Winter Squash
Butternut, Buttercup

Month: January
Time Required: 30 minutes
Tasting: Local winter squash (ex.: butternut, buttercup, pumpkin)

Lesson Goals
- Students will increase their knowledge of fruits and vegetables.
- Students will learn to try new fruits and vegetables and increase their preference for them.
- Students will learn that their peers like to eat fruits and vegetables.
- Students will learn how to ask their parents/caregivers for the fruits and vegetables tasted in class.

Lesson Objectives
- Students will be able to define diversity.
- Students will be able to describe differences in winter squash varieties.

Materials
- Image of many varieties of winter squash (included in lesson)
- All Kinds of Squash Cards: pictures and descriptions
- Whole, raw butternut squash (or other local varieties)
- For in-class cooking: cooler, antibacterial wipes, electric skillet, plastic tote (to transport electric skillet), spatula, power strip (with long cord), water bottle with water, rags, plastic food storage bags, winter squash for cooking (depending on class size), olive oil, salt, pepper, preferred spices (garlic, cumin, etc.)
- Tasting materials (plates, napkins, etc.)

Preparation
- Print the squash images and descriptions for All Kinds of Squash Matching Game based on class size (1 card per student – or 1 card per pair of students.) There are 10 different images and 10 different descriptions; a student will get either an image or description card. Cut apart the cards. You may want to laminate the cards so you can reuse them.
- Prepare simple slideshow of prompts used in the opening “Engage” activity
- Food preparation:
  - Prepare winter squash for tasting: peel and chop raw butternut squash in ½ inch cubes.
  - Portion squash into food storage bags (one per lesson).
  - Add olive oil and spices to the bag.

Recommended Books
(Send book suggestions to suzy.wilson@idph.iowa.gov.)

Standards Connection
This lesson supports the following Iowa Core standards.
Health Education Standards 1, 2, 3, 4, 5, 7, 8
Science
Second grade - 2-LS4-1. LS4.D: Biodiversity
Third grade - 3-LS3-1. LS3.B: Variation of traits

Lesson Checklist
- Physical Activity
- Tasting
- Voting
- “Asking” Discussion
- Newsletters, Bingo cards, Stickers, Incentives
- Science Connection: Plant diversity (2nd) & (3rd)
Engage

1. **Introduction**: 2 minutes
   The “Introduction” section is a time to introduce yourself, recap previous lessons, establish norms, or introduce the day's lesson.

   *You may want to preheat your electric skillet for the cooking activity and alert students to the hot skillet. Preheat to medium, depending on the skillet.

   ***Cooking Tips:***
   - Feel free to delegate responsibilities with the teacher. Have them stir the squash, while you work with the class. Or vice versa.
   - Email the teacher ahead of time to let them know you plan on using a heat source and will need a table close to an outlet, if possible.

   *If you notice students getting distracted by the noise, smells, or sights of cooking, use that as a teaching moment. Pause and ask students to smell the air together. Or listen very quietly for any sizzling noises. These are good interruptions!*

2. **Engage Activity**: 8 minutes
   The “Engage Activity” section has two purposes: 1) to activate students' prior knowledge and 2) to engage every student.

   Gather students in a circle. Share, **Today we are going to celebrate diversity.** Note new vocabulary word: **diversity.** Write out, define and repeat the word. Diversity means differences. What does diversity mean? Choral response: “differences.” To celebrate diversity in our classroom, we’re going to play a game. I’m going to play a song. While the music is playing, move calmly around the room. When the music stops turn to a friend standing closest to you and take turns answering the question on the board. If you have the same answer, touch your toes together. If you have different answers, touch your elbows together. For example (use an example about hair color with a student near you and demo the activity). Ready?

   Play some fun music! Idea: **So Many Colors, So Many Shapes, Diversity Song, from The Singing Walrus** Pause the music. Students find a partner. Display the following prompts one at a time via doc-cam using a simple slideshow. Remind students, take turns answering the question on the board. If you have the same answer, touch your toes together. If you have different answers, touch your elbows together. Display as many prompts as time will allow.

   - What is your favorite color?
   - What is your favorite food?
   - What letter does your name start with?
   - How old are you?
   - What is your favorite book?
   - How many people are in your family?
   - How do you get to school in the morning?
   - Do you have any siblings?
   - What is your favorite thing to learn about at school?
   - What is your favorite game?

   Excellent job! It’s important to celebrate all of our differences - the diversity - that makes up our classroom. Sometimes we like different things, sometimes we look different, we have different families. Diversity is beautiful in people and in plants!
Explore

3. Experiential Learning: 12 minutes
This is a time for students to familiarize themselves with what you’ll be tasting. The best way to do this is through a hands-on or exploratory activity.

Seat students in a circle. Opportunity for three deep breaths.

Show an image of many varieties of winter squash (image in the lesson plan). Explain, Winter squash is one kind of plant with lots of diversity. There are many different varieties of winter squash. Each kind of winter squash looks very different from others and also tastes different. However, they are all the same species of plant. Winter squash grow in the summer, but we can store it and eat it in the winter.

Show the bag of prepared butternut squash and explain how you’ll be cooking it. Before you add the squash to the preheated electric skillet, ask students to listen very carefully for the “sizzle” noises. Add the squash to the skillet. Leave uncovered. Stir occasionally. Cook for 10 minutes or until tender.

All Kinds of Squash Matching Game*
Introduce the 10 kinds of squash featured in the game using the pictures on the cards (available below), or using actual examples of the squash. Then, hand each student (or pair of students) a card from the matching game – either a picture or a description – and have them find their match. Students will match the description of the squash with the picture on the card. After students have done it once or twice, you can start timing it and make it a fun race, or use music again.
*Activity adapted from Vermont Harvest of the Month, Winter Squash

***Cooking tips:
- While students are doing this activity, check in on the squash. While students continue working, start prepping samples to be passed out once the activity is done.
- Have another lesson and don’t have time to wash the skillet? Simply squirt water into the hot skillet to cool it down, then wipe it clean with a rag. Do not wait more than 4 hours before washing with soap.

4. Tasting Activity: 3 minutes
The “Tasting Activity” section is when students get to try the fruit or vegetable. Don’t forget to review your food tasting norms (for example, “don’t yuck my yum”).

Before you pass out any samples, be sure to share your brave tasting rules (for example, don’t yuck my yum, we all try together, etc.). As students receive their squash samples, talk the class through using their senses to explore the tasting.

Local Food Facts! If you’re tasting local food, be sure to share information about where it came from: Iowa farm/farmer, location, distance from the school (a map is a great visual here!), when it was harvested, how did you get it, etc.

Reflect

5. Voting Activity: 2 minutes
This is a time for students to give their opinion on what they tried!

As students taste the winter squash, have them vote with their thumbs. Observe their voting and offer positive reinforcement regarding the Brave Taster Rules. If a student dislikes the tasting, perhaps ask what they would change about it.
6. **Reflection:** 3 minutes

Reflection is one of the most important processes for students to process and retain new information or experiences. Give students an opportunity to reflect on what they’ve learned or tried in your lesson. This is an excellent place for students to practice the “Asking Discussion.”

**Asking Discussion:**
Raise your hand if you’re excited to go home and tell your family about tasting winter squash.

- Will someone share what they liked or loved about the winter squash? Select a couple students to share.
- Will someone share what they would change about the winter squash? Select a couple students to share.
- Will someone share one way varieties of squash are different from each other? Select a couple students to share.
- Ask a student with a raised hand: if you wanted to try winter squash at home, how might you ask your grown-ups?
- You might also ask additional questions like, where could you buy butternut squash or other kinds of winter squash? What else do you know about winter squash?

*Leave newsletters, incentives, stickers, and BINGO sheets with the teachers to pass out.*
Acorn Squash
Butternut Squash
Tetsukabuto
Delicata
Kabocha
Red Kuri
Spaghetti Squash
Sweet Dumpling
Pumpkin
Blue Hubbard
Blue Hubbard
I have very thick, bumpy, blue-grey skin that keeps me from rotting. My skin is SO thick, that you need an axe to cut me open - a knife just won’t work. It is worth the effort to prepare me because my light orange insides are very sweet and have lots of Vitamin A, which helps your eyes.

Kabocha
I am a dark green squash with pale green speckles. I am shaped sort of like a pumpkin, but flattened - I am a squat cylinder. I am very popular in Japan; kabocha is a Japanese word.

Tetsukabuto
I am the strongest, longest lasting squash, a mix between a butternut and kabocha. My skin is deep green, bumpy and very thick. Inside, I’m bright yellow!

Sweet Dumpling
I am a winter squash with orange and green spots and stripes - I almost look like I have polka dots! I am the smallest winter squash. I have the shape of a small bowl. I taste kind of like a sweet potato.

Pumpkin
I am the most popular of all the winter squashes. I am delicious not only in pies and desserts, but also on top of oatmeal, mixed into yogurt and in smoothies. I have tons of Vitamin A, which helps your eyes.

Delicata Squash
I am shaped long and thin. I am a light-yellow in color with orange and dark green stripes. My skin is so thin that you can eat it! You don’t have to peel me, but I don’t last as long because of my thin skin. My insides are a light orange and I have a mild, sweet flavor.
Spaghetti Squash
I have bright yellow skin and my insides are a lighter yellow. I have an oval shape - kind of like a watermelon. The really cool thing about me is that after you bake me in the oven, you can scoop out my insides and they look just like spaghetti! You can even pretend they are spaghetti and put tomato sauce on top when you eat me!

Butternut Squash
I am shaped like a giant pear! I have a long thick neck and a round bottom. My skin is a light brown color, but inside I am bright orange! I have TONS of Vitamin A, which is great for your eyes - one serving of me gives you almost 300% of what you need each day. My rich creamy flavor is great in soups!

Acorn Squash
I am shaped like an acorn! I have dark green skin, except for one yellow or orange spot on the part of me that was resting on the ground. Inside, I am a deep yellow color. I don’t have a lot of Vitamin A in me, but I do have a lot of potassium, which is good for your muscles, and Vitamin C, which keeps you from getting sick.

Red Kuri
I am also called red kabocha squash - I am a type of kabocha squash but instead of having dark green skin, I have bright red skin! I am also sweeter inside than my green cousin. I have the same squat, flattened shape as the green kabocha squash.
**Physical Activity**
Choose a physical activity to incorporate into the lesson. Ideas for physical activities are available at https://idph.iowa.gov/inn/play-your-way/brain-breaks.

**What You Need to Know About Winter Squash**
- Look for squash with a full stem that is heavy and firm with no bruises or soft spots.
- Squash can be stored for up to 1 month in a cool, dark place. Once cut, cover and refrigerate squash for 2-4 days.
- Rinse squash under cool water and dry before preparing.
- Unlike summer squash, winter squash rinds (outer skin) should not be eaten.

**Facts About Winter Squash**
- Squash are in season August - October.
- They grow on vines on the ground and have prickly stems and big leaves.
- Squashes are a part of the gourd plant family.
- The flowers and seeds of squash are also edible. Roasted pumpkin seeds are a great snack!
- Acorn squash varies in shape from cylindrical to spherical and can be green, yellow, orange, or white.
- Pumpkins come in a variety of sizes and colors including orange, yellow, green, white, red, tan, and even blue!
- The largest pumpkin ever grown was over 2,000 pounds!
- The Halloween tradition of carving pumpkins began in Ireland where they originally carved turnips or potatoes! Once the custom traveled to the U.S., pumpkins were used instead.
- Florida, California, Georgia, and Michigan are the top squash-producing states.

**Health Connection**
- Winter squash contains both vitamin A and vitamin C.
- Butternut, acorn, and spaghetti squash provide the antioxidant lutein, which is good for our eyes!
- Pumpkin provides vitamin A, vitamin C, potassium, and fiber.
- Vitamin A is important for eyesight and keeps our skin healthy.
- Potassium helps keep our hearts and muscles healthy.
- Vitamin C helps heal our skin and helps our bodies fight off illness!

**References and Resources**
- https://spendsmart.extension.iastate.edu/cook/produce-basics/
- https://www.iowafarmtoschoolearlycare.org/choose-iowa-campaign
- https://www.britannica.com
- https://www.agmrc.org/commodities-products/vegetables/squash
- https://snaped.fns.usda.gov/seasonal-produce-guide/winter-squash