# **Growing Gardeners**



A School Garden Curriculum for Grades K-8

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Lesson Document includes considerations for grade K-8

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### Introduction



Pictured from left to right top is Katie Wuori and Sarah Reynolds and Pictured from left to right bottom is Selina Greene Warren and Laura Hoeft.

#### THE GROWING GARDENERS CURRICULUM TEAM

At the infancy of the 2020 pandemic, Erica Emery, a local farmer and committee chair of the GFFC (Greater Franklin Food Council) met with Sarah Reynolds one day at their downtown bookstore to brainstorm ways to get more garden education into the curriculum at local schools. Through Erica's dedication and networking, coupled with support from the Greater Franklin Food Council, the SING (Schools Integrating Nutrition and Gardening) Group was born.

Two years later, four of the primary members of this group recognized the need for access to an inclusive cross-curricular K-8 garden and nutrition curriculum. The idea was to provide a digital resource for teachers of all comfort levels to use to support exploratory learning and to get students of Franklin County and

### Introduction

beyond integrated into the physical world around them.

They worked together to revise an existing curriculum, co-authored by one of the curriculum team members, that provides an alternative platform for learning, embedding curriculum standards to encourage teachers to branch out from their traditional lesson plans. In providing said curriculum, students would have an opportunity to experience outdoor, hands-on learning, all while gaining an appreciation of where our food comes from and the importance of healthy eating habits.

Below is a little more information on the authors of this resource:



Selina Greene Warren is a transplant to Maine, but thrives and blooms where she is planted. She grew up in the suburbs of Fort Lauderdale Florida, where she enjoyed observing the mangroves, other tropical vegetation, and wildlife along the intracoastal waterway. After high school, Selina traveled and became a very young snowbird, migrating from Maine to Florida seasonally. She eventually landed and earned her Bachelor of Science in Early Childhood Education with a minor in Environmental Studies from the University of Maine at Farmington. Selina earned her Master's Degree in Early Childhood Education with a Focus on Leadership and Policy from Wheelock College in Boston Massachusetts, while focusing her research on the impacts of gardening and experiences in nature on student growth. Currently, Selina is the Kindergarten teacher and School Garden Coordinator at Kingfield Elementary School in Kingfield, Maine.

Selina has established two school gardens in rural Maine, and she authored the first edition of the school

garden curriculum that she titled Growing Gardeners. The success of the school garden in Selina's community is a result of her collaboration and community engagement. She collaborated with school administration to create a community time where the entire school engages in the Growing Gardeners Curriculum every spring and fall. She also writes grants to expand the garden classroom and place based education experiences for students. Selina engages community members and businesses for yearly garden programming and events. She has also established a strong relationship with the Healthy Community Coalition of Franklin County Maine, and collaborates with nutritionists to provide nutrition education and cooking lessons to students using the crops grown at school.

Selina is also a strong advocate for the health and wellness of students. As the 2016 Franklin County Teacher of the Year, she advocated for the health and wellness of students while highlighting the benefits of school garden programs for healthy and optimal student growth and development. From 2016-2019, Selina served on the board for the Maine Association for the Education of Young Children, and continued her advocacy efforts while engaging in policy work at the State House in Augusta, Maine as well as in Washington, DC in support of healthy learning environments and opportunities for young children.

Selina is proud to be an original member of the Franklin County SING (Schools Integrating Nutrition and Gardening) Group, and honored to have been recognized as the 2023 Maine Agriculture in the Classroom Teacher of the Year. She is so grateful for the healthy roots she has established in Maine, for the opportunity to plant seeds and sing songs with her young students, and for facilitating the growth of so many Growing Gardeners over the years.



Katie Wuori grew up in Islesboro, Maine, where she and her siblings spent years learning organic, sustainable living and farming, along with the love of growing, preserving, and eating the product from her parents. Growing up on an island, self-sufficiency, respect for the community and the awe of all weather was embedded into her. Leaving home, she attended Keene State College in New Hampshire and earned her Bachelor of Arts in Developmental Psychology, Bachelor of Science in Education K - 8, and an endorsement for Special Education K - 12. She lived in the Philippines for three years, teaching first through third grades at the International Rice Research Institute (I.R.R.I.), where she was surrounded by scientists of all kinds, most to figure out how to genetically change rice to help cure world hunger. This was her first exposure to the Genetically Modified Organisms (G.M.O.) world, and from her organic, rural living, she had many heated

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and educational debates. When she returned from abroad, she took a middle school teaching job in Stratton, Maine, got married, bought a house, and started her own organic garden.

She returned to on-line classes through the University of Maine for her endorsement for Gift and Talented and Walden University for her master's in Education with a concentration in Curriculum Design and Writing. Shortly after she had settled into her job, a school board member approached the staff and asked if anyone was interested in a school garden. He had written a grant and was willing to put in six raised beds for children of the Stratton community to learn how to grow vegetables. Katie and a fellow first grade teacher raised their hands. Katie became the School Garden Coordinator and the middle school collaborated with the first grade for many garden projects. Eight years later, this school has nine more raised beds, a three-season 22-foot growing dome, Food Corp for the past two years, school teachers and staff on board for experiential/outdoor learning, and a full-time, year-round Farm to School Gardening Coordinator Position (created spring of 2023). This position will provide sustainability and support for the schools' nutrition, gardening, and outdoor learning goals. Patience and love are two qualities teachers have, and when one puts some of that effort into the health and nutrition of the next generation, seemling impossible visions grow roots and flourish.



**Sarah Reynolds** was born and raised in Farmington, Maine with her three siblings and supportive parents. She has fond childhood memories, and all of them connect to the natural world in some way. She spent nearly every day (and many nights) outside in all weather conditions. Her elderly neighbor used to send the "Middle Street Gang " on wildflower scavenger hunts, and this opened her eyes and heart to observing all that nature has to offer. She attended Saint Anselm College in New Hampshire for 2 1/2 years majoring in Accounting, but soon realized this wasn't her life's dream. She eventually returned to her roots and graduated from UMF with a Bachelor of Science degree in Elementary Education and a mathematics concentration. She taught math and science at Windham Middle School for three years before getting married and then teaching fifth grade at Belgrade Central School for six years, where she earned a Master's Degree from UMO in Literacy Education.

She was part of the "Green Fusion" at BCS, and a local CSA farmer and inspirational friend, Lani Carlson, got her hooked on teaching students all about where food comes from. She decided to settle down in Farmington to raise her family and she started her own raised beds to learn about gardening with her kids.

Since moving back, she has taught fourth grade, Gifted and Talented (for grades 3-5 in RSU 9), third grade, and is now a Math Interventionist for grades K-5. She's very passionate about her school's natural surroundings which include an outdoor classroom and nature trail in "Nina's Woods". Both of these serve as inspirations for many of her lesson plans. In 2015, Sarah was recognized as the Franklin County Teacher of the Year and was a finalist for Maine Teacher of the Year. During her recognition year, Sarah's fourth grade class teamed up with the Department of Agriculture, Conservation, and Forestry to write and publish the book "Here Come The Beetles: Asian Invasion" in an effort to teach students in the state about the invasive species known as the Emerald Ash Borer. Sarah partnered with local foresters to host a community "Ash Tagging" party in an effort to visualize the potential effects of this beetle's devastation. In 2020, Sarah decided to apply for an MEEA grant (Maine Environmental Education Association) to fund the revival of her school's garden space. Upon receiving the grant, she was able to build a handicap accessible garden bed to allow learning for all students. In addition to this new structure, the grant also provided funds for a new garden shed that was designed and built by a high school engineering class led by Jake Bogar. Sarah's excited to see this gardening journey continue in hopes of inspiring future generations of life-long learners. She feels strongly that you do harvest what you sow both in a garden and in life.



Laura Hoeft was born and raised in upstate New York, spending all of her free time playing either in the warm months on the lake or in the cold months in the snow! As a child, she gravitated toward anything that enabled her to be outdoors and enjoying her natural surroundings. Soon after graduating from Cornell University with a Bachelor's of Science in Human Development and a concentration in Early Childhood Studies, she moved, with her now husband, to the Western Mountains in Maine. She quickly embraced the lifestyle and, after buying her first home, decided to try her hand at growing a garden, in spite of not being raised around them!

After twenty plus years of trial and error gardening, and a number of experiences working in an educational setting, she was hired by the Greater Franklin Food Council in September 2020 as a School Garden Coach.

In her first year, she provided support for four area schools in Franklin County, collaborating with staff in two of the schools who had established garden programs to increase their volunteer/staffing capacity. In the remaining schools, she established new garden programs, creatively seeking out new ways to build support and enthusiasm with staff and students. Now in her third year, Laura supports nine schools in Franklin County, providing gardening and nutrition education to over 900 students on a regular basis throughout the school year. Laura has also managed Sugarloaf's biggest annual fundraiser, the Sugarloaf Charity Summit, for the last three years, collectively raising over \$900,000 to fight cancer in Maine. She has served as a Board member for several organizations, including the Maine Mountain Children's House, the Kingfield POPS Event Committee, and the Town of Belgrade Parks and Recreation Department. She lives in Farmington with her husband and three children.

#### **Today's SING Group**

Now in its fourth year of existence, the SING group extends to nine schools in Franklin County. There are currently seventeen members in the group, all contributing invaluable knowledge on how to get students excited about nutrition and gardening as well as the outdoor space surrounding them! The original SING Group is so excited to provide professional development for this curriculum resource with teachers in Franklin County, though the ultimate goal is to extend outreach to the state level. We are excited to be able to share this resource and hope that our readers find it as fulfilling to teach as we do!

Plant Seeds and SING Songs!

#### **DESIGN, ILLUSTRATION AND LAYOUT**

The visual design and illustrations for this curriculum were created by students at the University of Maine Farmington. It started as a class project for advanced graphic design students, and was finished by a handful of dedicated student designers and illustrators under the direction of Professor Dawn Nye.

Dawn Nye (Creative Director and Production) Sol Labelle (Lead Designer and Production) Ana Rogers (Designer) Elayne Gustafson (Designer) Sean Maher (Designer) Nic Laro (Lead Illustrator and Illustration Supervisor) Artemis Monteith (Illustrator) Hailey Brooks (Illustrator) Hunter Kemp (Illustrator) Kimlie Gillespie (Illustrator) Grace Pimenta (Illustrator) Becca Nirza (Illustrator)

### **Comprehensive Integration**

#### GARDENING

This unit is designed to teach children about growing their own vegetable gardens. The overarching theme is the seed to plate concept, which describes how a seed grows into a healthy vegetable that ends up on our plate, while encouraging life-long healthy living choices. Students will also gain knowledge about where their food comes from and understand the effort that it takes to grow healthy vegetables in a sustainable manner. The objectives for the lessons are aligned to the Next Generation Science Standards and Maine Learning Results, and include concepts related to life cycles, soils, and insects. The garden lessons are organized into three different subgroups: The Planting Garden (Lessons 1-6), The Growing Garden (Lessons 7-10), and The Harvesting Garden (Lessons 11-16). In addition to the science concepts related to gardening, students will also experience participation in garden work. During the Planting Garden Lessons, the garden work focuses on laying out the garden space, seed starting, direct sowing, and transplanting. During the Growing Garden Lessons, the garden work focuses on watering and weeding. During the Harvesting Garden Lessons, the garden work focuses on harvesting ready vegetables, clearing the garden space, and preparing the soil for winter.

#### **INTEGRATION**

This garden curriculum was designed to function as an integrated unit. The lessons are aligned to the Maine Learning Results, Next Generation Science Standards, and include practices that support mathematics, reading, and writing goals. It is important to note that the standards that are aligned to each lesson were chosen as the most appropriate connection. However, the standards chosen are not exclusive and other standards are applicable. Each lesson has a section that is labeled Extension Activities. In this section of each lesson, there are suggested activities that connect mathematics, literacy, social studies, and STEAM. There are several read alouds suggested in the Procedure and Extension Activities sections of the lessons. However, you may find an entire book list of suggested readings, as well as other related literature for students in Appendix B. Finally, many lessons include the completion of a Garden Journal entry, where students may write or journal about their activities, experiences, and observations. Journaling may take many forms, and a teacher may decide to have students use a template or journal freely in a notebook. This curriculum was designed to allow flexibility for educators to make decisions about the depth and duration of lesson topics in order to meet the needs of their students.

#### NATURE

Students' exposure to nature, green spaces, and the outdoors affords them natural stimulation that may increase curiosity, wonder, and knowledge of the natural world. When students spend time outdoors in nature, they also receive many opportunities for sensory experiences that are necessary for self-regulation and survival. Furthermore, there has been much research conducted to support the claim that experience in nature can have a positive impact on children's social and emotional development. The more time children spend outdoors in nature, the more they will begin to understand how humans are interconnected with all other living things. As a result of this understanding, children will develop empathy for other living things as well as each other. Additionally, promoting experiences in nature for children is one way to raise environmental stewards that will take an interest in environmental sustainability, while preserving our planet's resources.

#### NUTRITION

This curriculum unit was not only designed to teach children about nutrition, but it was also designed to expose children to healthier food choices, such as garden-grown vegetables. The rise of obesity in this country is mostly due to the fact that many families lack nutrition education and access to healthy food. Furthermore, healthier choices at the grocery store are usually more expensive choices. However, if children and families learn how to easily grow their own healthy foods, they may begin to value healthy choices. It is important to note that as soon as vegetables are ready to harvest, students should be harvesting and tasting these vegetables. In the summertime, there are many vegetables that must be harvested to allow for multiple harvests. Continual harvest not only allows students many opportunities to taste and try new healthy foods, but harvesting the vegetables in the garden will also provide healthy snacks for the program. During this unit, students not only get to harvest and taste the vegetables they grow, but they also get to learn how to use the vegetables as ingredients for healthy snacks and meals. You may refer to Appendix D for a list of recipes that may be used with the vegetables grown in a school or community garden.

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#### **PHYSICAL EDUCATION**

Physical activity is another crucial component for this curriculum unit as well the holistic health of children and families. Although this curriculum has not been aligned to nutrition and physical education standards, this curriculum could serve as a resource for meeting such standards. In addition to the garden work included in this unit, many lessons refer to specific physical activities or outdoor games for students to participate in. Being outdoors in a green space such as a garden is the perfect setting to organize cooperative games that not only foster community among young gardeners, but also get children moving their bodies. In addition to the games and activities referenced in the lessons, Appendix C contains more outdoor games that are sure to get children moving!

#### **STRATEGIES FOR OBTAINING RESOURCES**

As educators, we spend much time teaching the concept of or fostering a sense of community with our students. The definition we use for community is "a place where people live, work, and play together," but the most important part of that definition is the word together. Together, a community can accomplish amazing things when members combine resources! The concept of community is mentioned in this section because when we all decided to establish and build a school garden at our schools, the only resources we had was our diverse knowledge of gardening and our ability to plan engaging lessons outdoors. However, we did not have the lumber, soil, seeds, or any other supplies to build a school garden. We simply called community members and businesses to tell them about our plans and asked for donations. In most cases, community members and businesses are always willing to donate materials and resources needed to start your school garden classroom.

When you are getting started with the establishment of a school garden at your school, generous donations from local businesses and community members usually provide enough funding and resources to get started. Local lumber companies, hardware stores, and plant nurseries are good businesses to acquire materials necessary for establishing a school garden. However, in order to continue to grow your school garden, you will need to begin looking elsewhere for resources and funding. Many school garden coordinators and administrators search for grants that are being offered to school gardens and nutrition programs. Believe it or not, if you do an Internet search for garden and nutrition grants, you will be surprised by how much money is really available for such projects and programs! We highly suggest starting with organizations that are locally supporting such efforts within your state. In Maine, there are many grant opportunities being offered by local groups and businesses, such as 5210 Let's Go! Healthy Maine Partnerships, Maine Environmental Education Association, and Maine Agriculture in the Classroom, just to name a few.

Our best advice to any teacher or program coordinator who is looking to obtain resources and funding for starting a school garden is to start locally. First, see what your community members and local business have to offer. Then, if you have to extend your search, it may be as simple as completing a grant application or as involved as actually writing a grant. Just remember to start small and never doubt the power of what a community can do together if they combine their resources!

### Foreward

### Choose your own adventure!

#### YOUR TEACHING STRUCTURE IS...

- Self contained classroom
- Team teaching
- Whole Community
- Afterschool program

#### **IN A GARDEN THAT IS...**

- Just being developed
- Established and still growing
- · Established, integrated, and embedded in school culture

Schools have different cultures, needs, goals, support systems, stakeholders, resources, and priorities. However, schools share an overarching common goal, which is to support students' development for becoming productive members of society. As educators, our job is to give them guidance and a tool belt full of diverse skills. The promotion of healthy living choices provides one such skill set for students. Furthermore, the seed to plate concept with integrated nutrition education is a crucial component for a successful school garden program. We focused on three different pathways that we felt encompassed where most schools might be at:

If you work in a school where most of the teachers use the garden space for learning, or there are classes outside your "pod" or people you plan with regularly for shared spaces, you will need to have a conversation around the garden space. Here are two different suggestions:

#### **STEP I - ORGANIZATION OF CLASSES**

If your school has a garden coordinator, horticulture teacher, or someone dedicated to working with students and teaching about gardening and healthy living choices, they should be tasked with supporting you and making a schedule.

If your school does not have a point person for the garden, have a meeting with teachers and staff involved with the garden (see example of meeting agenda).

#### **STEP 2 - WHO IS PLANTING WHAT?**

This plan is for transplanting schedule, then planning, if you have seedlings, you will want to incorporate the space needed for those plants in this conversation. Seedlings are fragile and there will be a learning curve for successful transplanting. It is okay to transplant and sow seeds a little closer than advised on the packages.

I have had success with younger students planting the bigger seeds such as peas (which need to be soaked the night before planting), beans, potatoes, etc. Then go up to the finer seeds such as lettuce, carrots.

#### **STEP 3 - TIMING AND SUPPORT**

I find a google doc works good here. I recommend having the garden coordinator or one person to be in charge of the planting times and create a final schedule. This is also a good time to share resources and gain support from others. Is there an ed tech who can lend a helping hand? An older class that can team up with a younger one for a buddy system? A community member who would like to volunteer?

#### **STEP 4 - IN THE GARDEN**

Yay! Success! You made it to the garden. This is probably the first time many students are here, remember this is a classroom and plan your rules/expectations accordingly. Also expect planting will take longer than expected and have some additional activities for exploration and wonder for student to participate in. See Seed Planting Activity for specific steps here.

In Northern Franklin County, we have had success starting seedlings after April vacation, as tending to them over break is tedious. It is important to understand, even in Franklin county there are huge differences in the growing zone and season (sometimes just over a hill), these are guidelines and through successes and failures you will become more accustomed to what works best for you, your students, your school culture, and growing zone.

### Maine Education Standards Alignment Spring Lessons Topics 1-8

	Topic	Kindergarten	lst Grade	2nd Grade	3rd Grade	4th Grade	5th Grade	6th Grade	7th Grade	8th Grade			
Science	1	K-LS1-1	1-LS1-1	2-LS4-1	3-LS4-2	4-LS1-1	5-PS3-1	MS-LS1-7	MS-LS1-7	MS-LS1-7			
	2	K-ESS2-2	1-LS3-1	2-LS2-2	3-LS1-1	4-LS1-1	5-ESS3-1	MS-LS2-2	MS-LS2-2	MS-LS2-5			
Maina	3	Seed Starting Activities											
learning	4	K-ESS3-1	1-LS1-1	2-LS2-2	3-LS4-3	3-5-ETS1-3	5-LS1-1	2-LS2-1	2-LS2-1	2-LS2-1			
<u>Results</u> (K-8)	5	K-ESS3-3 K-2-ETS1-1	1-LS1-1 K-2-ETS1-1	2-LS4-1 K-2-ETS1-1	3-LS1-1	4-LS1-2	5-ESS3-1	MS-LS2-A	MS-LS4.D	MS-LS2-2			
	6	Transplanting A	Activities										
	7	K-ESS3-1	1-LS1-1	2-LS4-1	3-LS1-1	4-LS1-2	5-LS2-1	MS-LS4-3	MS-LS2-1	MS-LS2-1			
<u>Next</u> <u>Generation</u> <u>Science</u> <u>Standards</u>	8	K-LS1-1 K-2-ETS1-2	1-LS3-1 K-2-ETS1-2	2-LS2-2 K-2-ETS1-2	3-LS3-1	4-LS1-1	3-5-ETS1-2	MS-LS2-4	MS-ESS3-5	MS-ESS2-5			
Social Studies	1	Civics and Government 1	Civics and Government 1	Civics and Government 1	Economics	Economics	Economics	Economics Civics & Gov. 3	Economics Civics & Gov. 3	Economics Civics & Gov. 3			
<u>Maine</u>	2	Economics	Economics	Economics	Geography 2	Geography 2	Geography 2	Geography 2	Geography 2	Geography 2			
Learning	3	Seed Starting Activities											
<u>Results S.S.</u>	4	Geography 1	Geography 1	Geography 1	Geography 1	Geography 1	Geography 1	Geography (F3)	Geography (F3)	Geography (F3)			
	5	Civics and Government 3	Civics and Government 2	Civics and Government 3	Geography 2	Geography 2	Geography 2	Personal Finance/ Economy	Personal Finance/ Economy	Personal Finance/ Economy			
	6	Transplanting A	Activities										
	7	History 1	History 1	History 1	History 2	History 1	History 1	Geography	History	Culture			
	8	<u>Geography 2</u>	Geography 2	Geography 2	Geography 1	History 1	Geography 1	Geography	Civics and Geography	Civics and Government			

# Science

### Maine Education Standards Alignment Spring Lessons Topics 1-8

# Social Studies and Math

Math	1	K.CC.A.1 K.MD.A.1	1.NBT.A.1 1.MD.A.1	2.NBT.A.2 2.MD.A.1	3.MD.B.3	4.NBT.A.2	5.NBT.A.1	QR.EA.2	QR.EA.2	QR.EA.2				
<u>Maine</u>	2	K.GA.1	1.GA.1	2.GA.1	3.MD.A.1	4.MD.B.4	5.G.A.1	6.G.A.2	7.SP.A.1	8.G.A.5				
Learning	3	Seed Starting A	Seed Starting Activities											
Kesults	4	K.MD.A.1	1.MD.A.2	2.MD.A.2	3.MD.B.4	4.MD.A.3	5.MD.C.3	6.G.A.4	7.SP.C.8	8.G.A.2				
	5	K.MD.B.3	1.MD.C.4	2.MD.D.10	3.MD.B3	4.MD.A.1	5.G.A2	6.RP.A.3	7.RP.A.2	8.F.A.2				
<u>Common</u> <u>Core State</u> <u>Standards</u>	6	Transplanting A	Activities											
	7	K.MD.B.3	1.MD.C.3	2.MD.D.10	3.MD.B.3	4.G.A.3	5.NBT.A.1	6.EE.B.6	7.EE.B.4	8.F.B.4				
	8	K.GA.2	1.GA.2	2.GA.2	3.MD.D.8	4.MD.A.2	5.NBT.B.7	8.G.A.4	7.G.A.1	8.F.B.5				

### Maine Education Standards Alignment Spring Lessons Topics 1-8

ELA	1	RI.K.3	RI.1.3	RI.2.3	RI.3.1	RI.4.4	RI.5.4	L.6.4.C	L.7.6	W.8.2.D
					W.3.1	W.4.1	W.5.1			
<u>Maine</u>					L.3.4.B	L.4.4.B	L.5.4.B			
Learning Results	2	RI.K.1	RI.1.1	RI.2.1	RI.3.5	RI.4.7	RI.5.9	W.6.2.D	RI.7.3	W.8.2.A
<u>Incourto</u>					W.3.7	W.4.3	W.5.7		W.7.2.C	-
					L.3.4.C	L.4.4.B	L.5.4.B			
	3	SL.K.1	SL.1.1	SL.2.1	SL.3.1	SL.4.1	SL.5.1	SL.6.1	SL.7.1	SL.8.1
Common		SL.K.2	SL.1.2	SL.2.2	SL.3.2	SL.4.2	SL.5.2	SL.6.2	SL.7.2	SL.8.2
Standards		SL.K.3	SL.1.3	SL.2.3	SL.3.3	SL.4.3	SL.5.3	SL.6.3	SL.7.3	SL.8.3
<u>otanua do</u>	4	W.K.2	W.1.2	W.2.2	RI.3.3	RI.4.5	RI.5.5	W.6.1.B	SL.7.1.A	W.8.3.A
					W.3.10	W.4.10	W.5.10			
					L.3.1.D	L.4.5.C	L.5.1.C			
	5	RI.K.2	RI.1.2	RI.2.2	RI.3.5	RI.4.9	RI.5.9	RI.6.5	RI.7.5	RI.8.5
					W.3.3	W.4.3	W.5.3			
					L.3.4	L.4.4	L.5.4			
	6	SL.K.4	SL.1.4	SL.2.4	SL.3.4	SL.4.4	SL.5.4	SL.6.4	SL.7.4	SL.8.4
		SL.K.5	SL.1.5	SL.2.5	SL.3.5	SL.4.5	SL.5.5	SL.6.5	SL.7.5	SL.8.5
		SL.K.6	SL.1.6	SL.2.6	SL.3.6	SL.4.6	SL.5.6	SL.6.6	SL.7.6	SL.8.6
	7	W.K.2	W.1.2	W.2.2	RI.3.5	RI.4.9	RI.5.9	W.6.2.D	W.7.2.D	W.8.2.D
					W.3.7	W.4.7	W.5.1			
					L.3.6	L.4.5.C	L.5.4.C			
	8	L.K.6	L.1.6	L.2.6	RI.3.3	RI.4.9	RI.5.9	W.6.7	W.7.1.B	W.8.2.B
					W.3.7	W.4.10	W.5.7			
					L.3.4	L.4.3.A	L.5.4			

ELA

### Maine Education Standards Alignment Fall Lessons Topics 9-16

#### Kindergarten Ist Grade 2nd Grade 3rd Grade 4th Grade 5th Grade 6th Grade 7th Grade 8th Grade Topic Science 9 K-LS1-1 1-LS1-2 2-LS4-1 3-LS1-1 4-LS1-1 3-5-ETS1-1 MS-LS1-5 MS-LS1-5 MS-LS1-5 K-ESS2-2 2-LS2-2 1-ESS1-1 K-ESS3-3 2-LS2-2 3-LS4-4 5-LS2-1 MS-LS1-4 MS-ETS1-2 10 1-LS3-1 3-5-ETS1-1 MS-PS1-2 Maine K-ESS2-1 1-LS1-2 2-ESS1-1 Learning 11 Harvesting Vegetables Activities Results 12 Cooking and Nutrition Activities (K-8) 13 Service Learning Activity Next Summarizing Garden Experience (ELA Focus) 14Generation 15 Presentations and Sharing Science 2-ESS1-1 MS-ESS2-6 3-ESS2-2 4-ESS3-2 5-LS2-1 MS-ESS2-6 MS-ESS2-6 16 K-ESS2-1 1-ESS1-1 Standards K-ESS3-2 5-ESS3-1 1-ESS1-2 2-ESS2-3 3-ESS3-1 MS-ESS2-3 MS-ESS2-5 MS-ESS2-2 Social 9 Geography 2 Geography 2 Geography 2 Geography 2 Geography 1 Geography 2 Geography 2 Geography 1 Geography 1 **Studies** History 3 History 3 History 3 Civics & Geography Maine His-Maine Histo-10 Economics Economics ry/Economics Government tory Maine 1 Learning Harvesting Vegetables Activities 11 **Results S.S** Cooking and Nutrition Activities 12 13 Service Learning Activity Summarizing Garden Experience (ELA Focus) 14 15 Presentations and Sharing 16 Preparing the Garden for Winter

### Science

### Maine Education Standards Alignment Fall Lessons Topics 9-16

# Social Studies and Math

Math	9	K.CC.B.5 K.OA.A.2	1.NBT.A.1 1.OA.A.2	2.NBT.A.2 2.OA.A.1	3.MD.B.3	4.NF.A.2	5.NBT.A.3	6.NS.A.1	7.EE.B.4	8.EE.A.4				
<u>Maine</u>	10	K.CC.C.7 1.NBT.3 2.NBT.A.4 3.NBT.A.1 4.OA.B.4 5.OA.A.2 6.EE.A.2 7.RP.A.2 8.G.A.3												
Learning Recults	11	Harvesting Veg	Harvesting Vegetables Activities											
Kesuits	12	Cooking and N	Cooking and Nutrition Activities											
	13	Service Learning Activity												
<u>Common</u>	14	Summarizing Garden Experience (ELA Focus)												
<u>Core State</u> <u>Standards</u>	15	Presentations and	nd Sharing											
	16	Preparing the C	Garden for Win	ter										

### Maine Education Standards Alignment Fall Lessons Topics 9-16

# **ELA and Nutrition Standards**

ELA	9	RI.K.7	RI.1.7	RI.2.7	RL.3.3	RI.4.3	RI.5.7	L.6.5.B	L.7.6	L.8.5.B
					W.3.8	W.4.8	W.5.7			
<u>Maine</u>					L.3.4.C	L.4.4.B	L.5.4.B			
Learning Results	10	W.K.2	W.1.2	W.2.2	RI.3.5	RI.4.10	RI.5.4			
<u>Incourto</u>		W.K.8	W.1.8	W.2.8	W.3.1	W.4.10	W.5.10	W.6.9.B		W.8.2.D
<u>Common</u>					L.3.5.A	L.4.4.C	L5.5.B		L.7.6	
Core State	11	HE.K.1.1	HE.1.1.1	HE.2.1.1	HE.3.1.1	HE.4.1.1	HE.5.1.1	HE.6.1.1	HE.7.1.1	HE.8.1.1
<u>Standards</u>		HE.K.1.2	HE.1.1.2	HE.2.1.2	HE.3.1.2	HE.4.1.2	HE.5.1.2	HE.6.1.2	HE.7.1.2	HE.8.1.2
&		HE.K.1.4	HE.1.1.4	HE.2.1.4	HE.3.1.4	HE.4.1.4	HE.5.1.4	HE.6.1.4	HE.7.1.4	HE.8.1.4
α.	12	HE.K.3.1	HE.1.3.1	HE.2.3.1	HE.3.3.1	HE.4.3.1	HE.5.3.1	HE.6.3.1	HE.7.3.1	HE.8.3.1
Nutrition		HE.K.3.2	HE.1.3.2	HE.2.3.2	HE.3.3.2	HE.4.3.2	HE.5.3.2	HE.6.3.2	HE.7.3.2	HE.8.3.2
Standards	13	HE.K.5.1	HE.1.5.1	HE.2.5.1	HE.3.5.1	HE.4.5.1	HE.5.5.1	HE.6.5.1	HE.7.5.1	HE.8.5.1
		HE.K.5.2	HE.1.5.2	HE.2.5.2	HE.3.5.2	HE.4.5.2	HE.5.5.2	HE.6.5.2	HE.7.5.2	HE.8.5.2
<u>Maine</u>	14	HE.K.6.1	HE.1.6.1	HE.2.6.1	HE.3.6.1	HE.4.6.1	HE.5.6.1	HE.6.6.1	HE.7.6.1	HE.8.6.1
Learning Results		HE.K.6.2	HE.1.6.2	HE.2.6.2	HE.3.6.2	HE.4.6.2	HE.5.6.2	HE.6.6.2	HE.7.6.2	HE.8.6.2
(Nutrition		W.K.3	W.1.3	W.2.3	W.3.3	W.4.3	W.5.3	W.6.3	W.7.3	W.8.3
Standards)	15									
-		SL.K.5	SL.1.5	SL.2.5	SL.3.5	SL.4.5	SL.5.5	SL.6.5	SL.7.5	SL.8.5
		SL.K.6	SL.1.6	SL.2.6	SL.3.6	SL.4.6	SL.5.6	SL.6.6	SL.7.6	SL.8.6
	16	Preparing the	Garden For Wi	nter Activity (Se	ee Science Stand	lards)				

### Maine Education Standards Alignment Winter Lessons Topics 17-20

# **Science and Social Studies**

	Topic	Kindergarten	Ist Grade	2nd Grade	3rd Grade	4th Grade	5th Grade	6th Grade	7th Grade	8th Grade
Science	17	K-LS1-1	1-LS1-1	2-LS4-1	3-LS4-3	4-LS1-1	5-PS3-1	MS-LS2-1	MS-LS2-1	MS-LS2-1
	18	K-2-ETS1-1	K-2-ETS1-1	K-2-ETS1-1	3-5-ETS1-1	3-5-ETS1-1	3-5-ETS1-1	MS-ETS1-2	MS-ETS1-2	MS-ETS1-2
	19	K-2-ETS1-3	K-2-ETS1-3	K-2-ETS1-3	3-5-ETS1-2	3-5-ETS1-2	3-5-ETS1-2	MS-ETS1-3	MS-ETS1-3	MS-ETS1-3
<u>Maine</u> <u>Learning</u> <u>Results</u> (K-8)	20	K-ESS3-1	K-2-ETS1-2	2-LS4-1	3-LS4-3	3-5ETS1-1	3-5ETS1-1	MS-ETS1-1	MS-ETS1-1	MS-ETS1-1
<u>Next</u> <u>Generation</u> <u>Science</u> Standards										
Social	17	Geography 1	Geography 1	Geography 1	Geography 1	Geography 1	Geography 1	Geography 1	Geography 1	Geography 1
Studies	18	Economics	Economics	Economics	Economics	Economics	Economics	Economics	Economics	Economics
	19	Geography 2	Geography 2	Geography 2	Geography 2	Geography 2	Geography 2	Geography 2	Geography 2	Geography 2
<u>Maine</u> <u>Learning</u> <u>Results S.S.</u>	20	Geography 1	Geography 1	Geography 1	Geography 1	Geography 1	Geography 1	Geography 1	Geography 1	Geography 1
Math	17	K.CC.B4	1.NBT.B.3	2.NBT.A.4	3.NBT.A.3	4.NBT.B.5	5.NBT.B.5	6.RP.A.3	7.NS.A.3	8.NS.A.1
	18	K.CC.A.1	1.NBT.A.1	2.NBT.A.4	3.NBT.A.2	4.NBT.B.4	5.NBT.A.1	6.NS.B.3	7.NS.A.1	8.NS.A.1
<u>Maine</u>	19	K.CC.C.7	1.NBT.B.3	2.NBT.A.4	3.NBT.A.3	4.NBT.B.5	5.NBT.B.5	6.RP.A.1	7.NS.A.3	8.NS.A.1
<u>Learning</u> <u>Results</u>	20	K.CC.C.6	1.NBT.B.3	2.NBT.A.4	3.NBT.A.3	4.NBT.B.4	5.NBT.B.5	6.RP.A.3	7.RP.A.2b	8.NS.A.1
<u>Common</u> <u>Core</u> <u>Standards</u>										

### Maine Education Standards Alignment Winter Lessons Topics 17-20

# Math and ELA

ELA	17	SL.2.K	SL.2.1	SL.2.2	SL.2.3	SL.2.4	SL.2.5	SL.2.6-8	SL.2.6-8	SL.2.6-8
	18	R.4.K	R.4.1	R.4.2	R.4.3	R.4.4	R.4.5	R.4.6-8	R.4.6-8	R.4.6-8
<u>Maine</u>	19	R.5.K	R.5.1	R.5.2	R.5.3	R.5.4	R.5.5	R.5.6	R.5.7	R.5.8
<u>Learning</u> Results	20	SL.1.K	SL.1.1	SL.1.2	SL.1.3	SL.1.4	SL.1.5	SL.1.6-8	SL.1.6-8	SL.1.6-8
Results										
Common										
Core State										
<u>Standards</u>										



As educators, we know there is the ideal and the actual. Whether you are perusing this for how do I even start, for inspiration, ideas, or you have an established program and want aligned lessons to get your kids active in their learning and allow you to check boxes in the process (or a mixture of all). You should be proud of the work you are doing to get your students outside of the box, spark passion for their world (they are going to need it!), and create an adventure of learning that will be remembered for a lifetime. Here are some pathways to help support your mold as you venture with your students into outside classroom learning in the garden.

#### PATHWAY I

The Beginning:I have never or have little experience gardening.I am the only one (or there are a couple of us) who want to start a garden.

#### PATHWAY 2

•There are a few teachers in the school invested and we have a garden time across multiple grades AND/OR I want to start or have an afterschool program.

#### PATHWAY 3

•The school or program has invested teachers and staff, push in programming that aligns with what teachers are teaching in the classroom, and/or has a designated garden/ Farm to School coordinator.









### **PATHWAY #I THE BEGINNING**

## Ideas of how to start/resources

- ~ Start Local (link to Strategies doc)
- ~ Start small
- $\sim$  Plant extra and let kids take them home
- ~ milk boxes (well washed out) from the school meal program make great containers for planting

# Activities:

Start with Activities **3,6,11,12,13,14,15,16**. Adapt these activities as it fits to your time and resources. Don't be afraid to let your students know you are learning and growing with them through this gardening experiment.

# Words of Wisdom

Start small, dream big

There are never failures, just learning opportunities

Every year is different when gardening

# Things to think about/plan:

This book starts gardening in the spring for plants that take a long time to grow. If you do not want to commitment of taking care of plants

over the summer that it okay. Summertime is your time!

### **Option I:**

Plant in the spring use containers and have students and staff take them home. Be aware, they most likely won't come back!

### **Option 2:**

Start in the fall and use plants that have a shorter growing span. Lettuce, peas, radishes, cucumber are a few see Activity 3 for seed starting. Use Topic 4 as a resource, or skip it. You will still get a harvest and be able to taste test and celebrate.

### **Option 3:**

Plant herbs. They are perennials, which mean they will come back every year, and need very little care. Then host a pizza party: use the dough, sauce, and cheese recipes (Appendix D) to cook with your students and use the herbs you grew together!

# **P36 Pathway #I The Beginning cont'd**

As we noted in the <u>Comprehensive Integration</u>, the standards listed are just one example of how to connect the work you do around creating healthy living and nutrition choices with your students. The activities focus on teambuilding, building a community around experiential learning, while practicing speaking and listening standards.

If you need a little more connection, please see extension activities for **Topics 3** and **6**. The standards are not listed, but we felt the individual teacher could use their own "check box" for them.


# Pathway #I The Beginning cont'd

Activities 11 - 16 are set up a little differently. Since the fall time has a high focus on creating expectations, rigor, and rules as well as developing community, teambuilding and a sense of self. Please use the following suggestions for deeper connections:

Choose an additional Topic Lesson or use an extension activity listed at the bottom. Here is an example for an outline of a experiential learning cross curricular integrated lesson - all of these are based on real-life examples and problems which most standards reference:

- 5-10 minutes (Reading) Start with a book (Appendix B).
- 5 10 minutes (Writing) Have students journal their expectations, curiosities, and 5 senses at the beginning.
- 10- 15 minutes (Vocabulary) Look at a lesson for vocabulary terms, and choose 3 -5 words to introduce to your students to journal with later. Quizlet has different ways to print out vocabulary cards.
- 20 30 minutes may vary (Math): For quantitative reasoning, try counting seeds, seed sorting, and graphing. figure out what a heating

degree day is, use vectors. For algebraic operations, analyze patterns in a flower, go cloud watching, or make a mosaic with seeds. Record what is growing into a table and use x/y intercepts. Geometric systems are everywhere in nature. Have students sketch a scaled drawing of a plant, figure out the size of the container, raised bed, or garden plot you are planting with and how many seeds of one kind can fit. How would it change if they used a different type of seed? Use statistics vocabulary and concepts such as perimeter, area, volume, mean, median, and mode when planting seeds. Talk about the concept of time as each seed has a different time to maturity. Set up a seed sale, seedling sale, or mock one to reinforce concepts related to money.

P37

- Time for (Science) is integrated into Math. What you are doing is science! Be creative, and try to hit a standard you struggle to teach.
- 10 15 minutes (activity dependent) wrap up Ideas:
- See <u>Appendix C</u> for physical activities and cooperative games.
- OR

• End with an exit slip of your choice, a reflection journal, or a book.

#### OR

• You can also cook as an activity. See Appendix D for recipes.

#### OR

• Return to journaling for a reflection and integrate the vocabulary words introduced.

Anything you do and try with your students is a start - doing, revising, adding and subtracting to and from lessons is the art of being a teacher. Great job for taking the first step!



#### **PATHWAY #2 DEVELOPING**

First, read over <u>Pathway #I</u>. This pathway builds upon strategies and outlines laid out in that section.

### How to use this book:

If you are here, you most likely have an established time and routine with a group of students (and hopefully teachers) and you a ready to expand. Well done!

This book is meant to spiral up from year to year. Concepts grow on each other. If you are teaching students grade three or above, you may need to start with the lessons for K - 2 to create a conceptual foundation.

K - 2 lessons repeat the same concepts year after year. 3 - 8 lessons have an overarching lesson, then go into grade specifics. Focus on the overarching lesson at the top and enrichment activities at the bottom.

### Words of Wisdom

Use your community: Reach out to them, use their specialities, have them come into your outdoor space and show what they know to students.

Refer to the Standards Matrix to rationalize why and how you are teaching nutrition and gardening through the regular ed classes.

Note about Activities 11,12,13,14,15: Please look over the activities in advance or over the summer and follow the order as it makes sense to you. You should Harvest, Cook, and Eat (Celebrate) within a day or two of each other to maximize the nutritional quality of your garden harvest.

If you are feeling like there are too many steps, combine some of the activities. For example:

First, plan your Service Learning (Activity 13) and have students reflect on their learning (Activity 14) at the same time.

Harvest (11) and Cooking (12) can happen together, and depending on who you invited and what you are cooking can also be celebrated (15) all on the same day.



# Pathway #3 Emerging

### **PATHWAY #3 EMERGING**

Please read Pathway #1 and #2 as Pathway #3 builds upon the strategies mentioned in previously.

## How to use this book:

If you are here, you have an established program, have invested teachers and staff, maybe even a staff member hired for garden and nutrition, and you are looking to embed healthy living choices through nutrition and gardening into the daily or weekly curriculum.

This curriculum is meant to spiral upwards, you may have to have all grades start at the same point and move up together, introducing new

curriculum as teachers and students get comfortable with the vocabulary and activities.

It was the purpose of the authors to provide a multitude of material to reach a wider audience of teaching and learning styles. Don't feel you have to do everything as it is listed.

## Words of Wisdom:

Communication is they key. Talk with teachers and know what they want and are going to teach. Coordinate with them not only on topics but sharing outdoor space. One suggestion is to set up an outdoor space google doc with blocks of time that fit into the school day. Use this as a sign up sheet so you know when other classes are planning to be in shared outdoor spaces.

Collaborate younger and older grades. It gives the older students a chance to be a role model, and the younger students will be more engaged.

### **Note about Activities** 11,12,13,14,15:

Please look over the activities in advance or over the summer, and follow the order as it makes sense to you. You should Harvest, Cook, and Eat (Celebrate) within a day or two of each other to maximize the nutritional quality of your garden harvest.

Most likely your celebration will be a school-wide community event.

Collaborating on this will take some time, it is well worth it to see how

proud Kindergarten to eighth graders are about sharing the meal they

cooked with their families from the seeds they started.

Here are some tips for planning a big event: Communication is key! Find

out from the teachers how much they want to be involved. Here is an example of one whole-school Harvest Festival Event.

# Pathway #3 Emerging cont'd...

Plan a theme or have an idea of what you are going to cook in the spring, that way you can plant a lot of some of the ingredients. Example: Italian (lots of tomatoes for sauce), Stone Soup (whatever happens), Maine Made (also a general easy one). A simple favorite is kale chips and pumpkin cookies.

Have some "always" recipes. For example, always make bread (<u>King</u> <u>Arthur</u> will sponsor), three (or more) different vegetable soups (one all veggie broth, one with meat, one with cream,- this will cover most dietary restrictions you may come across when feeding a large number of people), and salad (Appendix D).

Think about dessert, planting pumpkins or planning a visit to an apple orchard are two easy ingredients to make many different desserts from.

Have classes or grades sign up for something to cook. Talk to the teachers, see if they want to find the recipe. Or have the Garden Coordinator, or the Middle School, use Appendix D). Here are some group tasks to consider:

- Desserts (this is usually mashing things like apple sauce, pumpkin pie filling).
- Soups where the vegetables that are cut are big pieces and everything can go into a crock pot at the same time.
- Salads.- Ripping up lettuce and cutting vegetables into smaller pieces.

- Multi Step Recipes Think easy meals that feed a lot of people. A food processor also helps and is something students can use safely. Some examples are lasagna (make your own noodles Appendix D), pizza, Mexican (make your own tortillas Appendix D), soup buffet, different types of different types of salads, and many more!
- Portion size this will vary from school to school and how active the community and parents play a role, as a rule of thumb, cut your school population in half, then think about how many families have multiple children and both parents. Then, cut the serving size of the recipe portions in half.

# Pathway #3 Emerging cont'd...

- Once you have your recipes and portions, combine recipes for a list of ingredients. Reach out to the community to fill in the gaps of needed supplies.
- Set up a cooking schedule. Figure out if teachers are going to cook during the set day at their own time, or if they want to rotate through a schedule. Rotating through a room with ingredients already set up and is cleaned for cooking might be easier than trying to sanitize a classroom(s).
- Have students make and send home invitations. Have them choose someone to invite and write in the invitation what they grew, harvested, and cooked.
- To get around many food guidelines, the celebration needs to be promoted as a Pot Luck Dinner. While you cannot charge admission, you can certainly ask for donations to support the school gardens. The Harvest Festival or Meal is a great place to fund raise. Think about a Farmers Table to sell produce you didn't use to cook, 50/50 raffles, garden herbs, student made tea, worm compost (or tea), are a few examples.

For the cooking portion, cook as much as you can in crock pots and sheet trays. Coordinate with the kitchen if you need to use the ovens, be kind, gentle, and make sure the kitchen sparkles when you leave it.

- Have students decorate the gym or setting for your dinner. Set up a presentation display of garden journals or their end reflection activities (make a video to play).
- Have students set up a buffet line and serve, talk to them about portion size and how to talk to people about what they want.
- Signage is important. Make sure the flow through the buffet line is clearly marked, and how to take care of trays and silverware is also obvious.
- Thank everyone for their support and watch your students be proud of their accomplishments!

## Lesson Topic 9: Classifying Vegetables Season: Fall Grade Span: K-2



## **Background Information:**

It is important to note that this is the first fall lesson, the first garden lesson of a new school year. This lesson is meant to review the content of the first spring lesson, the Six Basic Plant Parts, and it will be a review for returning students. However, for students who are new to the school and for all of the kindergarten students, this may be new content. Sorting, seriating, and classifying are important and very developmentally appropriate tasks for young children. However, young children must have a solid schema or basic understanding of the subject matter or the objects that they are classifying. As a result, a kindergarten teacher may want to reference Topic I from the spring lessons and consider some pre teaching.

## **Objectives:**

The purpose of this lesson is to review The Six Basic Plant Parts by thinking about the edible plant parts in the school garden.

- Students will decide which plant part is the edible plant part for each vegetable in the school garden.
- Students will complete a scavenger hunt activity with a partner to classify vegetables in the school garden.
- Students will think about and classify other vegetables they eat.

The Lesson Chart will have to be edited based on the

vegetables you decided to grow in your school garden during a particular season. This lesson could be adapted to be a Family Involvement Activity and families could be students' partners, while refreshments could be the classified vegetables (which could be labeled).

As the students are classifying their vegetables this would be a good time to remind them how important fresh fruits and vegetables are. Fruits and vegetables, which are full of vitamins, also give us antioxidants and fiber which help protect us from disease. The fresher the fruits and vegetables are the greater the nutritional benefit!

# Classifying Vegetables K-2 P44

## Materials:

- Clipboards
- Classifying Vegetables Scavenger Hunt handout (one per student)
- Pencils
- Chart Paper
- Markers

## **Procedure/Teaching and Learning Sequence:**

- I. Invite students to the meeting area.
- 2. Review the school garden contract created in the spring.
- 3. Allow young learners at least 10 minutes for unstructured exploration time in the garden, while giving reminders to use their senses to discover what has grown over the summer.
- **4.** Use exploration time to have new students sign the school garden contract.
- 5. Invite students to the meeting area using the established call, chant, or auditory signal.
- 6. Ask students to review The Six Basic Plant Parts.
- Tell students that for this lesson they will classify the vegetables in the school garden, and consider which types of vegetables we didn't grow (if any).



# **Classifying Vegetables K-2**

- 8. Read the first part of the Lesson Chart with students.
- 9. Read and discuss the directions for the Classifying Vegetables Scavenger Hunt (see <u>Appendix A</u>) and instruct students to find a partner, to complete the scavenger hunt within the school garden.
- 10. Gather students back to the meeting area after most have completed the scavenger hunt activity.
- 11. Discuss findings then reveal and read the second part of the Lesson Chart with students.
- 12. Instead of revealing a completed accurate list, if time allows you may choose to complete the second part of the Lesson chart with students and scribe their ideas for how they classified the plants they observed.
- 13. Use the book titled the Vegetables We Eat by Gail Gibbons (also suggested in the Extension Activities Section) to show illustrations of classified vegetables that you may not have in your school garden.
- 14. When students share, encourage them to use the following language. For example, "Celery is a stem vegetable because we eat the stem part of the plant." This language helps them state their claim and provide evidence.
- 15. Finally count and compare the classified vegetables that you grow in your school garden.

**Note** about grade level expectations: For kindergarten, the goal is for students to simply be able to name the edible plant part for each vegetable that grows in the school garden. For first grade, in addition to naming the edible plant part, students should begin to articulate the function of the edible plant parts. By second grade, all students should be able to name the edible plant part and articulate its function for all Six Basic Plant Parts.



## Lesson Chart:

(Consider this as a visual tool for all grades to use during the warm-up and individual lesson)

#### (Before Scavenger Hunt)

#### **Title: Classifying Vegetables**

The vegetables we grow and eat can be classified, or sorted into different groups. The groups describe the edible plant parts, or the part of the plant that we eat. Vegetables can be classified as:

- I. Seed Vegetables
- 2. Flower Vegetables
- 3. Fruit Vegetables
- 4. Stem Vegetables
- 5. Leaf Vegetables
- 6. Root Vegetables

#### (After Scavenger Hunt)

#### **Title: Classifying Vegetables**

Below is a classified list of vegetables from our school garden that we grow and eat, as well as the flowers and herbs we grow.

- I. Seed Vegetables:
  - Sugar Snap Peas and Green Beans



# Classifying Vegetables K-2 P47

#### 2. Fruit Vegetables:

- Tomatoes, Peppers, Squash, and Pumpkins

#### 3. Leaf Vegetables:

- Swiss Chard and Kale
- 4. Root Vegetables:
  - Carrots, Onions, and Potatoes
- 5. Flowers and Herbs:
  - Marigolds and Basil

We did not grow any flower or stem vegetables in our garden this year, but can you think of any flower or stem vegetables that you could grow and eat?

## **Discussion Questions:**

- 6. Why do we grow flowers in our vegetable garden?
- 7. What are herbs, such as basil used for?
- 8. Why are beans in the protein food group if they are seed vegetables?
- 9. Vegetables, such as tomatoes, peppers, and cucumbers are classified as fruit vegetables because we eat the fruit part of the plant. So are they fruits or vegetables? (The answer is fruit vegetables, but this can create a great opportunity for discussion. Encourage students to provide reasons and evidence to support their claim.)
- 10. What is a grain, and where do we find it in the food we eat?
- II. Do you think you could classify the vegetables in our garden in another way?

# Classifying Vegetables K-2 P48

## **Extension Activities:**

### **SCIENCE**

- Use your senses to describe what the classified vegetables look, smell, feel, and taste like and turn these descriptions into a guessing game. For example, This vegetable is a fruit vegetable that has a red, smooth, and delicate skin with a juicy inside. What vegetable is this? A tomato!
- Create a "Vegetable Rainbow" by color or cutting and pasting pictures of different colored vegetables onto a rainbow template.



• Create illustrations or 3D models of classified vegetables encouraging details and labels.

### ELA

- <u>Read The Vegetables We Eat</u> by Gail Gibbons (see <u>Appendix B</u>).
- Use a combination of drawing, dictating, labeling, and writing to create an opinion piece of writing that gives reasons for preferring a particular classification of vegetables. For example, provide reasons for why you think fruit vegetables are the best vegetables.
- Research more information about other food groups at <u>www.choosemyplate.gov</u> and write a report about food groups and/or nutrition in general.

# **Classifying Vegetables** K-2

### MATH

 Create a tally chart to display the classified information for the different vegetable types in your school garden. Then ask questions that encourage students to compare the data displayed. For example, How many more seed vegetables than flower vegetables are there in our school garden?

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- Have students distrate or write their own story problems related to the classifying vegetable data collected for this lesson.
- Create a survey for favorite types of vegetables to collect data, then create a graph to display the collected data.

### **SOCIAL STUDIES**

- Discuss how geography impacts the plants you can grow. Think about the fruits and vegetables you
  can grow in Maine and the fruits and vegetables that you get from other states (like tropical fruits,
  such as bananas, mangoes, avocados, etc).
- Discuss the meaning of sustainability as interacting with our environment in a way that considers our consumption of resources. This can be described as conserving or saving energy and resources. Collectively create a list of ideas for how growing your own food is a sustainable practice.
- Take a field trip to the grocery store or a farmer's market and walk through the produce department to practice classifying vegetables.

# Classifying Vegetables K-2

## **Enrichment:**

- **Dig deeper!** For this lesson, all vegetables with edible plant parts grown below the soil are considered root vegetables. Research and learn the difference between bulbs, tubers, and true root vegetables with taproots, such as carrots.
- Introduce a new way to classify plants in the garden using the terms perennial and annual. Then walk
  around the garden to see how many perennial plants you have growing. Finally, perhaps make a plan to
  grow more perennials next season.
- Compare and contract different characteristics of the vegetables you classified for this lesson. Create a Venn diagram or any other visual model to present similarities and differences between different groups of classified vegetables.
- Create a class book titled The Vegetable We Grow and Eat at School.

## Nutrition Corner:

The Six Basic Plant parts are reviewed in this lesson. Having samples of a **seed** (like beans), **root** (like carrots), **stem** (like celery), **leaf** (like kale), **fruit** (like tomato), and a flower (like broccoli) will provide examples of the six basic plant parts. Having these vegetables present will provide another opportunity to taste such vegetables.



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# Classifying Vegetables K-2 P51

## Accommodations:

- Provide movement breaks or energizers as necessary for busy bodies.
- Provide visual writing models or a word bank for students' to fill in the blanks of their Classifying Vegetables Scavenger Hunt.
- For younger students or students with specialized learning needs, a scribe may be necessary for a student to complete the writing portion of the scavenger hunt.
- Provide garden gloves for sensory exploration or any other garden tasks to support students' special sensory needs.

## Additional Resources:

- Check out these more detailed classifications for digging deeper.
  - https://www.britannica.com
  - https://www.vegetables.co
  - https://www.shiveshskitchen.com

# Standards Alignment K-2 P52



## Lesson Topic 9: Classifying Vegetables Season: Fall Grade Span: 3-5



## **Background Information:**

In grades K-2, students learned the six basic plant parts and their functions. Beginning these lessons with a warm-up activity that activates prior knowledge allows students to make greater connections and have stronger understandings. Using every opportunity to connect new knowledge to real-world experiences (edible parts of a plant) deepens learning and provides hands-on application of content.

It is important to note that this is the first fall lesson, the first garden lesson of a new school year. This lesson is meant to review the content of the first spring lesson, the Six Basic Plant Parts, and it will be a review for returning students. However, this might be new content

## **Objectives:**

The main focus for these lessons is to review and classify the six basic plant parts by thinking about the edible plant parts of the garden vegetables grown at school, home or in their community.

- Students will review the six basic plant parts and the function of each.
- Students will be able to complete a garden sort by classifying edible parts of the plant they recognize.

for many students and staff, so refer to Topic I from the spring lessons for additional background information.

As the students are classifying their vegetables this would be a good time to remind them how important fresh fruits and vegetables are. Fruits and vegetables, which are full of vitamins, also give us antioxidants and fiber which help protect us from disease. The fresher the fruits and vegetables are the greater the nutritional benefit!

(If the school garden space is small and doesn't contain a lot of variety, consider printing off images of different vegetables for students to classify on their "Garden Sort" worksheet.)

# Classifying Vegetables 3-5

## Materials:

- Student garden journals & writing/drawing materials
- Chart paper or white board and markers
- Plant Parts Sort (just use pages I-3 for the warm-up activity on the Lesson Chart)
- Garden Sort Worksheet (I copy per pair of students for the warm-up activity)
- Tape

## Lesson Chart:

(Consider this as a visual tool for all grades to use during the warm-up and individual lessons. Much of this is a review from the spring lesson 1, as this will be a new group of students. This warm-up is a great formative assessment tool for background knowledge.)

#### **Title: Plant Parts and Functions**

(Plant parts and functions will be taped on the chart during the warm-up activity.)



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# **Classifying Vegetables** 3-5

## Procedure/Teaching and Learning Sequence

- 1. As a class, review the behavior expectations for each part of the garden lesson (explore, listen, inquire, and debrief).
- 2. Allow 5-10 minutes of unstructured exploration time.
- 3. Invite students to the meeting area using the established call, chant, or auditory signal.
- 4. Activating Prior Knowledge:
  - Pass out the six plant part function cards to random students (these are found on pages 2 and 3 of the <u>Plant Parts Sort</u>).
     Assist with reading cards if students need additional support.
- 5. Go through each of the six plant parts (one at a time) with the class as students correctly match the function to each part. Tape these on the Lesson Chart as a reference for the grade specific lessons.
- 6. Have the students "Turn and Talk" after the following prompt:"Did you eat any plant parts today?"
- 7. Pass out a <u>Garden Sort Worksheet</u> to each pair of students and have them walk around the garden space and classify edible parts of plants they recognize. Using a colored pencil, have the pair add more edible plant parts that the school garden doesn't include.
- 8. Invite students to the meeting area using the established call, chant, or auditory signal.
- 9. Share and discuss results from the "Garden Sort".
- **10.** Break off into grade specific lessons.



**3rd Grade** 

## 3rd Grade

Focus: Edible vs. Inedible

### **Materials Needed**

- White board and markers (or plain chart paper near garden space)
- Watercress by Andrea Wong
   (<u>Video reading</u> if book isn't accessible)
- plant parts vocabulary words from lesson 1

### **Discussion Questions**

- Throughout history, how have people known what foods were safe to eat? What methods do you think they used to determine this?
- Are there any edible plant parts you know of that grow in the wild?
  - Make sure to point out that it is not safe to eat random plants found in the woods. Encourage students to talk to a foraging expert and/or knowledgeable adult. NEVER eat a plant without 100% accurate identification.

## **Vocabulary:**

Edible

Inedible

digital link vocabulary words and definitions

- Record the following words on a white board or chart paper:
  - inactive
  - inexpensive
  - invalid
  - incomplete
  - independent
  - invisible
- 2. Read the words to students.
- **3.** Ask students if they notice something about each of these words (*possible answer: prefix "in"*).
- **4.** Ask students if they know the meaning of any of the words.
- 5. Discuss meanings.
- 6. Add the word "inedible" to the list.
- Discuss the meaning of edible (fit or suitable to be eaten), and discuss what happens to the word with the prefix "in".
- 8. Ask discussion questions.
- 9. Read or Watch Watercress by Andrea Wong.

- 10. Hold a class discussion on how the main character's thoughts, feelings, and actions contributed to the sequence of events.
- II. Ask students if their families have any recipes/ traditions with edible plant parts from the wild (examples could include: crabapple jam, dandelion greens, elderberry juice, fiddleheads, acorn flour, etc.). Connect these discussions to the parts of the plant mentioned in the warm-up.
- 12. Tell students that some parts of our garden plants should not be eaten (leaves and flowers of nightshade plants including: tomatoes, potatoes, eggplants, and peppers; asparagus berries; rhubarb leaves). Refer back to discussion questions.
- 13. Movement Break: Students stand and the teacher announces a plant part as students touch the corresponding body part (roots = feet; stem = legs; leaves = arms; flowers = head; fruit = torso; seed = belly).
- 14. Have students journal at the end. A prompt could include a list poem for one plant part (students just come up with as many words as they can for that part).
- 15. Clean-up and share.

4th Grade

## 4th Grade

Focus: Plant Parts Menu

### **Materials Needed**

- Sample cookbooks (I per pair of students)
- Online research tools

### **Discussion Questions**

- I. How have our daily food choices changed over time?
- 2. How has the Earth's geographical features influenced these changes?

#### Lesson

- Have students visit <u>foodtimeline.org</u> and explore for a few minutes.
- Have students share any surprising foods and/or recipes.
- Present the discussion questions to students and have them continue to browse the site and share any thoughts with a peer.
- 4. Discuss as a class.
- Pass out a cookbook and an online research tool (iPad, computer, etc.) to each pair of students.

- Have them work together to create a "Plant Parts Menu" using all plant parts at least once. Their menu must include the following: Appetizer, Snack, Lunch, Snack, Dinner, Dessert.
- **7.** Students can share their menu informally or it can become a product for display (poster, etc.).
- In groups, have students compare and contrast these menus to the ones found on <u>foodtimeline.org</u>.
- **9.** Clean up and debrief.



5th Grade	Maaabulaww
Focus: Nutritional Benefits	vocabulary:
	Antioxidants
Materials Needed	Vitamins
• Index card (I per pair)	Minerals
• Research tool (iPad, computer, etc.)	Fiber
• Garden Sort Worksheet (I per student)	Protein
Printable School Menu (I copy per student)	Complex carbs
	digital link vocabulary words and definitions

### **Discussion Questions**

I. What nutritional benefits do the plants in our garden provide us?



- 1. Assign one vocabulary word to a pair of students. Have them research the meaning of the word and its application to our garden space. Have them list specific plants that are good sources of it.
- 2. Share and discuss.
- 3. As a class, create a "Top Ten" list of plants that give us the most nutritional benefits.
- 4. Discuss our garden space and connect it to this list. Is there anything else we should be growing?
- 5. Pass out a blank "Garden Sort" worksheet to each student in addition to a school menu.
- 6. Have students choose one week of school lunches and record examples of each plant under the correct plant part heading.
- 7. Turn and talk: "Were there any 'Top 10' items on your week's menu? Do you notice any examples from our vocabulary list that are minimally represented in a week of school lunch? How do you think a menu is chosen? What does a nutrition coordinator have to consider when creating the menu?
- **8.** Culminating Activity: Have students write a persuasive paragraph about one positive change that could impact the nutritional benefits from one week of school lunch.
- 9. Share and discuss.

# Classifying Vegetables 3-5 P61

### **Extension Activities:**

### LANGUAGE ARTS:

- Read any of the following books:
  - Watercress by Andrea Wang and illustrated by Jason Chin
  - A Day with Yayah by Nicola I. Campbell and illustrated by Julie Flett
  - We Wait For the Sun by Katie McCabe and illustrated by Raissa Figueroa
  - Finding Wild by Megan Wagner Lloyd and illustrated by Abigail Halpin
- Have students work with a partner to create interview questions for the school nutrition coordinator. Questions could connect to the financial and nutritional aspects of deciding on a school district's menu.

### **VOCABULARY:**

- Prefix lesson on "in" and connect it to "inedible."
- Prefix lesson on "anti" and connect it to "antioxidants."
- Create a word web from the Latin root "fructus" (examples could include: fruition, fruiting, fruitful, fruitarian, fruity, fruitless, etc.).
- Have students partner up. Teacher will name a plant part and students must go back and forth naming one word that comes to mind that connects to that particular plant part. The game ends when a student cannot think of another word on his/her turn.



# **Classifying Vegetables** 3-5

### MATH:

- **3rd Grade**: Keep a food journal for one day and complete a frequency table of how many plant parts were eaten. Have students write word problems for their peers to solve using the comparison phrases: "How many more/How many less?"
- 4th Grade: Keep a food journal for one day and complete a frequency table of how many plant parts were eaten. Have students convert each part to a fraction and create comparison expressions.
- **5th Grade**: Keep a food journal for one day and complete a frequency table of how many plant parts were eaten. Have students convert each part to a fraction and then a decimal and create comparison expressions.

### **SCIENCE:**

- Go on a nature walk to find/observe edible plants around the school yard. Discuss which ones are seen in the spring versus the fall. Examples could include: dandelion greens, trout lilies, fiddleheads, acorns (tannins need to be safely leached first), crab apples, rosehips, etc. Remind students that they should consult an expert before consuming anything found in the wild. Connect these findings to the plant part categories.
- 5th Grade: Have the students define a simple school garden design problem that reflects a need or want from the nutritional benefits activity. What are the constraints for materials, time, or cost?
   Does this design problem reflect our geographical location?

### **SOCIAL STUDIES:**

Research medicinal plants used throughout history (consider connecting it to the mentor text,
 *I Feel Better With A Frog In My Throat: History's Strangest Cures* by Carlyn Beccia).

# **Classifying Vegetables** 3-5

Classify the medicinal plants into the plant part categories from the warm-up.

• Choose a time period and visit <u>foodtimeline.org</u>. Research foods eaten during this time period in addition to ways different cultures stored, refrigerated, and/or prepared certain foods.

#### **STEAM:**

- Create a new plant that is made up of combined plant parts found in our garden space. The new
  plant can be constructed from play-dough, Legos, or any other drawing/building materials. Come
  up with a creative name for your new plant.
- Create plant superhero characters that teach other students about the nutritional benefits of a plant. Consider building your superhero from recycled materials that resemble the plant.

## **Enrichment:**

Deepen the learning by connecting this lesson to the <u>Universal Theme</u> of "Relationships". Have students brainstorm other examples of relationships and connect all of this to generalizations about the theme. They can work with partners to group these examples into categories and connect all of these to generalizations about the theme. Consider focusing on the relationship humans have had with the land over time.

## **Nutrition Corner:**

Students can continue to explore food samples from the basic parts of a plant. To connect to the possible mentor texts, consider making a basic stir-fried watercress recipe. As students learn about the history of some plants, consider exploring some recipes from the book **Cooking With Bear: A Story and Recipes From The Forest** by Deborah Hodge and illustrated by Lisa Cinar.

## **Additional Resources:**

- <u>Universal Themes</u>
- Plant Parts Sort
- Garden Sort Worksheet
- www.foodtimeline.org

## Accommodations:

- Provide movement breaks as necessary.
- Have word banks available for any of the garden sort activities.
- Provide a scribe when applicable for students with specialized learning needs.
- Provide appropriately leveled reading materials for independent research.



## Lesson Topic 9: Classifying Vegetables Season: Fall Grade Span: 6-8



## **Background Information:**

In grades K-5, students learned the six basic plant parts and their functions. Beginning this lesson with an activation of prior knowledge allows students to make greater connections and have stronger understandings. Using every opportunity to connect new knowledge to real-world experiences (edible parts of a plant) deepens learning and provides hands-on application of content.

If the school garden space is small and doesn't contain a lot of variety, consider printing off images of different vegetables for students to classify on their "Garden Sort" worksheet.

## **Objectives:**

The main focus for these lessons is to review and classify the six basic plant parts by thinking about the edible plant parts of the garden vegetables grown at school, home or in their community.

- Students will review the six basic plant parts and the function of each.
- Students will be able to complete a garden sort by classifying edible parts of the plant they recognize.

## Materials:

- Student garden journals & writing/drawing materials
- Chart paper or white board and markers
- Plant Parts Sort (just use pages I-3 for the warm-up activity on the Lesson Chart)
- Garden Sort Worksheet (I copy per pair of students for the warm-up activity)
- Tape

# **Classifying Vegetables** 6-8

## Lesson Chart (Review from 3 - 5 strand)

(Consider this as a visual tool for all grades to use during the warm-up and individual lessons)

#### **Title: Plant Parts and Function**

(Plant parts and functions will be taped on the chart during the warm-up activity)

## **Procedure/Teaching and Learning Sequence**

This is a review from lesson 1 from the spring. Since this is a new school year, you probably have a new group or individual students. This review allows you to see where your students are at and what they remember and what will need to be reviewed. If you students are comfortable with this learning sequence, please skip to grade level or use an extension activity.

- As a class, review the behavior expectations for each part of the garden lesson (explore, listen, inquire, and debrief).
- Ask the class what they planted last year in the garden (if anything) or what they remember about their gardening experience (skip this if your program is beginning).
- Allow 5-10 minutes of unstructured exploration time
- **4.** Invite students to the meeting area using the established call, chant, or auditory signal





- 5. Activating Prior Knowledge:
  - Pass out the six plant part function cards to random students (these are found on pages 2 and 3 of the Plant Parts Sort). Assist with reading cards if students need additional support.

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- 6. Go through each of the six plant parts (one at a time) with the class as students correctly match the function to each part. Tape these on the Lesson Chart as a reference for the grade specific lessons.
- 7. Have the students "Turn and Talk" after the following prompt: "Did you eat any plant parts today?"
- 8. Pass out a Garden Sort Worksheet to each pair of students and have them walk around the garden space and classify edible parts of plants they recognize. Using a colored pencil, have the pair add more edible plant parts that the school garden doesn't include.
- 9. Invite students to the meeting area using the established call, chant, or auditory signal
- 10. Share and discuss results from the "Garden Sort"
- II. Break off into grade specific lessons

# 6th Grade

## 6th grade

Focus: Make your own plant with the 6 parts

### Materials

- Plant sort (reference, as needed)
- Ipad or device to take pictures of plants and/OR paper and colored pencils

### **Discussion Questions**

- What are the differences between the plant parts?
- 2. What is the purpose of each part?
- 3. What type of plant is your favorite?
- **4.** Think about the different parts of plants, how would you put the different parts together?
- 5. If you put different parts of different plants together, what kind of plant do you think you will get?
- 6. Explain your thinking process

## Vocabulary

<u>plant parts vocabulary words</u> <u>from Lesson I</u>

#### Lesson

- Review as needed with the resources from Lesson 1 (spring).
  - Focus on the vocabulary using the quizlet link:
  - plant parts vocabulary words from lesson I (see Hula Hoop Vocabulary relay for an active vocabulary game see Appendix C)
- Review the protocol for outdoor classroom learning before going outside.
- Make sure individuals or groups have access to a way to record different parts of plants. Give them a time limit for exploration and recording their observations.
- Have students choose one of the six different parts of plants from their pictures or drawings to combine into a new plant.

## 7th & 8th Grade

Focus: Classification - Jeopardy

#### **Materials**

- Plant Families Vocabulary Words for game
- How to play Jeopardy
- Plant Family Jeopardy
- Ipads with internet connection
- Some sort of beeper or call in signal to know which team is first to answer the question (amazon sells light up push buttons for about \$10.00).
- Optional:
  - Save the answers to Discussion Question #6 for planning next year's beds.
  - 4 or more hoola hoops

### **Discussion Questions**

- I. What are the five different categories of vegetables?
- 2. State a vegetable category and give an example of a species in that category.
- 3. Why is it important to know the different categories of vegetables?
- 4. What was something that surprised you about the classification of vegetables? Journal about it.
- 5. Extension: What are the companion plants for each vegetable category?



# 8th Grade

- 6. What categories of plants do not belong together and will actually hinder the growth of the vegetables?
- 7. Why does your vegetable grow at your school? Would it grow in other parts of the world? Why or why not?
- **8.** Go outside and make a diagram of your garden area. How would you change the layout to enhance the vegetables growing now. What could be done different for next year?

#### Lesson

- 1. Practice the vocabulary words using quizlet. For a more active approach, have students participate in the vocabulary relay (game directions below).
- 2. Once students are comfortable with the classification of vegetables. Teach them how to play Jeopardy. Use the link provided if needed.
- 3. Split class up into three or more teams. Figure out how you will identify who signaled first they have the answer. I have used a student or other adult as a referee before. Figure out if you will be subtracting points for wrong answers or if another team can answer if a team answers wrong.
- 4. Play until all the answers have been used.
- 5. As a follow up or extension, have students research more into the classifications of vegetables and answer discussion questions four, five, six.
- 6. For deeper thinking and a strong math/science connection complete discussion question seven.

# **Classifying Vegetables** 6-8

### **Extension Activities:**

### LANGUAGE ARTS:

- Focus more on the journaling aspect of this lesson. Is it possible for journals from previous years to carry over? How are you going to set up the garden journal for this year? Every journal entry should have a date, time, weather and an opportunity to draw as well as write.
- Use this link for further ideas: <u>How To Start A</u> <u>Nature Journal | Sierra Club</u>

### **VOCABULARY:**

- Prefix lesson on "in" and connect it to "inedible"
- Prefix lesson on "anti" and connect it to "antioxidants"
- Create a word web from the Latin root "fructus" (examples could include: fruition, fruiting, fruitful, fruitarian, fruity, fruitless, etc.)
- Have students partner up. Teacher will name a plant part and students must go back and forth naming one word that comes to mind that connects to that

particular plant part. The game ends when a student cannot think of another word on his/her turn.



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# **Classifying Vegetables** 6-8

#### MATH:

• Compare and contrast world's largest producers for certain crops based on place value knowledge.

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- Use the USDA information for background knowledge:
- <u>Agricultural Production and Prices</u>

#### **SCIENCE:**

- Classification in science terms: <u>How to Classify Objects and Organisms | Science project</u>
  <u>| Education.com</u>
- What are some ways to classify plants? (color, shape, fruit, vegetable, poisonous, common, rare, etc).

#### **SOCIAL STUDIES:**

- History of the vegetable, where and why it grows well, where and why it doesn't? Have students choose a vegetable in the garden and research five facts about it. Group students into sets of five and have them make their own jeopardy game to share with the class:
- <u>https://jeopardylabs.com/</u>

#### **STEAM:**

Go into a deeper study with a mini science fair, suggestions - <u>Eighth Grade, Plant Biology</u>
 <u>Science Projects</u>

## **Enrichment:**

Start a classroom identification book. This could be a year long theme of getting outside, observing and recording what is on the school grounds and what they find during different seasons. This can be tied into the natural journals, or digitally made with google slides and pictures they take with their ipads.

## **Nutrition Corner:**

Carrot Top Pesto (appendix D)

### **Additional Resources:**

- <u>Universal Themes</u>
- Plant Parts Sort
- Garden Sort Worksheet
- www.foodtimeline.org
- https://apps.apple.com/us/app/plantsnap-identify-plants/id1451054346

## Accommodations:

- Provide movement breaks as necessary
- Have word banks available for any of the garden sort activities
- Provide appropriately leveled reading materials for independent research

