriptive words on the board under the “See” column. Explain that descriptive words are called adjectives. The students should choose at least two adjectives to write on their own *5 Senses Chart*. At the end of the activity, they will use the adjectives on their chart to write a poem about apples.
3. Cut each apple into slices. Give a green, red, and yellow slice to each student. Ask them to smell the apples and describe what they smell. Write their adjectives on the poster under the “Smell” column and have them write at least two adjectives on their chart.
4. Ask the students to feel the apple slices and describe what they feel. Write their adjectives on the poster under the “Taste” column and have them write at least two adjectives on their chart.

5. Each student will choose adjectives from their *5 Senses Chart* to create a poem about apples. For each sense, they will write a sentence about the apples they were able to see, smell, feel, hear, and taste. Using the “Apple Book” template, cut a front and back cover and five pages. Write each sentence on one page of the book. Secure the book using a hole punch and ribbon.

Extensions:

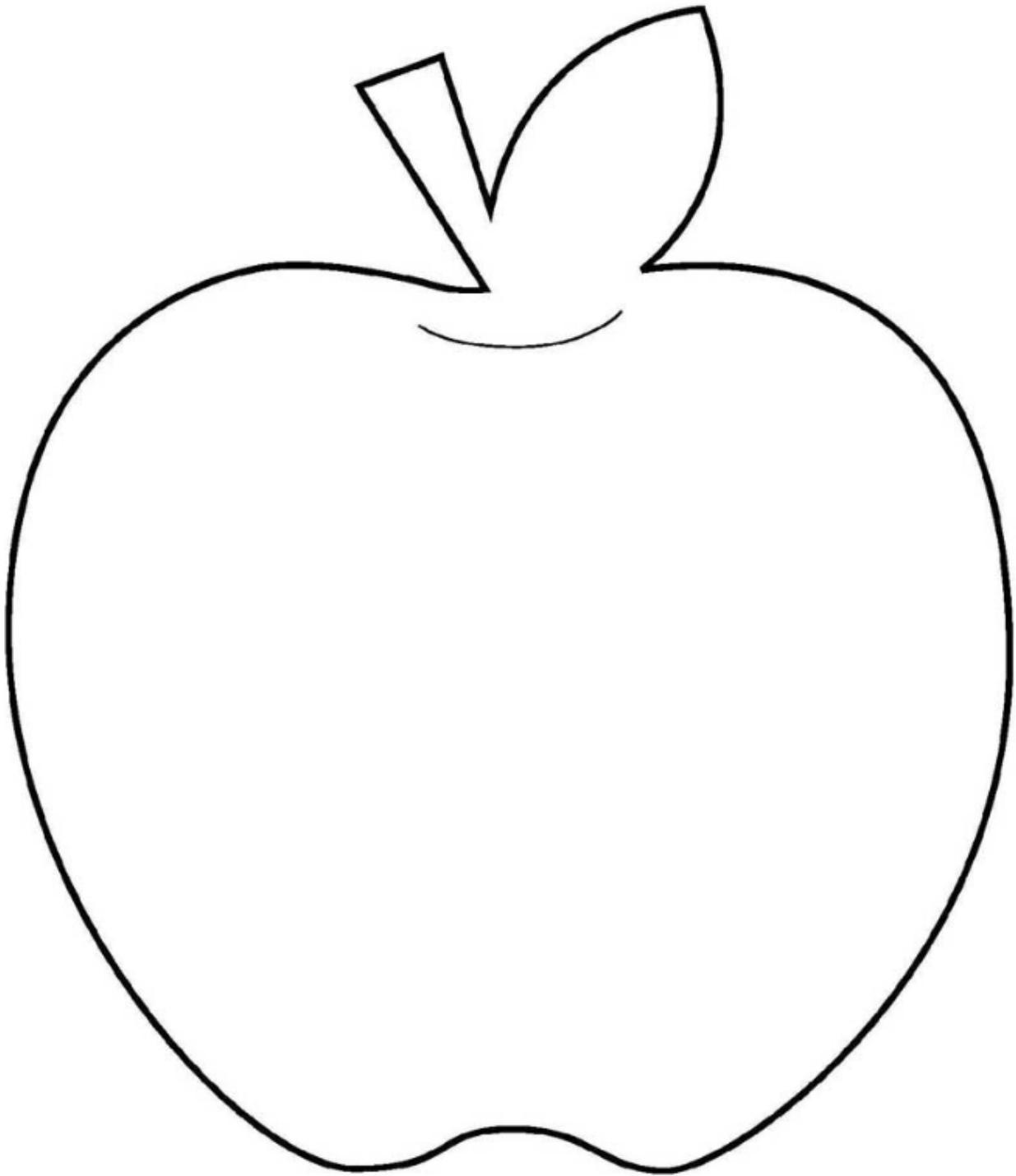
- Ask the students to vote on whether they like red, green, or yellow apples best by choosing a red, yellow or green interlocking cube. Stack the cubes together by color, and create a bar graph to show the preferences of the whole class.
- Have students bring in stickers from apples they consume. Place the stickers on a United States map to show where apples are grown. Discuss where different states are geographically located and why some states are better than others for apple production.

Adapted from Washington Agriculture in the Classroom

5 Senses Chart

I see	I hear	I feel	I smell	I taste

Apple Book Template



Melodious Melon Poetry

Grade Level: K-3

Objective: Students will be able to write a descriptive poem about their experiences tasting cantaloupe.

Common Core State Standards: CCSS.ELA-Literacy.RL.1.10; RL.2.10; RL.3.5; RL.3.10; W.3.10; L.K.1; L.1.1; L.2.1; L.3.1

Suggested Reading Materials:

The Popcorn Astronauts Menu for a Gray Day by Deborah Ruddell ISBN: 9781442465558

We Love Fruit by Fay Robinson ISBN: 0516460064

Lettuce Introduce You by Laura Purdie Salas ISBN: 978429617031

What You Will Need:

One cantaloupe for every six people

Knife

Paper towels

Writing paper

Pencils

Directions:

1. Give each group of students a cantaloupe. Have them write down single words that describe its external appearance.
2. Next, cut the cantaloupe in half. Have students brainstorm a list of adjectives that describe its internal structure.
3. Continue cutting the melons, providing each student with a slice. Have them, smell, touch, and taste the melon and then write down words that describe their experience.
4. Have students write a cinquain, as outlined below, describing their melon-tasting experience. Provide word banks if students require assistance with parts of speech.

A one-word title, a noun that tells what your poem is about

_____, _____

Two adjectives that describe the title

_____, _____, _____

Three action verbs that describe the title

Four-word phrase that tells more about the title

A synonym for the title

Adapted from California Ag in the Classroom

Popcorn Math

Grade Level: K-3

Objective: Students will practice estimation, addition, and subtraction while learning about popcorn.

Common Core State Standards: CCSS.Math.Content.1.OA.5; 2.OA.1; 1.MD.2; 1.MD.C.4; 2.MD.D.10; 3.MD.4

CCSS.ELA-Literacy.RL.2.4; W.1.7; W.2.7; W.3.10

Suggested Reading Materials:

The Popcorn Astronauts *Arrival of the Popcorn Astronauts* by Deborah Ruddell ISBN: 9781442465558

Popcorn! by Elaine Landau ISBN: 1570914435

The Popcorn Book by Tomie de Paola ISBN: 0823405338

IAITC Corn Ag Mag

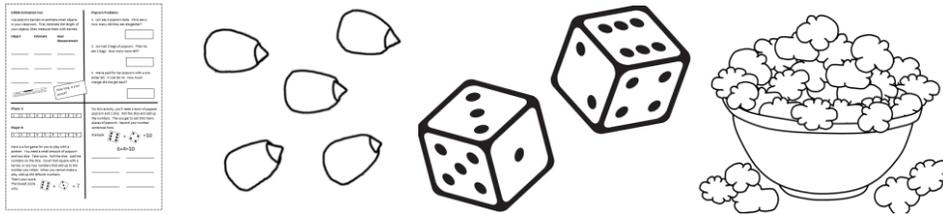
What You Will Need:

Popcorn Math Worksheet (found on next page)

Popcorn Kernels (approximately twenty per student)

Dice (two per student)

Popped Popcorn (one bowl per student)



Directions:

1. Read *Arrival of the Popcorn Astronauts*. Discuss context clues (e.g. they scramble, puffy, salt) that lead reader to know the astronaut is popcorn.
2. As a class, review the IAITC Corn Ag Mag. Call attention to the fact that Illinois leads in popcorn production and that popcorn is the official Illinois snack food.
3. Have students complete Popcorn Math worksheet for Math mixed practice. The worksheet provides opportunity for independent work as well as paired work. Find the answer key on page 30.

Extensions:

- Survey students to find out their favorite corn-based food product, such as popcorn, corn on the cob, corn bread, and so on. Display the results in a graph.
- Have students record words that rhyme with POP. If students suggest words that do not rhyme with Pop, work with the class to discover why it does not rhyme.
- Play a form of “Duck, Duck, Goose” using the phrase, “Pop, Pop, Corn!”
- Create a class incentive jar. Fill it with kernels or popcorn.

Popcorn Math

Edible Estimation Fun

Use popcorn kernels to estimate small objects in your classroom. First, estimate the length of your objects, then measure them with kernels.

Object	Estimate	Real Measurement
--------	----------	------------------

_____	_____	_____
_____	_____	_____
_____	_____	_____



How long is your pencil?

Popcorn Problems

1. Lori ate 3 popcorn balls. Chris ate 4. How many did they eat altogether?

2. Jon had 3 bags of popcorn. Then he ate 2 bags. How many were left?

3. Maria paid for her popcorn with a one dollar bill. It cost \$0.70. How much change did she get back?

Player A

1	2	3	4	5	6	7	8	9
---	---	---	---	---	---	---	---	---

Player B

1	2	3	4	5	6	7	8	9
---	---	---	---	---	---	---	---	---

Here is a fun game for you to play with a partner. You need a small amount of popcorn and two dice. Take turns. Roll the dice. Add the numbers on the dice. Cover that square with a kernel, or any two numbers that add up to the number you rolled. When you cannot make a play, add up the leftover numbers.

That's your score.

The lowest score wins.

$$5 + 4 = 9$$

For this activity, you'll need a bowl of popped popcorn and 2 dice. Roll the dice and add up the numbers. The you get to eat that many pieces of popcorn. Record your number sentences here.

Example: + = 10

$$6 + 4 = 10$$

_____	_____
_____	_____
_____	_____

Popcorn Math

Edible Estimation Fun

Use popcorn kernels to estimate small objects in your classroom. First, estimate the length of your objects, then measure them with kernels.

Object	Estimate	Real Measurement
--------	----------	------------------

_____	_____	_____
-------	-------	-------

Answers will vary.

_____	_____	_____
-------	-------	-------



How long is your pencil?

Player A

1	2	3	4	5	6	7	8	9
---	---	---	---	---	---	---	---	---

Player B

1	2	3	4	5	6	7	8	9
---	---	---	---	---	---	---	---	---

Here is a fun game for you to play with a partner. You need a small amount of popcorn and two dice. Take turns. Roll the dice. Add the numbers on the dice. Cover that square with a kernel, or any two numbers that add up to the number you rolled. When you cannot make a play, add up the leftover numbers.

That's your score.

The lowest score wins.

$$\begin{array}{c} \bullet \\ \bullet \\ \bullet \end{array} + \begin{array}{c} \bullet \\ \bullet \end{array} = 9$$

Popcorn Problems

1. Lori ate 3 popcorn balls. Chris ate 4. How many did they eat altogether?

7

2. Jon had 3 bags of popcorn. Then he ate 2 bags. How many were left?

1

3. Maria paid for her popcorn with a one dollar bill. It cost \$0.70. How much change did she get back?

\$0.30

For this activity, you'll need a bowl of popped popcorn and 2 dice. Roll the dice and add up the numbers. The you get to eat that many pieces of popcorn. Record your number sentences here.

Example:

$$\begin{array}{c} \bullet \\ \bullet \\ \bullet \end{array} + \begin{array}{c} \bullet \\ \bullet \end{array} = 10$$

$$6 + 4 = 10$$

Answers will vary.

