



THANK YOU!

WELCOME

IMPORTANT: Thank you for joining us! We're so excited to offer you a digital version of our physical learning kits, which typically come with all of the materials you need from soil and pots, to test tubes, flashlights, and more. These school setting materials have been adapted for use at home, with some educator and classroom focused language still included. We hope you enjoy our innovative, hands-on, seed to table STEAM!

Interested in more of our content?

Check out our Digital Membership options for educators and parents with more than +200 activities, videos, and downloads! Find at the top of our homepage at www.getbeetbox.com.

HELP: info@getbeetbox.com



Apples



LESSON OVERVIEW

- DISCOVER - Apple Anatomy
- TASTE - Apple taste test
- COOK - Apple Salad
- EXPERIMENT - Sink or float
- GROW - Planting apple seeds
- RECYCLE - Box and apple scraps
- EXTENSIONS - Songs, recipes, dramatic play, & more

WHAT' YOU'LL NEED:

- Soil pellets
- Cornstarch
- Toothpicks
- Knife
- Bowl
- Spoon
- Measuring spoons
- Spray bottle
- Grow bags, small pots, or cups
- Transparent pitcher or bin

SHOPPING LIST

- 20 apples (green, yellow, red)
- 2 lemons
- Raisin
- Cinnamon, pie spice
- Honey

ALLERGY STATEMENT

We take great care in trying to avoid common allergens in the food we source. However, we leave it to you to review the contents of each box with reference to specific allergies in your school and make a determination of which ingredients best meet your schools dietary needs.

THINGS TO KNOW

REFRIGERATION: Please refrigerate all fresh produce upon receipt.

FRESH PRODUCE: Wash all fresh produce before use, engaging children in this process.

QUANTITIES: Please note that lesson plan quantities are for a class size of 18 to 24 children. Please adjust recipe quantities accordingly.

LESSON SEQUENCE: We suggest prioritizing lessons requiring fresh produce to avoid spoilage. Please read all instructions thoroughly before starting. As we minimize waste by using produce scraps for activities, we suggest reviewing all lessons before disposing of any produce leftovers.

ACADEMIC AND HEALTH STANDARDS: Please see the enclosed guide.

SOIL PELLET INSTRUCTIONS:

(for kit use only)

1.) Fill a tray, cup, or bowl with 1 or 2 inches of water. Place the soil pellets in the water, and allow the pellets to fully absorb the moisture and expand to their full height of about 3 inches.

2.) Add more water if needed.

3.) Empty any excess water that remains in the tray and add soil to provided pots or grow bags. Break up soil as needed.

Items mentioned in **BLUE** are digital downloads on your portal.

DIRECTIONS



DISCOVER

Pass the apple: Sit in a circle, allowing each child to hold an apple and make observations before passing to their friend. How does it feel? Smooth, round, heavy, light? What color is it? Create a WORD WALL using the activity in Extensions. What kind of food is it? Fruit or vegetable?

Cut apple in half.

Point out the skin, flesh, stem, core and seeds.

Guess the number of seeds.

Remove the seeds and count them. What shape are they? Does every apple have the same number of seeds? (The answer is 'no').

Set seeds and apple parts aside for GROW and PARTS OF AN APPLE SORTING in Extensions.



TASTE

Have children help wash and dry 2 apples.

Slice apples into small pieces for children to sample.

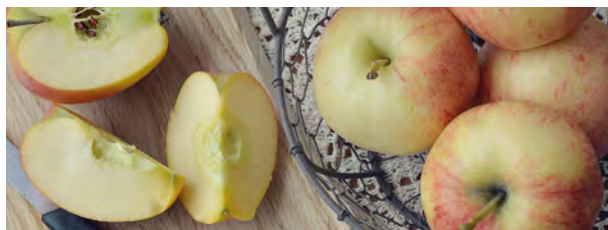
Ask children to describe the taste and texture.

Use vocab: sweet, tangy, tart, crunchy, soft.

Discuss benefits of eating apples: Stronger teeth, bones and muscles, healthy tummy.

See APPLE FUN FACTS in Extensions.

See Apple Word Wall in Extensions.



COOK

Set aside 2 different colored apples for the SINK or FLOAT activity. Apple Salad ingredients - 8 Apples, ½ tsp. cinnamon, ¼ cup honey and juice of ½ lemon.

Children to take turns with all the steps below:

Wash and dry 8 apples. Slice into quarters, removing the core.

Explore the seeds and core. Set aside seeds for GROW activity and scraps for RECYCLE activity. Next, roughly chop the quartered apples and add to a bowl.

Add the honey and cinnamon. Stir to combine.

Roll the lemon on a table to loosen the juice. Slice into 4 wedges, removing and exploring the seeds. Starting with 2 lemon wedges, squeeze the juice onto the apples to preferred taste, and stir. Serve immediately.



EXPERIMENT

Ask children if they can think of things that sink (coins, metal toy car) and float (plastic bath toy). Discuss the difference between sinking and floating items.

Fill a large pitcher/container with water.

Ask the children to predict if the apples will sink or float.

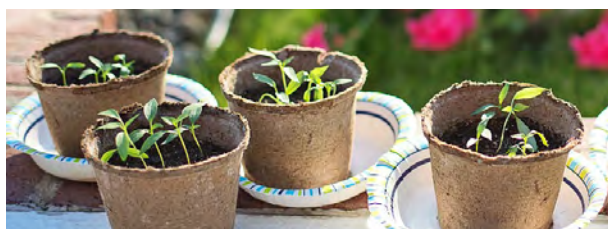
Place an apple in the water.

Is it the same for different sizes and colors of apples? What happens if you drop all of the apples into the water at the same time?

Experiment with other classroom objects to see if they sink or float.

Suggested items: crayons, metal and plastic toys, feathers and paper.

Discuss differences between the items.



GROW

Soak soil pellets in water following enclosed directions. OR use loose soil.

Place one pellet in each pot, and make a hole with a pencil in the center of each pellet.

Place one seed in each hole and press down until covered. Place the pots in a sunny window.

Children to water pots frequently enough to keep soil damp, but not soaked.

Sprouts can be transplanted into a larger pot or taken home after a few weeks.

Optional: Keep a drawing journal of the apple plant as it grows.



RECYCLE

Decorate your shipping beetbox or any cardboard box in an apple theme using paint, markers and crayons: draw apples, apple trees, seeds, etc.

Encourage children and parents to bring in an apple from home to collect in the box.

Compare all the different types of apples collected before enjoying for snack.

Apple scraps can be left out in a dish to monitor decomposition, or used for stamping with paint.

See APPLE AND LEMON SCIENCE EXPERIMENT in Extensions.

A SEED GROWS

Supplies: Raisins and spray bottle containing water.

Children will have the chance to pretend they are a seed and go through the life cycle of that seed. Teachers will use the following instructions to guide children through the act of “being a seed.”

Begin the activity by having children imagine that they are a seed: what seed would they be and why? Next, have children find a comfortable space on the floor to “plant” themselves and then begin by reading the following out loud while the children act out the directions:

Plant yourself in a comfortable spot. What kind of seed are you? It’s fall and seeds are getting ready for a long winter’s rest (curl up into a tiny seed).

Each seed has its own supply of food inside to help start to grow in the spring (have children hold one hand out and place raisins (food) in their palm - don’t eat yet! Hold on to your food tight!). In order to survive the long, cold winter, the seed must save its food until spring arrives once again.

Winter has come (turn off classroom lights). The seed is tucked safely below the ground and snow, resting for the winter (have a quiet moment).

Finally, the days are starting to get longer and warmer and now its spring! The soil is getting warmer and the seeds are slowly starting to wake up (begin to wiggle your toes and fingers, gently rock your body back and forth, but don’t get up yet!).

The warm spring rains are starting to fall, which makes the seeds very happy (walk around and gently squirt each child with the squirt bottle. Once sprayed, children can poke out a little root (their leg or arm) to soak up the water and show a big smile).

The days are getting warmer and warmer. The soil is getting warmer and the seeds get to use their food that they have been holding on to all winter long. (Children can uncurl and eat their raisins).

Now the seeds have the energy to sprout and grow from the ground (on the count of three, children can stretch their arms upward. Turn on the lights).



The seeds have turned into baby plants and are starting to grow taller and taller each day (children can slowly rise to a standing position).

Your leaves are stretching out to gather the sunlight, you begin to gently sway in the breeze and enjoy the sunlight. (Children can slowly rock back and forth, swaying in the breeze).

The seasons have changed again and it is finally summer! The plants begin to form flowers (children can make a circle above their heads and show off their flowers).

The flowers need to be pollinated by bees and other insects (teacher will buzz around to each student and pretend to pollinate their flowers).

Where there was a flower, a fruit begins to grow (children can widen their arms to show their fruit growing bigger and bigger).

The seasons are changing yet again and summer is coming to an end. Fall is in the air now – it is getting cooler. The leaves on the trees are changing and now the leaves on your plant are starting to fall off (children can flutter their arms to show their leaves falling to the ground).

Your fruit also falls to the ground and breaks open (children can fall to the ground with a “plop”).

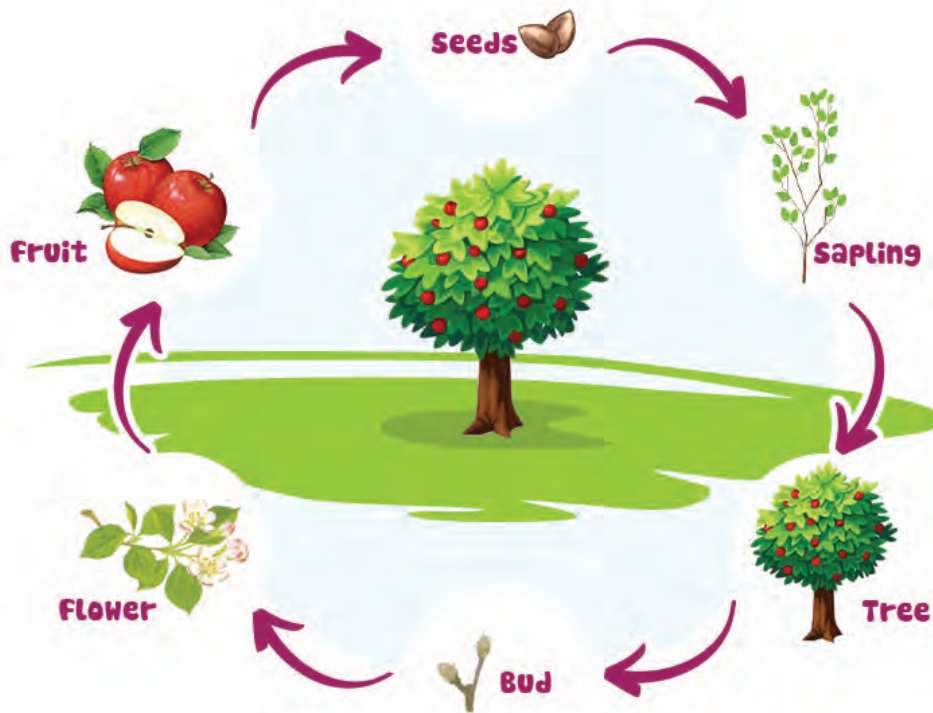
What do we find inside your broken fruit? Seeds! What will happen to your seeds? They will get ready for a long winters rest and the cycle will start again.

EXTENSIONS

FUN FACTS

- Apples are healthy for our bodies - they have vitamin C to fight colds and fiber for healthy tummies.
- Apples can be grown all over the world.
- Apple trees don't grow apples until they are 4 or 5 years old.
- Apple trees can live to be 100 years old.
- Apples are fruits because they have seeds.
- Apple can be as small as a cherry to as large as a grapefruit.
- The healthiest part of the apple is the skin.

APPLE LIFE CYCLE



EXTENSIONS

APPLE AND LEMON EXPERIMENT

Taking turns with the children, firmly roll 1 lemon on a flat surface. Cut the lemon into quarters, and squeeze into a cup to collect as much lemon juice as possible. Cut a half of an apple into 4 slices. Divide the sliced apples into 2 groups, and place in a bowl. Label one group “No Lemon” and the other group “With Lemon”. Pour the lemon juice over the “With Lemon” apples and coat the apples thoroughly with the juice. Make guesses with the children as to what might happen to each group of apples. Will they change? Stay the same? Write down the children’s answers, and/or draw and take pictures of the apples. Check the apples after 30 minutes, 1 hour, 6 hours, and the next day. Discuss, note, record, draw, any changes.

PARTS OF THE APPLE SORTING

To be used as a center or a small group activity Make copies of the included sheet, help children with sorting the parts of an apple into its matching area on the circles.

APPLE WORD WALL

Create two apple word walls, using 2 large pieces of paper, markers, and the included diagram as an example. Create the first word wall BEFORE introducing the apples to the children. Ask them to make predictions on how they think the apples will look, smell, feel, sound, and taste. AFTER the children have explored and tasted the apples, create another word wall, and compare the results.



APPLE GOOP

Pour 2 cups of cornstarch into a medium sized bowl. Add 1 cup of water and stir well to combine. Give each child a small scoop of the oobleck on a plate or dish to explore and play with. Then, sprinkle a small amount (about a teaspoon) of apple pie spice into the oobleck and stir once more. Encourage and help the children to enjoy the sensory experience of pushing around the oobleck with their fingers. What happened to the spices when stirred? Do they sink into the oobleck or float on top? Do they disappear? How does it feel? What does it look like? What does it smell like? Upon finishing, wash hands immediately after handling oobleck. Optional: split the batch in halves or thirds and add red, green, or yellow watercolor paint, a spoonful at a time to add color.

EXTENSIONS

APPLE SCULPTURES

*To be used as a center or small group activity. Children should work on a paper towel or clean placemat. Ask children to wash their hands. Cut an apple into chunks - about one inch in size. Using the toothpicks, show children how to connect apple chunks to each other. By placing an apple chunk on both ends of the toothpick, and repeating by adding more toothpicks and apple chunks. Create houses, people, shapes. Apple chunks can be eaten at the end of the activity (avoiding any choking hazard).

DRAMATIC PLAY

Farm Stand and Apple Orchard Dramatic Play: Use your imagination! Set up a corner or a table in your classroom as a “farm stand” at the farmers market. Gather baskets, aprons, buckets, play money, apples, play food, etc. Children can explore and pretend to be working or being customers.

SONGS

(Sung to: Twinkle Twinkle)

Apple, apple tree so tall, I can hardly wait till fall!
When your apples I can pick, fill my basket, eat them quick.
Apple, apple tree so tall, I can hardly wait till fall!

Apple, apple tree so fair, what do I see growing there!
Green and round and plump and sweet, soon they will be good to eat.
Apple, apple tree so fair, what do I see growing there!

(Sung to: Itsy, Bitsy Spider)

Once a little apple seed was planted in the ground
Down came the raindrops, falling all around.
Out came the big sun, bright as bright could be
And that little apple seed grew to be an apple tree!

Reading List

[Ten Red Apples](#) by Pat Hutchins

[The Apple Pie Tree](#) by Zoe Hall

[Apples and Pumpkins](#) by Anne Rockwell

[How Do Apples Grow?](#) by Betsy Maestro

[Johnny Appleseed](#) by Steven Kellogg

[Orange Pear Apple Bear \(Classic Board Books\)](#) by Emily Gravett

[The Seasons of Arnold's Apple Tree](#) by Gail Gibbons

[Ten Apples Up On Top!](#) by Theo LeSieg

[The Very Hungry Caterpillar](#) by Eric Carle

PARTS OF AN APPLE

STEM

SEEDS

CORE

FLESH

SKIN

EARLY LEARNING STANDARDS

Below are standards for inclusion in the **APPLE** lesson plans and **APPLE BETSY** story.

Betsy ELA Standards and Questions:

Key Ideas and Details: CCSS.ELA-LITERACY.RI.K.1, CCSS.ELA-LITERACY.RI.K.2, HS: P-LC 1 Language and Communication Goal

Questions:

Where did Betsy and her mother go to find a healthy snack?

How does an apple start to grow?

Integration of Knowledge and Ideas: CCSS.ELA-LITERACY.RI.K.7:

Questions: (Using the photo at the bottom of page 3)

What is the first step a farmer takes when growing an apple tree?

After the seed is planted, what happens next?

What is the last step in growing an apple tree?

Lesson Plan Standards:

Lesson 1:

NGSS: K-LS1-1 From Molecules to Organisms: Structures and Processes

CCSS: K.CC.B.5 Count to tell the number of objects

HS Goal P-SCI 1. Scientific Reasoning: Inquiry

HS Goal P-MATH 3. Mathematics Development

Lesson 2:

NHES: 1.2.1 Identify that healthy behaviors impact personal health.

NHES: 7.2.1 Demonstrate healthy practices/behaviors to maintain/improve personal health.

HS Goal P-PMP 5. Health, Safety and Nutrition

Lesson 3:

NHES: 1.2.1 Identify that healthy behaviors impact personal health.

NHES: 7.2.1 Demonstrate healthy practices/behaviors to maintain/improve personal health.

CCSS: K.CC.A.1 Know number names and the count sequence

CCSS: K.CC.B.5 Count to tell the number of objects

HS Goal P-PMP 5. Health, Safety and Nutrition

EARLY LEARNING STANDARDS

Lesson 4:

NGSS: K-ESS3-2: Encounter questions about the natural world

CCSS: K.MD.B.3 Classify objects into given categories

HS Goal P-SCI 3. Scientific Reasoning: Inquiry

Lesson 5:

NGSS: K-LS1-1: From Molecules to Organisms: Structures and Processes

NGSS: LS1.C: From Molecules to Organisms: Structures and Processes

NGSS ESS3.A: Earth and Human Activity

HS Goal P-SCI 5. Scientific Reasoning: Reasoning and Problem Solving

Lesson 6:

NGSS: ESS3.C: Earth and Human Activity

KEY:

Framework Name	Abbreviation in Lesson Plans	Web Link
Next Generation Science Standards	NGSS	http://www.nextgen-science.org/sites/default/files/AllDCI.pdf
Common Core State Standards Initiative: English Language Arts Standards-Reading Informational Text	CCSS	http://www.core-standards.org/ELA-Literacy/RI/K/
Common Core State Standards Initiative: Standards for Mathematical Practice	CCSS	http://www.core-standards.org/Math/Content/K/introduction/
Center for Disease Control and Prevention: National Health Education Standards	NHES	https://www.cdc.gov/healthyschools/sher/standards/index.htm
Head Start Early Learning Outcomes Framework: ECLKC	HS	https://eclkc.ohs.acf.hhs.gov/interactive-head-start-early-learning-outcomes-framework-ages-birth-five