



**EDIBLE
SCHOOLYARD
NYC**

March in the Kitchen: Aloo Gobi (Pre-K--2nd)

Aim: See appendix A for lesson objectives.

Summary: Students will learn to make a simple roasted potato and cauliflower dish. They will play a game in which they compare and contrast many different kitchen and food objects based upon size, plant part, volume, and more.

Standards and Skills Practiced

Grade	Academic Standards	Culinary Skills
Pre-K - 2 nd	<u>CCSS ELA Anchor Standard SL 1</u> : Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.	saute, mash, knife skills

Agenda double period lesson	Agenda single period lesson
<ul style="list-style-type: none"> ★ Handwashing (5 min) ★ Opening (8 min) ★ Food Prep (25 min) ★ Vegetable game (10 min) ★ Set Table (5 min) ★ Eat/ Discuss (15 min) ★ Clean Up (5 min) ★ Wrap Up (3 min) 	<ul style="list-style-type: none"> ★ Handwashing (5 min) ★ Opening (7 min) ★ Food Prep (20min) ★ Saute (5 min) ★ Set Table (3 min) ★ Eat/ Discuss (10 min)

Prep. Work:

- Par-boil whole potatoes for 11 minutes, then slice them into strips.
- Cut 3 heads of cauliflower into 10 large chunks each

- Peel ginger knobs (1 ½ inches in size, leaving the peel on top for students to hold while they grate)

Opening (3 minutes)

Introduce today's lesson:

- Start with Bollywood music playing and stop it as a cue for them to turn their voices off and be ready to listen. *Welcome back to your kitchen, everyone! Today we will cook a recipe with vegetables that stay fresh all winter; potatoes and cauliflower! This recipe comes from countries called Pakistan and India, and it is called aloo gobi.*
- *One of these grows underground and the other is a flower...Which do you think is the one that grows underground? Which one is a flower? Before we get started, we're going to read a book about plant parts, a tricky rabbit, and a bear called Tops and Bottoms*
- Sing the song "Flowers, Stems, Leaves and Roots" to the tune of "Head, Shoulders, Knees and Toes"
Flowers, stems, leaves and roots, seeds and roots
Flowers, stems, leaves and roots, seeds and roots
These are all plant parts that we eat
Flowers, stems, leaves and roots, leaves and roots!
- *Today we will be eating two plant parts: the flower and the root!*

Cook (25 minutes)

All tables simultaneously do all activities

Tray 1: Potatoes and cauliflower

- Half of the students receive cutting boards and plastic knives. They cut up the potatoes into bite-sized pieces (about ½ inch cubes) and put them into the bowl.
- The other students receive large chunks of cauliflower that they break into small florets and put them into the bowl.
- Halfway through, the two sides switch so every child has an opportunity to do both tasks
- Add 2 TBSP olive oil to the bowl.
- Add the seasonings to the bowl.

Tray 2: Seasoning Smash

- Half of the students add a pinch of cumin seeds.
- Half of the students add a pinch of coriander seeds.
- Each student measures ½ tsp curry powder.
- Each student puts a pinch of salt into the mortar
- *Smash it smash it smash it, smash it all you can, smash it smash it smash it, and pass it to a friend!* Around the circle until everyone has had a chance to smash the herb mixture

Saute:

- Add 1 TBSP olive oil to the pan
- Add the spices to the pan
- Add 1 cup water to the pan and bring it to a boil
- Add the vegetables to the pan
- Give each kid a chance to stir the pot three times
- Set the pot to the side to simmer with the lid on while you do the hot potato activity

See appendices B,C, D, E for notes.

Hot Potato Game (10 minutes)

- Come together as a whole class standing in a circle on the carpet
- Play “Hot Potato”
 - Have the students toss around a bean bag
 - Sing the song that goes along with it: “Wiggles” song about potatoes, pausing at random interludes
 - when paused, have them do some comparison and contrasting
 - Use the potato and cauliflower cards to assist with math problems for the older grades.

For Kindergarten:

- Which is bigger, which is smaller (Measuring cups)
- which has fewer, which has more?
- point to the vegetable that grows under the ground!
- point to the vegetable that’s also a flower!

For 1st grade:

- addition and subtraction word problems (also use kindergarten questions)

For 2nd grade:

- two-digit addition and subtraction,
- Identify the plant part! (What part of the plant is cauliflower?)

Eat/Discuss (15 minutes)

Clean Up (2 minutes)

Wrap Up (3 minutes)

See appendix F for notes.

Supporting Documents

- Supplies List
- Tray Set Up Guide, with photos
- Take Home Recipe
- Middle station teacher talking points
- chalkboard photo
- Knife skills guide photos

Extension Activities:

- Listen to/sing along/watch “One potato, two potato”:
<https://www.youtube.com/watch?v=QHL5sYEmd1E> (0:50-1:45)
- Listen to Doodlebops “Cauliflower Song”
<https://www.youtube.com/watch?v=HUnakSnpO4M> (14:04-15:29)
- Lyrics: <http://mstexan7.tripod.com/djsdoodlebopsandwigglessite/id16.htm>
- Read Tops and Bottoms by Janet Stevens

Vocabulary

- Tradition: something a group of people do that has been passed down from generation to generation
- Aloo Gobi: an indian dish containing potato (aloo), cauliflower (gobi), and a spice mixture

Supplies List (for one class)

Food:

- 2 heads of cauliflower
- 3 large potatoes, par boiled and cut into strips with skin on
- whole coriander seeds, in three ramekins
- whole cumin seeds, in three ramekins
- curry powder, in a ramekin
- salt, in three ramekins
- olive oil, in a squirt bottle

Equipment/Tools:

- 2 - ½ teaspoon measuring spoons
- 3 mortar and pestles
- 15 cutting boards
- 15 plastic lettuce knives
- 3 medium bowls
- 3 wooden serving spoons
- 2 large saute pans
- 2 large lids
- 2 - 1 cup liquid measuring cups
- 2 bean bags or small balls (for hot potato game)
- music-playing device with internet capabilities, to play music
- Measuring cups, spoons, winter vegetables and cards for hot potato game visuals
- Book Tops and Bottoms by Janet Stevens
- enough bowls for every student (for eating)
- forks for every student
- drinking cups for every student
- compost bucket
- Take Home Recipes for each student
- Middle station teacher recipe

Roasted Potatoes and Cauliflower Lesson Food Prep and Tray Set Up

Food Prep for EACH CLASS (multiply by the number of classes in the day)

- Parboil potatoes with their skin on, cut them into strips
- cut the cauliflower into quarters

Tray 2: Potatoes and Cauliflower

Food (3 trays per class):

- approximately 1 potato's worth of potatoes, cut into strips
- 1 head of cauliflower, cut into 10 large chunks
- olive oil (in squirt bottle)

Tools and Equipment (3 trays per class):

- medium bowl
- 5 cutting boards (on table)
- 5 lettuce knives

Tray 1: Seasoning Smash

Food (3 trays per class):

- Coriander seeds (in ramekin)
- Cumin seeds (in ramekin)
- Curry powder (in ramekin)
- salt (in ramekin)

Tools and Equipment (on trays with food):

- mortar and pestle
- ½ teaspoon measuring spoon

Tray 3: Saute (2 trays per class)

Food

- olive oil in squirt bottle

Tools and Equipment

- large saute pan with lid
- wooden spoon
- 1 cup liquid measuring cup

Middle Table Teacher Recipe:

1. Hand out knives to the students with the cutting boards. Place the knives in their home.
2. Give each student with a cutting board 2 pieces of potato to cut into $\frac{1}{2}$ inch cubes.
3. The other students receive 1 chunk of cauliflower that they will remove the florets and place them into the bowl.
4. Have the students switch sides in order for every student to get to use a knife and to break down the cauliflower
- 5. Take away cutting boards and knives and bring out spice mixture tray**
6. Half of the students add a pinch of cumin seeds to the mortar.
7. Half of the students add a pinch of coriander seeds to the mortar.
8. Every student adds a tiny pinch of salt to the mortar.
9. Every student measures $\frac{1}{2}$ tsp curry powder to the mortar.
10. Students take turns smashing the mortar with the pestle while you sing:

*Smash it, smash it, smash it
Smash it all you can!
Smash it, smash it, smash it,
And pass it to a friend!*

11. Set aside the mortar.

Cauliflower Image: By Shree Krishna Dhital (Own work) [CC BY-SA 3.0 (<http://creativecommons.org/licenses/by-sa/3.0>)], via Wikimedia Commons

Supplies List (for one class)

Food:

- ground turmeric
- ground cinnamon
- ground cardamom
- 3 cloves of garlic
- 3 - 1.5" knobs of fresh ginger, with peel removed
- ground nutmeg
- ground cloves
- whole coriander
- whole cumin
- whole mustard seed
- black pepper (in 3 pepper mills)
- salt
- olive oil in squirt bottle
- 3 heads of cauliflower
- 4 potatoes

Equipment/Tools:

- 3 dry erase markers
- spice facts cards (1 set for each table)
- spice trade checklists
- spice labels
- plastic wrap
- 33 ramekins or small cups, filled with spices, covered with saran wrap
- labels for each ramekin
- 3 pepper mills with black pepper
- 3 microplanes or fine graters
- 3 mortar and pestles
- 15 cutting boards
- 15 plastic lettuce knives
- 3 medium bowls
- 2 large sauté pans
- 2 induction burners or two stovetops
- 2 wooden spoons
- atlas
- world map
- enough bowls for every student (for eating)
- forks for every student

- drinking cups for every student
- compost bucket
- Take Home Recipes for each student
- 3rd Grade task cards
- 4-5th Grade recipe check list
- Middle station teacher talking points
- Exit tickets for each student



Kitchen Lesson Plan Appendices

Appendix A: Lesson Objectives

1. Increase and Deepen Student Knowledge: *Students will be able to explain why eating whole plant-based foods promote personal health, community health, and environmental sustainability.*
 2. Increase Food Preparation Knowledge: *students will be exposed to a new example of a multi-cultural, seasonal, fresh, plant-based, and delicious food preparation.*
 3. Build Confidence: *Students will build confidence and skills about how recipes get put together.*
 4. Increase Resilience: *Encourage growth in students interpersonal relationships, teamwork, leadership, sense of stewardship and engagement in the school community, personal understanding, confidence, problem solving, resilience, and independence*
 5. Develop Personal Efficacy: *Students will leave the class with the knowledge, ability, and intention to replicate food preparation skills that will serve them in their personal and professional lives.*
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Appendix B: Before Beginning the Lesson

Getting into Groups and Washing Hands (5 minutes)

Separate the students into three groups to wash hands and then join back up at the tables.

Briefly review kitchen safety: elicit student responses about the importance of walking, oven/stove/safety lines, hand hygiene in the kitchen.

Appendix C: Exploring Ingredients During Food Prep (if time allows)

- **Talk about produce (if time allows):**
 - Let students see and feel whole examples of garden produce featured in the lesson
- **Taste/ smell test/ ingredients (if time allows):**
 - Remind students that our goal is to describe what we taste with more than just “yuck” and “yum”. Try helping them express taste vocabulary by saying “Give me a thumbs up if you think it’s crunchy. Give me a thumbs up if you think it’s sweet”, etc. then practice completing these sentences: “I like it because...” and “I don’t like it because...”
 - Let the students taste/smell a small piece of each veggie and practice using the above sentences.

Appendix D: Safety:

- 3rd grade and younger use plastic lettuce knives
- 4th grade and up can use metal paring knives if they are well behaved and aware of their surroundings.
- Set out 4-5 cutting boards for use with knives
- **Sawing:** Practice holding up the hand they hold the pencil with. This is the knife hand. The knife saws back and forth until the food it cut all the way through. We don't chop up and down.
- **Bear Claw:** Practice the "bear claw" method of holding the piece of food that is being cut still where the fingertips are curled under. If the fingernails are showing, then the fingertips could be in danger.
- **Knife's Home:** The knife's home is horizontal at the top of the cutting board. It goes here whenever we are not cutting. We don't use the knife to scrape the cutting board, to move food, or to gesture. We don't hold it in our hands while doing ANYTHING other than cutting.
- **Avoid having students pass or walk with knives.** If they must carry one, they should be carried point-down at their sides, against their leg. They should say "knife behind" when walking behind someone while holding a knife. If they must pass one, they should pass it handle first, so that the receiver can grab the handle easily and not the blade.
- **Chiffonade Greens:** stack two leaves neatly. Roll the stack into a caterpillar shape. Cut thin slices out of the roll. These turn into ribbons.
- **If using stoves, review stove safety:**
 - one person at a time comes up to the stove
 - hold the top of the spoon.
 - The stove and pan are hot so they are not to be touched.

Appendix E:

During or after the work at this station, connect the recipe and lesson to the sustainability theme for each grade.

Grade	Sustainability Theme	Talking Points
Pre-k, K	Cycles: a set of steps that happen in the same order, over and over	Review cycle of seasons and what season it is now. Talk about what grows in the garden and what we eat in this season. We can make today's recipe with the foods that grow in this part of the season cycle. You can sing the water cycle song during the boiling, sauteing, or simmering part of the lesson. See the extension activities section for the song.
1	Community: a group of people with something in common	Brainstorm things we have in common: they are a community of students; we are a community of cooks; we are a school community, etc. Communities have food traditions. Our community makes has a tradition of cooking foods from the garden. Today's recipe comes from (insert culture here)'s food tradition. We can make today's recipe with foods from our garden as a community working together. The flavor of each of the vegetables helps make the recipe delicious just like just like people in a community can use their special skills to make the recipe!
2	Diversity: when there are lots of different kinds of	Ask if there are a lot of plants growing the garden, if it is diverse right now. Talk about the current level of diversity and how it is related ot he weather. (Insert recipe name) is a diverse dish because many different people eat it in

	things	many different ways! What are some different kinds of (insert recipe) you have eaten?
3	Change: to make something different or when something becomes different	<p>Ask the students to define the word change and give an example of change. Tell the students that today we're going to look at how individual ingredients' flavors change when you make a recipe, and how the flavor of a recipe changes based upon the flavor of the ingredient.</p> <p>Tell the students that they will have the opportunity to taste/smell some of the ingredients individually to see how they change the flavor of the recipe.</p>
4	Systems: a set of things that work together to accomplish a goal	<p>Define a system for the students. Tell the students that a plant is a system because the small parts, also known as the plant parts, work together to help the plant grow. Have the students come up with a list of plant parts and what they do for the plant.</p> <p>Ask what jobs do we do in the kitchen for which we need each other to accomplish our goal of completing the recipe.</p> <p>Our recipe is like a system too- each ingredient has an important job--it gives it's flavor and texture to the whole dish.</p>
5	Interdependence: when people, places, and things rely upon each other to accomplish a goal	<p>Break down the word, tell them that inter means between, and ask what dependence means. Ask the students who/what do they depend on and for what?</p> <p>Ask the students about times that they depend upon each other in their classroom to accomplish a goal. Ask when that happens in our kitchen. Talk about how we depend on each other to make a recipe.</p>

Appendix F: After Food Prep

Eat/Discuss (15 minutes)

- One table at a time get chairs to sit down.
- Set the table: give students directions to split up the following tasks:
 - putting out the tablecloth
 - getting plates
 - getting water cups
 - getting forks
 - picking a centerpiece
 - Teacher puts out food on everyone's plate
 - We say "Thank you Gardeners! Thank you Cooks!"
 - Enjoy eating!

Discussion during the meal:

- Remind students that they will be getting the recipe to take home to their families.
- Ask by a show of hands, "Who liked this recipe?"
- Ask by a show of hands, "Who will make this at home?"
- Ask by a show of hands, "Who made the Panzanella recipe at home since you were here last?"

- Ask some students to share: (*Who will you make it with? Where will you put the recipe so you remember to make it? What day of the week will you make this? How will you describe the recipe to get your family excited about it?*)
NOTE: even if all students do not share, this will allow all to think about this.
- Encourage students to complete the sentences: “I like it because...” and “I don’t like it because...”
- Ask student to share what they like about the borscht. (might include): *fresh, colorful, sweet, warm, etc.*.)
- Ask students what they would change (might include): *more/less of a certain vegetable; more / less dill or different herb.*
- Ask students what they need to do in order to make this at home (*What would you need to get to make this? What do you already have at home?*).

Clean Up (2 minutes)

One table at a time, students clear the tables:

- They clean off their plates into the trash can.
- Then they make a pile of dirty dishes on the table, and a pile of dirty forks.
- Students empty their water cups into the hand washing sink and make a tower of empty cups on the table.
- Students return centerpiece to table and fold tablecloth.

Wrap Up (3 minutes)

- **Grades 3-5 only: Exit Tickets and Exiting:** *Have students sit back down at their tables. The last thing we will do today is answer a quick question about something you learned. Spelling is not important. And it’s ok if you aren’t sure about the answer. Just answer the best that you can. This paper with your answer on it is called an exit ticket; it is like your ticket out of class today. When you finish, come get in line and hand in your ticket.*

Appendix G: Songs in the kitchen

The Soup is Steaming Up (to the tune of the farmer in the dell)

*The soup is steaming up
The soup is steaming up
stir slow around we go, the soup is steaming up!*

*First we add the onion
first we add the onion
stir slow around we go, the soup is steaming up!*

*Next we add the carrot
next we add the carrot
stir slow around we go, the soup is steaming up!*

Continue with each ingredient, one by one as you add them to the pot

Carpet Song

(To the tune of oh my, darling clementine)

*Sit on the carpet
on the carpet
on the carpet right now
if you don't sit on the carpet
you'll turn into a (whatever you're focusing on in the lesson)*

Crunchy Carrot Song

*I'm gonna crunch, crunch, crunch my carrot
crunch, crunch, crunch my carrot
crunch, crunch, crunch my carrot
They are so good for me!*

This song can be sung for any activity that you are doing. i.e. I'm gonna chop, chop, chop my onion , I'm gonna stir, stir, stir the pot, etc.

Water cycle song

(Gestures in parantheses)

(Fingers moving up to the sky)
Evaporaaaaaaation!

(Make hands into a cloud)
Condensaaaaaaation!

(Fingers moving down to the ground)
Precipitaaaaaaation!

Strong Kale

(to the tune of Mary had a little lamb)

*We are kale big and strong
big and strong
big and strong
We are kale big and strong
we're green all winter long!*

Where has my dog Bean song

(to the tune of I'm a nut)

Inquire for a type of bean, i.e. fava, green, cannellini, etc.

*My dog Fava likes to roam
one day Fava didn't come home
when Fava came home he was so clean
where oh where has Fava bean?
Fava bean, Fava bean
where oh where has Fava bean?*

Herb Roasted Potatoes and Cauliflower

This recipe is simple and delicious! Kids will enjoy breaking the cauliflower into florets with their hands. **(Makes 6 servings)**



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Ingredients

1 small head cauliflower
2 large potatoes
4 sprigs of thyme or 2 tsp dried thyme
4 sprigs of rosemary or 1 TBSP dried rosemary
½ tsp salt
¼ tsp ground black pepper
2 TBSP olive oil

Steps

1. Preheat the oven to 375 degrees.
2. Cut the cauliflower and potatoes into 1-inch pieces.
3. Remove the leaves of the thyme and rosemary from the stems. Cut leaves into very small pieces.
4. Mix the oil, salt, pepper, and herbs into the potatoes and cauliflower.
5. Spread the mixture on a baking sheet. Roast in the oven for 20 minutes.
6. Stir the roasting mixture. Roast for 20 more minutes.

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