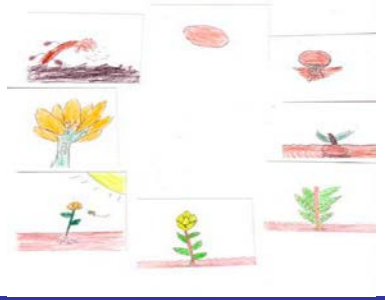
From Garden to Plate

A learning guide on gardening and nutrition for young children

The Annenberg Foundation



Ayesha Ercelawn
Eric Hernandez

ALL CHILDREN WILL FIND THEIR BRILLIANCE

TULE ELK PARK
CHILD DEVELOPMENT CENTER

CHRC
Community Health Resource Center
California Pacific Medical Center

Introduction

From Garden To Plate

Is it possible for an educational institution (a school) and the medical field to collaborate on a project to better the lives of children and families?! It is unusual for the educational field to seek collaboration with other fields of study and research. In education, we often find ourselves isolated and we tend to only "talk to ourselves".
At Tule Elk Park Child Development Center in San Francisco, we have broken this isolation and we have established, over the years, a longstanding tradition of collaboration and exchange with the larger community. We have reached out to landscape architects, engineers, and other professionals in support of our Environmental program which started by literally "breaking the asphalt" and turning this site into an outdoor laboratory for inner-city students.
This school-year, 2007 – 2008, we were excited to join efforts with the Community Health Resource Center (CHRC), and The Annenberg Foundation in order to better the lives of our children and families through our site-wide project ***"From Garden To Plate"***. Our shared global vision was healthy families living in a healthy environment.
The Community Health Resource Center (CHRC) and Tule Elk Park Child Development Center offered a unique partnership that blended the Resource Center's nutritional expertise with Tule Elk Park's innovative environmental approach to early childhood education. Together, we developed an integrated curriculum that educated the child experientially.
From Garden To Plate, for pre-kindergarten and lower elementary students, used a garden-based learning approach to address three key components: **Obesity Prevention, Ecological Awareness and Sustainable Living.** We addressed these three components together because personal nutrition, the environment, and our ecological stewardship are inextricably linked.

The Project's Mission: Develop and pilot test an early childhood, garden-based curriculum that aimed to help prevent childhood obesity and promote sustainable living through ecological awareness.

Maria Allis
Tule Elk Park Child Development Center
Site manager
Fall 2007 and Spring 2008

How to use this book

Are you starting a school garden? Teaching children about their body and how to make healthy food choices? This learning guide provides a collection of activities for teachers wanting to integrate their gardening activities with nutrition lessons, while also encouraging their student's interest in trying new foods. The guide was developed while working with preschool and Kindergarten through fourth grade children in our after-school program. It is divided into three sections –
"Grow Your Food- Lessons in the Garden"
"Your Body and Food- Lessons in the Class"
"Explore New Foods- Lessons in the Kitchen"

This format does not imply an order in which activities should be implemented – most lessons will complement each other, no matter what order they are taught in. And most importantly, the garden's plants will always have their own schedule that we teachers have to work around!

Each lesson is followed by a page on Extensions that include tasting ideas (Let's Eat!), art, math, or science activities and a list of relevant children's books. We hope you are inspired by this learning guide and you and your students find your own path through the garden…

Acknowledgements

The efforts of many went into making the ***From Garden to Plate*** pilot project possible. Without the philanthropic contributions of the Annenberg Foundation the much needed resources would not have been available. Ayesha Ercelawn's M.Sc. passion, knowledge and teaching skills were inspiring in the garden, kitchen and the classroom. Eric Hernandez's RD devotion to the children and their health was immeasurable. The parents, families and friends to Tule Elk Park CDC were a constant support for the project. A special thanks to all the Tule Elk Park CDC classrooms, special thanks to Rooms 6 and 8, Maria Allis M. Ed. the site manager at Tule Elk Park CDC , Tiffany Sutter M.Ed., Erin Tarica MSW and Scott Plymale LCSW from CHRC. Thanks to Eddy Jara MPH for his evaluative skills, Otto Schultz for his extraordinary grant writing abilities. Melanie Okamoto and Mia Villaneuva for generously sharing their resources, ideas and time throughout the year. Finally, many thanks to the amazing Jimmy Jenkins who volunteered his time and know-how to help create this learning guide for young children.

Table of Contents

1. Grow Your Food!

Lessons in the garden

... continued on following page ...

Table of Contents *(continued)*

2. Your Body and Food!

Lessons in the classroom

3. Explore New Foods!

Lessons at the table

1. Grow Your Food!

Lessons in the garden

Lesson 1 Planting Peas

Overall Objective To increase children's skills and confidence in gardening; to increase children's access to fresh fruits and vegetables.

Learning Objective To learn how to plant seeds and grow vegetables.

Grade Level Pre-K to K

Process

- ❑ Gather a small group of children (6-8) and show them a picture of peas. Initiate a discussion with questions such as "Who likes to eat peas?" "Who eats peas at home?"
- ❑ Explain to children that peas, like other vegetables, grow from seeds. Show them the pea seeds and let them listen to the sound they make as you shake them in their container. Let children examine the seeds and encourage a discussion of their color, surface texture, etc. For example, "Is your seed smooth or bumpy or wrinkled?"
- ❑ Ask children to return all seeds to your container.
- ❑ Take a planting pot and demonstrate how to plant a seed. Fill it with soil, make a hole that is ½ to 1 inches deep, put in one seed, and cover it.
- ❑ Ask children if the seed has grown yet. Explain that it first needs water to "wake up," and demonstrate watering the soil.
- ❑ Let all children plant and water their own seeds.

Materials Needed

- ❑ Soil
- ❑ Seeds from sugar snap peas or snow peas
- ❑ Clear container to exhibit seeds
- ❑ Cups in which to plant

- ✓ All cups should have holes in the bottom
- ✓ Label cups with children's names in advance if they are preschoolers

Lesson 1 Extensions

In the Classroom

Taking planted pea seeds into the classroom for a few weeks will allow close observation of seeds as they sprout and start to grow. This is also a good opportunity for experiments with the effects of light vs. dark, water vs. no water, etc. When seedlings are a few inches tall, they can be brought outside and transplanted into the garden.

Art

Using glue and heavy paper, children can make seed mosaics with a variety of seeds.

Botany

Dissect apples or other fruit and count the number of seeds inside.

Books

From Seed to Plant by Gail Gibbons
How a Seed Grows by Helene Jordan
I'm a Seed by Jean Marzollo
Ten Seeds by Ruth Brown

Educator's Notes

Have a snack of sunflower seeds or pumpkin seeds. Harvest your peas when they are ready and eat raw or steamed.

Jonas and Kevin — September

- carrot
- Swiss Chard
- broccoli
- lettuce
- Cabbage
- Spinach
- radish

Lesson 2 Using a Planting Chart to Investigate the Seasonality of Vegetables

Overall Objective To increase children's skills and confidence in gardening; to increase children's access to fresh fruits and vegetables; to increase children's knowledge of gardening's relationship to sustainable living.

Learning Objective To learn how to plant vegetable seeds according to the season.

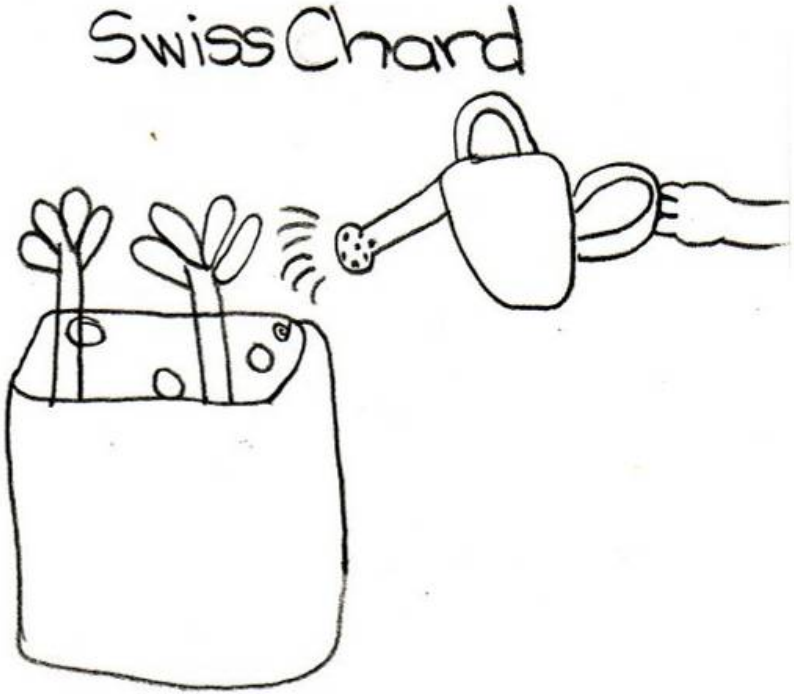
Grade Level 2 to 4

Process

- ❑ Explain to children that vegetable seeds need to be planted during the appropriate season. Encourage a discussion of differences among the seasons that might affect a plant's growth. Point out differences in day length as well.
- ❑ Organize children into partners. Pass out planting charts and explain how to read them.
- ❑ Each pair should work through the charts and circle all the vegetables that can be planted in the current month.
- ❑ Pass out blank pieces of paper and pencils.
- ❑ Ask children to write a list of the three vegetables that they would like to plant, making sure that they are appropriate to plant in the current month.
- ❑ Finish with a group discussion, encouraging each child to share which vegetables they are excited about growing!
- ❑ Have seeds ready for the next garden period so children can plant seeds of some of the vegetables they chose.

Materials Needed

- ❑ Photocopies of the planting chart from *Golden Gate Gardening* by Pam Peirce
- ❑ Pencils
- ❑ Paper


Swiss Chard

Lesson 2 Extensions

Art

Children can illustrate their planting list with drawings of their favorite vegetables.

Books

From Seed to Plant by Gail Gibbons

Scarlette Beane by Karen Wallace

Bear and Bunny Grow Tomatoes by Bruce Koscielniak

Educator's Notes

Lesson 3 Saving Broccoli Seeds

Overall Objective To learn children's skills and confidence in gardening; to increase children's access to fresh fruits and vegetables.

Learning Objective To learn about the plant life cycle.

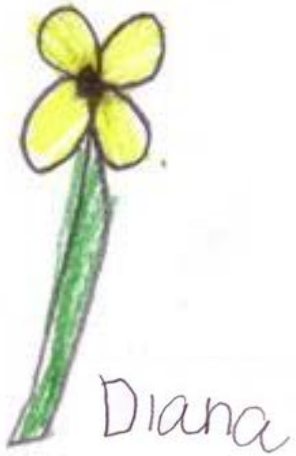
Grade Level K to 4

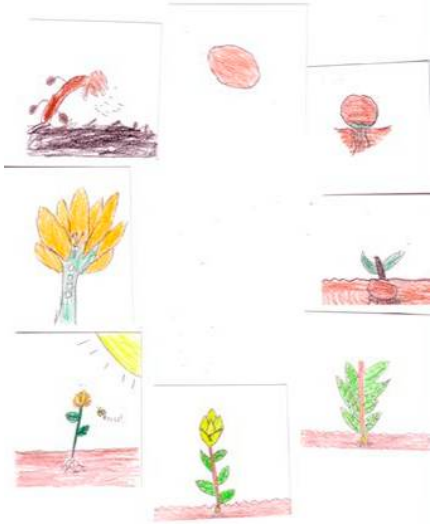
Process

- ❑ Leave one broccoli plant unharvested in the garden. The broccoli crown will open up into flowers, which will then turn into seed pods with seeds.
- ❑ Explain to children that the part of broccoli we eat is flower buds (unopened or "baby" flowers). These buds turn into flowers, and those flowers turn into seeds inside a seedpod. These seeds will again grow into broccoli and so complete the life cycle of a broccoli plant.
- ❑ Show children examples of ripe seed pods (brown and crackly) versus unripe (green) pods.
- ❑ Let children collect seeds out of ripened pods and put them in a container.
- ❑ Children can take seeds home or plant them in the garden if time permits.

Materials Needed

- ❑ One small container per child
- ❑ A broccoli plant that has become seeds


Diana



Lesson 3 Extensions

Art

Children can draw broccoli flowers or seed pods if you have them and include them in a broccoli life cycle drawing.

Books

From Seed to Plant by Gail Gibbons

Ten Seeds by Ruth Brown

The Carrot Seed by Ruth Krauss

The Tiny Seed by Eric Carle

Educator's Notes

Serve some broccoli, raw or steamed.
Sample some broccoli flowers,
which are also edible.

Lesson 4 Harvesting Greens in the Garden

Overall Objective Increase children's skills and confidence in food preparation; increase children's skills and confidence in gardening; increase children's access to fresh fruits and vegetables.

Learning Objective For children to learn when it is time to harvest vegetables, where food comes from and how to classify food by plant parts.

Grade Level Preschool and K to 4

Process

- ❑ Before starting, ask your group "Can you eat leaves?"
- ❑ Let children share their experiences. Younger children generally say "No". Explain that you can indeed eat some kinds of leaves and show them examples of leafy vegetables such as Swiss chard, bok choy, spinach, and lettuce.
- ❑ Explain that you will be harvesting these vegetables from the garden and that the children will help you prepare them.
- ❑ In the garden, the teacher should cut the vegetables and give at least one leaf to each child to hold. Older children can use scissors to harvest leaves themselves.
- ❑ Wash vegetables at a sink or in bowls full of water. Place in colander.
- ❑ Demonstrate how to use a knife safely to cut leaves into small pieces.
- ❑ Pass out cutting boards and knives to each child. Have empty bowls in center for them to place cut pieces into.
- ❑ Peel and cut garlic.
- ❑ Invite everyone to the stove and explain safety rules such as "hands behind backs."
- ❑ Cook your greens. Serve and eat!

Materials Needed

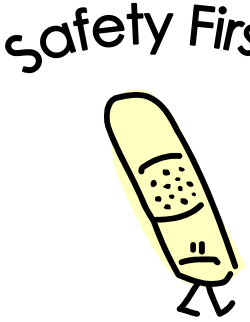
- ❑ Access to a sink or bowls full of water to wash vegetables
- ❑ Steak knives and cutting boards for each child
- ❑ A pot and a stove
- ❑ Leafy greens in the garden such as Swiss chard or bok choy

Lesson 4 Extensions

Books

Salad People and More Real Recipes
by Mollie Katzen

Educator's Notes



Remind children that while some leaves are for eating, others will make them sick. They should always check with an adult first.

Lesson 5 Drawing Leaves and Veins

Overall Objective To increase children's skills and confidence in gardening; to increase children's access to fresh fruits and vegetables.

Learning Objective To learn that leaves have veins, which transport water and food throughout the leaves. Different leaves have veins in different patterns. Increase in observation skills.

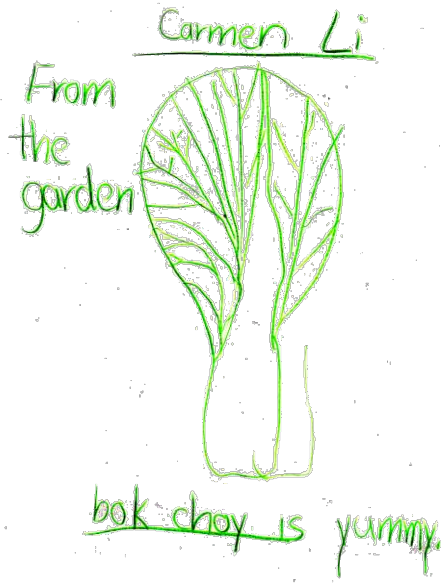
Grade Level K to 4

Process

- ❑ Start a discussion asking children if they themselves have veins and what these veins are for (transporting blood).
- ❑ Show everyone a large leaf, such as Swiss chard, and look at the veins on this leaf. Ask children what they think these veins do for the plant.
- ❑ Let each child harvest Swiss chard or bok choy leaves from the garden, being careful to cut each one from the base of the stem so that you have a complete leaf.
- ❑ Gather at a table and let children share their observations about the veins on their leaf. For example, the color of the veins, whether veins are curved or straight, whether they reach the tip of the leaf, whether there is a vein in the center of the leaf, whether veins are of an even thickness throughout the leaf, etc.
- ❑ Pass out paper and pencils and let children draw their leaf.
- ❑ Cook your leaves if time permits (see recipe in lesson 4) or save them in the refrigerator for later.

Materials Needed

- ❑ Paper and pencils
- ❑ Leafy greens from the garden or store-bought



Room 6, 2007

Evan, Room 6

Room 6, 2007

Lesson 5 Extensions

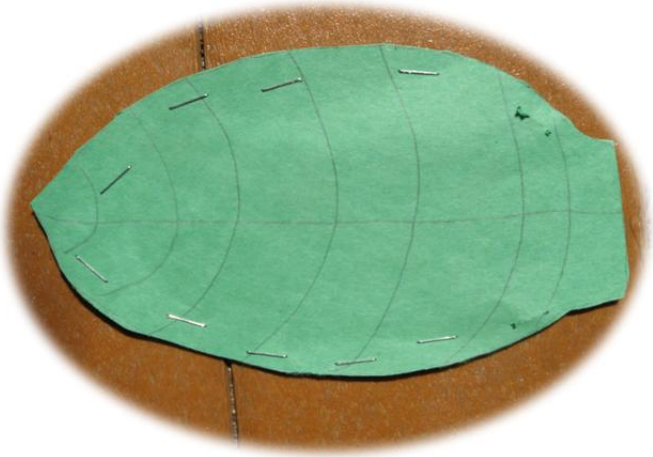
Art

Press and dry leaves for art projects.

Books

Plant by Eyewitness Books
I am a Leaf by Jean Marzollo
Leaf Man by Lois Ehlert
Leaves by David Ezra Stein

Educator's Notes



Lesson 6 A Game about Photosynthesis

Overall Objective To increase children's skills and confidence as gardeners.

Learning Objective To learn that leaves make food for the plant, in a process known as photosynthesis. To learn that leaves capture the sun's energy and use it to convert water and carbon dioxide into sugar/food for the plant.

Grade Level 2 to 4

Process

- ❑ Teacher prepares small strips of white paper with the word 'carbon dioxide' written on them and blue pieces of paper with the word 'water' written on them. There should be at least 3 of each per child. Hide these throughout the garden, in bushes, near watering cans, etc.
- ❑ Show children a large leaf from the garden and ask them what its job is, compared to roots, for example, which drink water.
- ❑ Explain that the leaf uses this water and mixes it with air (carbon dioxide) to make sugar, which is food for the plant. Sunlight is essential for this reaction to happen.
- ❑ Explain that they will play a game in which the children are leaves and have to collect water, carbon dioxide, and sunlight.
- ❑ Hand out green construction paper to each child and ask them to fold it in half. Explain that they will be tracing around their hand and making a leaf "mitten" for themselves. Encourage them to think about drawing in veins on their paper leaf. After drawing, each child cuts out the leaf shape and staples together the two halves of paper to make a mitten they can wear over their hand.

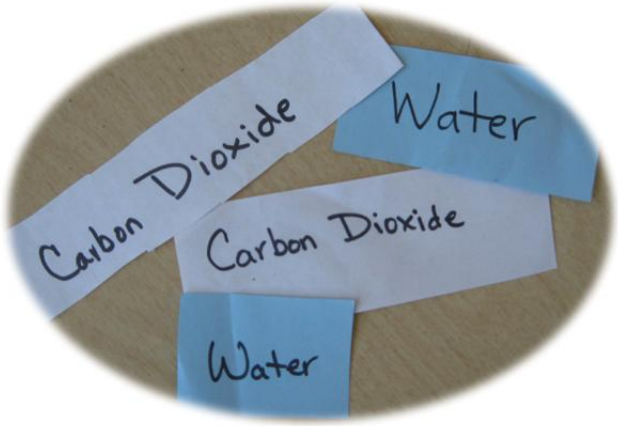
... Process continued on following page ...

Materials Needed

- ❑ Green, Blue and White construction paper
- ❑ Pencils
- ❑ 3-4 staplers

Process *(continued from previous page)*

- Remind children that as "leaves" they now need to make food for themselves and so they need to find water and carbon dioxide. Show them an example of your pre-prepared paper strips that represent water and carbon dioxide. Explain that these are hidden throughout the garden and the game is for them to find two of each. After finding these, children should face their leaf toward the sun for 10 seconds. After they finish photosynthesizing, their food reward will be given out by the teacher.
- The "sugary" treat is up to the teacher. A raisin works well.
- Each time a child finds a pair — water and carbon dioxide — they can receive a raisin.



Lesson 6 Extensions

Science

Leaves breathe in carbon dioxide but breathe out oxygen, which people need. Gather around a plant and take some deep breaths of this oxygen. Thank you, plants!

Art

Press and dry leaves to make leaf art.

Books

A Tree is a Plant by Clyde R. Bulla

Educator's Notes

Make a green salad or cook some leafy greens. Or gather mint leaves in the garden to make a tasty herbal tea.


Bzzzz!

Lesson 7 Learning about Corn and Wind Pollination

Overall Objective To increase children's skills and confidence in gardening.

Learning Objective To learn that corn has male and female flowers, that wind pollinates corn, and that the part we eat is the seeds.

Grade Level 1 to 4

Process

- ❑ Explain to group of children that corn has male and female flowers. Show a picture of the whole plant if possible. The female flowers will turn into seeds on a corn cob for us to eat, but this will only happen if pollen from the male flowers falls on the female silks. Wind is the necessary pollinator to blow the pollen.
- ❑ Demonstrate pollen blowing onto silks by shaking out some yellow chalk dust or corn meal onto a paper mock-up of a developing, green corn cob.
- ❑ Take children to the garden to find male and female flowers on the corn plants.
- ❑ Let children pretend to be the wind and blow pollen off the male flowers.
- ❑ Hand out paper, clipboards, and pencils, and ask children to tally how many of each kind of flower they can find.
- ❑ Water the corn.
- ❑ Harvest corn in a few more weeks!

Materials Needed

- ❑ Paper and pencils
- ❑ Clipboards
- ❑ Corn plants in the garden


Malia

Lesson 7 Extensions

Science

Look for unpollinated corn kernels when harvesting the corn.

Art

Bring out easels or clipboards for children to paint full-grown corn.

Books

The Popcorn Book by Tomie de Paola

The Reason for a Flower by Ruth Heller

Pick, Pull, Snap! Where Once a Flower Bloomed by Lola Schaefer

Educator's Notes

Have a snack of popcorn or other wind-pollinated foods such as rice or wheat products. Harvest corn from the garden when it is ready.

Lesson 8 Understanding Bee Pollination of Food Plants

Overall Objective To increase children's skills and confidence in gardening.

Learning Objective To learn that bees pollinate many of the fruits and vegetables that we eat.

Grade Level 1 to 4

Process

- ❑ Gather an even number of children (for example, 10).
- ❑ Show everyone a real flower or a picture/diagram/model of a flower and review all its parts.
- ❑ Explain that many flowers need pollen from another flower in order to form a fruit and seeds. Bees are often the pollen "movers" as they fly from flower to flower collecting nectar and pollen. This is called "pollination."
- ❑ Pollination can be thought of as a trade, in which flowers give bees nectar and pollen to eat and in return get pollinated by the bees.
- ❑ Children will recreate the actions of the bees. Let each child pick a paper with the word flower or bee on it, without looking. Five children will end up as flowers, five children as bees.
- ❑ Hand out 5 pipe cleaners to the 'flower' children, each pipe cleaner a different color. Each pipe cleaner gets 6 beads of the same color strung onto it. These beads represent pollen.

... Process continued on following page ...

Materials Needed

- ❑ A large flower such as a lily or a passion flower
- ❑ 5 pipe cleaners, each a different color
- ❑ 6 beads of each color to match pipe cleaner colors
- ❑ 5 pieces of paper labeled flower and 5 labeled bee
- ❑ 5 bee puppets

Process *(continued from previous page)*

- ❑ Ask children how they would know if they have been pollinated (they would receive beads/pollen of a different color on their pipe cleaner).
- ❑ Hand out bee puppets to the 'bee' children.
- ❑ Let 'bee' children start pollinating the 'flower children'. The flowers can give bees a sweet reward such as a raisin.
- ❑ Optional: Let 'bee' children wear compound eye glasses to demonstrate how insects see the world.

Lesson 8 Extensions

Science

Have children closely observe and draw a flower illustrating all its parts.

Books

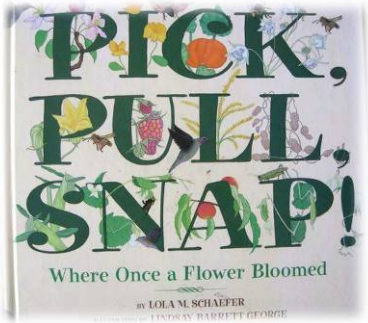
Pick, Pull, Snap! Where Once a Flower Bloomed by Lola Schaefer

The Magic School Bus Plants Seeds by Joanna Cole

The Magic School Bus Inside a Beehive by Joanna Cole

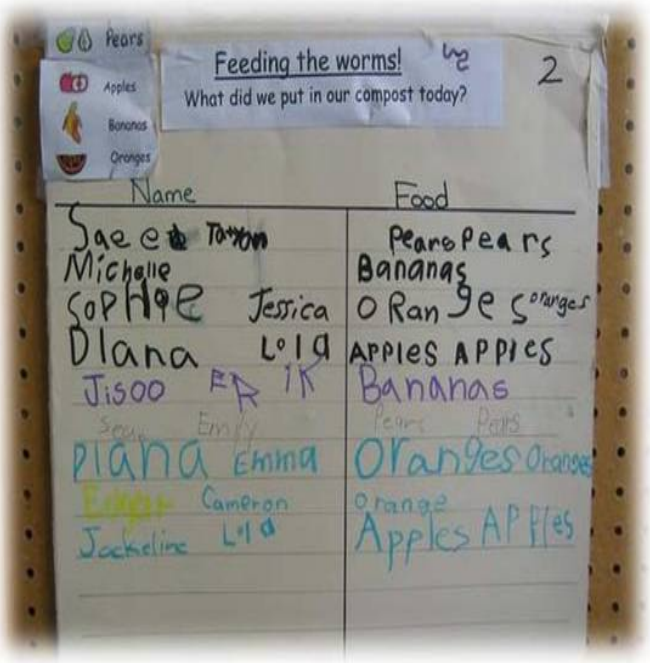
The Honeymakers by Gail Gibbons

The Bumblebee Queen by April Sayre



Educator's Notes

Have a 'bee party' —
a tasting of bee-pollinated fruits such as raspberries, apples, pears, blackberries, and plums. Sample some honey too!


Pears
Apples
Bananas
Oranges
Feeding the worms!
What did we put in our compost today?
2
Name
Food
Michelle
Bananas
Jessica
Apples Apples
Jisoo
Bananas
Emily
Pears Pears
Emma
Oranges Oranges
Cameron
Orange
Jackeline
Apples Apples

Lesson 9 Introduction to Composting

Overall Objective To increase children's skills and confidence in gardening; to increase children's knowledge of gardening's relationship to sustainable living.

Learning Objective To learn that fruits and vegetables can be turned into soil by worms and other compost critters. To learn that composting is part of the nutrient cycle.

Grade Level K to 2

Process

- ❑ Gather children at group time.
- ❑ Show them mock-up of a compost bin.
- ❑ Start a puppet show with a worm puppet popping out of the compost bin and declaring that it is hungry. What is it going to eat?
- ❑ Pretend to feed it a banana peel and drop peel into fake compost bin.
- ❑ Explain to children that worms will eat all their fruit and vegetable leftovers and turn them into dirt.
- ❑ Give children a chance to take turns selecting one plastic fruit or vegetable from the toy bin, identify it by name for everybody else, and drop it in the compost bin before sitting back down.
- ❑ Explain that there is a compost bin with worms in the garden and that the children will be feeding these worms with leftover fruits or vegetables.
- ❑ If time permits, go out to the garden to see the compost bin and some worms.

Materials Needed

- ❑ Mock-up of a compost bin
- ❑ Plastic fruits and vegetables from the classroom dramatic play area
- ❑ A worm puppet

Jessica, Age 7

Lesson 9 Extensions

Next Steps

Let children take turns delivering snack leftovers (fruits and vegetables only) to the garden compost bin every day.

Math

Create a chart for children to fill in each day about what they fed the worms.

Books

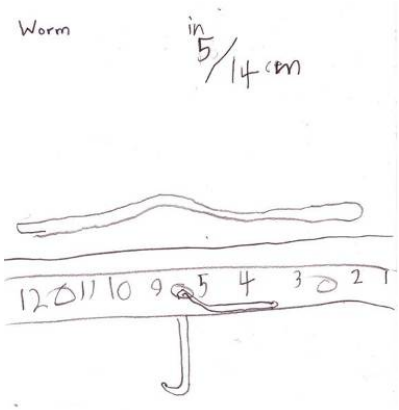
Compost! By Linda Glaser

Do the Rot Thing — A Teacher's Guide to Compost Activities by Alameda County Waste Management Authority

The Wonderful World of Wigglers by Julia Hand

Worms, Worms, and Even More Worms by the California EPA

Educator's Notes


Worm
in
5
14 cm
12 11 10 9 8 7 6 5 4 3 2 1

Lesson 10 Hunting for Worms and Other Creatures in the Compost Bin

Overall Objective To increase children's knowledge of gardening's relationship to sustainable living.

Learning Objective To learn about decomposers, to discover what lives in the compost bin and to develop increased comfort levels with handling bugs and worms.

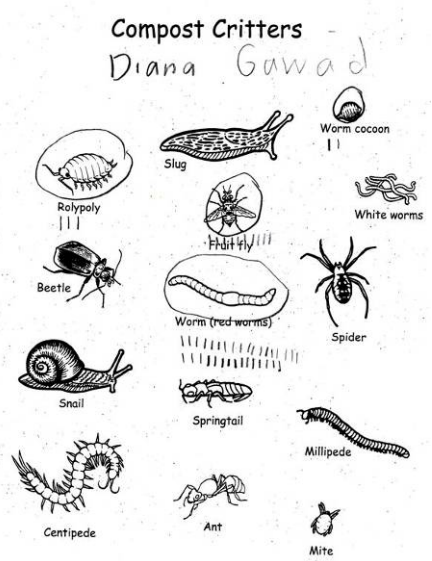
Grade Level K to 4

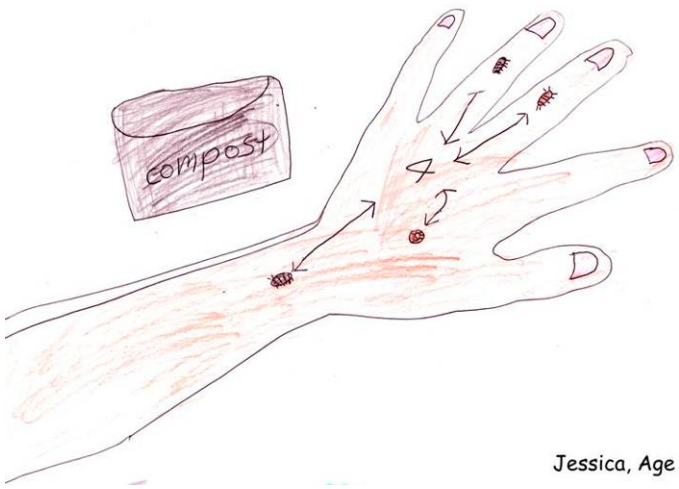
Process

- ❑ Gather around the compost bin and encourage children to share what fruit and vegetable leftovers they remember taking to the compost bin. Observe what these look like now after they have rotted a bit.
- ❑ Explain that their job is to look for worms and investigate what other creatures live in the compost bin.
- ❑ Hand out trowels and let children start searching for worms and bugs in the compost bin.
- ❑ Model holding a worm in your hand and discovering how it feels.
- ❑ After 5-10 minutes, hand-out compost critter worksheets and ask children to circle or tally (as appropriate to their age) what they find.
- ❑ Wrap up by putting every creature back in its home, the compost bin and explaining that the cover must be put back on so they can live in their preferred dark place.

Materials Needed

- ❑ Trowels
- ❑ Compost worksheets
- ❑ Pencils
- ❑ Clipboards





Jessica, Age 7

Lesson 10 Extensions

Art

Children can draw pictures of the worms they find.

Other children may be interested in creating a book about worms.

Books

Tunneling Earthworms by Dell'Oro, S.

Wormology by M.E. Ross

Wonderful Worms by Linda Glaser

Diary of a Worm by Doreen Cronin

Earthworm by Soutter-Perrot

Life Cycle of an Earthworm by Bobbie Kalman

Under the Ground by Scholastic 1st Discovery

Under the Ground by Anna Milbourne

Educator's Notes


What is happening to the pumpkins?


What is happening to the pumpkins?

Lesson 11 Observing a Pumpkin Decompose

Overall Objective To increase children's knowledge of gardening's relationship to sustainable living.

Learning Objective To demonstrate decomposition and nutrient cycling.

Grade Level All grades

Process

- ❑ After Halloween is over, let children bring pumpkins from home to the garden and place them on the ground, somewhere out of the way.
- ❑ Discuss what is going to happen to the pumpkins over time, and record children's predictions.
- ❑ Observe pumpkins over several months as they mold and slowly decompose.
- ❑ Record children's comments or let older children write their own 'reports.'
- ❑ Invite children to draw the pumpkins once a week to record changes.
- ❑ Visit the garden after pumpkins have completely rotted away to discuss what happened to the pumpkins and what happens to other fruits and vegetables over time.
- ❑ You may notice pumpkin seedling starting to sprout, and so completing the cycle!

Materials Needed

- ❑ Post-Halloween pumpkins


Pumpkin
½ cup butter
honey


Baked Pumpkin
1 Pumpkin
½ cup butter
¼ cup honey
1 teaspoon cinnamon
½ teaspoon salt
½ teaspoon mace

Lesson 11 Extensions

Math

Bring in a scale to weigh pumpkins before and after carving them. Let children also weigh themselves and compare the weights.

Art

Provide children with paints in just the primary colors of yellow and red, with a bit of black and white so they can mix their own orange and try to match the shade of the pumpkins.

Books

Pumpkin Circle by George Levenson

Delicious: A Pumpkin Soup Story by Helen Cooper

Educator's Notes

Save pumpkin seeds from your classroom pumpkin and roast them for a tasty snack! Or bake a pumpkin and mash pumpkin for pumpkin pancakes!

Lesson 12 Using Compost in Garden Beds

Overall Objective To increase children's skills and confidence in gardening; to increase children's access to fresh fruits and vegetables; to increase children's knowledge of gardening's relationship to sustainable living.

Learning Objective To learn that composting is part of the nutrient cycle in the garden. Through composting, food waste gets turned into valuable fertilizer. Compost has nutrients that help fruits and vegetables grow.

Grade Level 1 to 4

Process

- ❑ Have two bowls prepared - One with orange peels or other undecomposed material from the compost bin, the second with finished compost. Hide second bowl under the first. Let children volunteer what they remember about which decomposers eat the materials in the first bowl (worms, bacteria, etc). Pull out second bowl to review the fact that all these rotting fruits and vegetables will decompose into dirt.
- ❑ Explain that this dirt is called "finished compost" and helps plants grow. Just like children need to eat vegetables to be healthy, plants need compost near their roots to be healthy.
- ❑ Distribute trowels and buckets and demonstrate how to add a trowel full of compost around each plant's roots or to a new vegetable bed.
- ❑ If compost still has large undecomposed bits in it, such as sticks, pass out sifters.

... Process continued on following page ...

Materials Needed

- ❑ Trowels
- ❑ Finished compost (dark brown, looks like soil)
- ❑ Sifting tools, such as sand toy sifters or plastic colanders

Process *(continued from previous page)*

- ❑ Demonstrate how to sift compost so that only the fine particles are collected underneath. Large pieces get thrown back into the compost bin to finish decomposing.
- ❑ If time permits, encourage children to put compost around the roots of their favorite plant in the garden.
- ❑ Water the vegetables.

Date:

Garden Experiment

Comparisons	NO Compost	WITH Compost and Chicken Manure
Heght	12 inches	20 inches
Diameter	10 inches	17 inches
Stem Diameter	2 inches	2 inches
Soil Temp	61°F	61°F
Number of weeds	Fewer	greater
Speed of growth	Slower	Quiker
Soil Quality	badder	better
Amout of holes	More	lease
Capitter eggs	More	leass

Lesson 12 Extensions

Science

Set up an experiment in which only one of two vegetable beds receives compost. Record the differences between plant growth in each bed over several months.

Books

The Cabbage Soup Solution by Erika Oller

Scarlette Beane by Karen Wallace,

The Giant Carrot by Jan Peck

Educator's Notes

2. Your Body and Food

Lessons in the classroom

Lesson 13 We Eat Food, but Where Does the Food Go?

Overall Objective To increase children's access to (and interest in) fresh fruits and vegetables.

Learning Objective To show path traveled by food (fruits and vegetables) inside our bodies.

Grade Level Preschool to K

Process

- ❑ Ask children, “When we eat, where does food go?" (can pretend to eat a vegetable). "Yes, it goes inside your body!" (pretend to eat a vegetable and show food going down the throat and to the stomach using a clear plastic tube attached to an empty clear bottle).
- ❑ Ask, “What is the first thing we do when we eat? That's right we chew, chew, chew…”(pretend to chew a vegetable)... "Can you show me chew, chew, chew?" (Children can pretend to chew).
- ❑ Say, "Then food goes down to the stomach and the stomach goes mush, mush, mush (rub your own stomach)... Can you rub your stomach and say mush, mush, mush?"
- ❑ Ask, "Where does the food go after the stomach?” (Let children give their answers then, bring out the poster of the digestive system. Take a piece fruit or vegetable and use it to trace on the poster where the food goes. Show the food "enter" the mouth, travel down the throat or esophagus, reach the stomach, and then going into the long tubes in our body called intestines.)

... Process continued on following page ...

Materials Needed

- ❑ 3 digestive system posters
- ❑ Clear vinyl tubes to represent throat (esophagus)
- ❑ Clear plastic bottle to represent stomach
- ❑ Some real fruits and/or vegetables, preferably something grown in the school garden

Process *(continued from previous page)*

- "The food mush leaves the stomach and goes inside long tubes in your body called "intestines." "Can you say intestines?" (Invite children to say this word).
- "Let's start again and see where the food goes !" (Again take a piece fruit or vegetable and use it to trace on the poster where the food goes). "Are you ready to try it yourself?"
- Break up into 3 groups, or 3 stations for each child to practice tracing where food goes with their finger or with a piece of fruit or vegetable, and saying what part of the body they are in. For example, "mouth, throat, stomach, intestines".

Lesson 13 Extensions

Adapt for Kindergarten

After the fifth step (where the children pronounce "intestines") ask, "Do you want to see how long the intestine tubes are inside your body?" and "How long are they?

Stretch 18 feet of clear vinyl tubing. The presenter can hold one end and the teacher or a parent can hold the other end. Ask children to comment on the length of the tubes (intestines).

Next Steps

Taste food from the garden, or other foods to feel the food inside our bodies.

Also, put up the digestion poster on a wall for children to practice tracing where food goes during play time.

Educator's Notes


candy
cookise
Sometimes

Lesson 14 What Food Makes Us Grow? "Everyday" versus "Sometimes" Foods

Overall Objective To increase children's access to (and interest in) fresh fruits and vegetables.

Learning Objective To show that fruits, vegetables and healthy foods make us grow, and that junk food and sugary foods do not make us grow.

Grade Level Preschool to K

Process

- ❑ Ask children, " Do you remember where does food go when we eat fruits and vegetables?" "Yes, it goes inside your body!" (pretend to eat a vegetable and show food going down the throat and to the stomach using a clear plastic tube attached to an empty clear plastic bottle)
- ❑ Ask children, "what do vegetables do for our body?
  - ❑ "Yes, they make us strong! Can you show me strong?" Invite children to make a muscle.
  - ❑ "Yes, they make us grow! Look what happens when I eat a vegetable." Presenter pretends to be very small, crouches down to the floor and pretends to eat a vegetable and rises up with arms raised, saying... "I eat it and then I grow!"

... Process continued on following page ...

Materials Needed

- ❑ Clear vinyl tube to represent throat (esophagus)
- ❑ Clear bottle to represent stomach
- ❑ Some real fruits and/or vegetables, preferably something grown in the school garden
- ❑ Candy
- ❑ Soda can

Process *(continued from previous page)*

- Say, "Now it is your turn. Pretend you have a fruit or vegetable in your hand. What is it? A carrot, broccoli, peas?"
  - "Now make yourself very small." (Presenter also does this).
  - Pretend we are eating a fruit or vegetable "and then we grow!" (Everyone stands up from the crouched position raising their hands up).
  - Repeat this "growing" activity with other imaginary "everyday foods," that we can eat everyday because they make us grow...give examples of other fruits and vegetables.
  - Remind class...you see, fruit and vegetables make you grow.
- Ask, "How about candy?" Show a candy and repeat with soda. Ask, "Does it make you grow?"
  - Say, "Let's look what happens when I eat a candy (or drink a soda)." Presenter pretends to be very small, crouch down to the floor, and then pretends to eat candy. Presenter gets stuck and can't grow. Pretend to struggle to grow, saying "I'm not growing."
  - Invite children to do the same. Say, "Let's pretend to eat candy and say, "We're not growing!"
- Conclusion: Ask, "Should we eat sugary food every day or just sometimes?"
  - Say, "We eat sugary foods only sometimes. When do we eat sugary foods? Yes, for birthday parties, holidays, or special trips. What happens if we eat sugar everyday? We don't grow! And if we eat fruits and vegetables everyday, what happens? We grow!"

Lesson 14 Extensions

Adapt for Kindergarten

Explore other foods that make us grow, such as milk, cheese, bread, pasta, chicken, meat, beans, tofu, peanut butter, etc.

Bring samples for children to see and taste.

Next Steps

Children can draw "everyday" healthy foods that make us grow, and/or can plan with food models of these same foods.

Conduct a taste test for children to try different fruits and vegetables.

Educator's Notes

Lesson 15 We Eat Food, but Where Does it Go?

Overall Objective To increase children's access to (and interest in) fresh fruits and vegetables.

Learning Objective To show path traveled by food (fruits and vegetables) inside our bodies. To show that healthy foods make us grow and be strong, and that sugary foods do not make us grow or be strong.

Grade Level 1 to 4

Process

- ❑ Ask children, “When we eat, where does food go?" Pretend to eat a vegetable. Say, "Yes, it goes inside your body!" Pretend to eat a vegetable and show food going in the throat - called the esophagus - and to the stomach using a clear plastic tube attached to an empty clear bottle.
- ❑ Say, "First we chew the food to break it into smaller pieces" Crack open a shelled-almond using a nutcracker to expose the almond inside. Then further break the almond.
- ❑ Say, "Then food (almond pieces or a food from the garden) goes down to the stomach and the stomach mashes it up more until it becomes smooth mush"
- ❑ Ask, "Where does the food go after the stomach?” Let children give their answers then bring out the poster of the digestive system. Take a piece of food and use it to trace on the poster where the food goes. Show the food enter the mouth, travel down the esophagus, reach the stomach, and then go into the long tubes in our body called intestines.
- ❑ "The food mush leaves the stomach and goes inside long tubes in your body called "intestines." "Can you say intestines?" (invite children to say this word)
- ❑ Ask, "Do you want to see how long the intestine tubes are inside your body?" Stretch 18 foot clear vinyl tubing. The presenter can hold one end and the teacher or a parent can hold the other end.
- ❑ Say, "The intestines are like a sponge. The intestines soak up most of the food mush for your body to use the food. What does the body use the food for?" Food is used to grow and become strong.

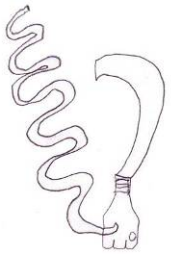
... Process continued on following page ...

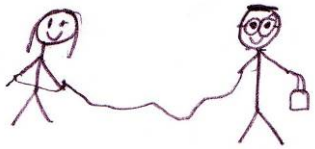
Materials Needed

- ❑ 1 digestive system poster
- ❑ Clear vinyl tubes to represent throat (esophagus)
- ❑ Clear plastic bottle to represent stomach
- ❑ 18 feet of clear vinyl tubing
- ❑ Hand held nutcracker
- ❑ A few almonds with the shells on
- ❑ Real fruits and/or vegetables, preferably something grown in the school garden
- ❑ Soda can
- ❑ Candy
- ❑ Sugar
- ❑ Teaspoon
- ❑ Small funnel

Process *(continued from previous page)*

- Ask, "Does all food make us grow and become strong?" Invite children to discuss different foods. "What about candy? What about soda?"
- Ask, "What's in candy and soda that does not make us grow? That's right! Sugar!" Show a clear container full of sugar.
- Ask, "How many teaspoons of sugar are in this candy?" Show a candy.
- *Note to presenter*: 1 teaspoon holds 4 grams of sugar. See food label for grams of sugar and divide by 4 to get the number of teaspoons of sugar in that candy.
- Pour the sugar into the clear vinyl tubing attached to a clear bottle so that the bottle captures the sugar.
- Next show a 12 oz. can of soda and again ask, "How many teaspoons of sugar in this can of soda?" (A can of soda contains about 10 teaspoons of sugar). Before saying the answer count out loud as you pour each teaspoon into the clear plastic bottle. Ask children to join along in counting: "1, 2, 3..." Ask them to tell you to stop when you have put the amount of sugar that's in the soda. You may need a funnel to not spill sugar when pouring each teaspoon of sugar into tube.
- Show children all the sugar that was collected into the "stomach".
- Conclusion: Ask, "Should we eat sugary food everyday or just sometimes? We eat sugary foods only sometimes. When do we eat sugary foods? Yes, for birthday parties, holidays, or special trips. What happens if we eat sugar everyday? We don't grow, we don't become strong! And if we eat fruits, vegetables, and other healthy foods everyday, what happens?"





Lesson 15 Extensions

Adapt for Kindergarten

After the fifth step (where the children pronounce "intestines) ask, "Do you want to see how long the intestine tubes are inside your body?" and "How long are they?" Stretch 18 feet of clear vinyl tubing. The presenter can hold one end and the teacher or a parent can hold the other end. Ask children to comment on the length of the tubes or "intestines."

Next Steps

Taste food from the garden or other foods to feel the food inside our body.

Post the digestion poster on a wall to remind children where food goes.

Educator's Notes

Lesson 16 Absorption of Food into the Blood

Overall Objective To increase children's access to (and interest in) fresh fruits and vegetables.

Learning Objective To learn that food eaten ultimately ends up in the blood to be delivered to every part of the body. Demonstrate how food is digested and absorbed in the intestine. A small amount of food is not absorbed into the blood and becomes "poo."

Grade Level 1 to 4

Process

- ❑ Briefly review lesson #15 by asking, "Do you remember when we eat food, where does the food go?" Use the digestion poster to remind students that food reaches the intestines, where it is absorbed into the blood. The food gets into the blood when it gets to the intestines.
- ❑ Ask, "How can food get into the blood? We have to make the food very, very small."
- ❑ Say, "Remember, first we chew food to make it smaller." Begin to cut up an apple. "Cutting the apple is like chewing food."
- ❑ Say, "The apple goes down to the stomach." Place a blender in front of your stomach. "Your stomach blends the food." Put apple pieces into the blender, and add 1 cup water. "And your stomach adds some liquid to the apple." Turn on blender, for children to see how the stomach grinds food into liquid.

... Process continued on following page ...

Materials Needed

- ❑ Fresh broccoli and apples
- ❑ Full soda can
- ❑ Small blender (ideally the "Magic Bullet Blender" or similar)
- ❑ 1 digestive system poster
- ❑ Clear vinyl tubes to represent throat (esophagus)
- ❑ Clear plastic bottle to represent stomach
- ❑ 18 feet of clear vinyl tubing
- ❑ Make a strainer by cutting 6 inches of vinyl tubing, poking holes into it with a nail or drill, and plug one end. Or use a kitchen strainer.

Process *(continued from previous page)*

- Pour the blended mixture through the piece of vinyl tubing with holes and one end plugged. Or, pour the mixture through a kitchen strainer. Be sure to have a clear plastic container below it to capture the liquid. The strainer retains the "fiber" and other chunks of food that we were not able to liquefy.
- Say, "See, the food has been turned into liquid, like juice. Now it is small enough to be absorbed by your intestines. The inside of the intestines has the food, and the outside has the blood. The intestines have tiny holes that let the liquid go into the blood."
- Ask, "What does the body use the food for? Yes, to grow and be strong!"
- Ask, "What happens with the food pieces that did not run to liquid? The pieces stuck in the strainer are not absorbed into the blood. They keep traveling down the intestines." Show the digestion poster. "These pieces become "poo" that we get rid of in the restroom."
- Repeat using a carrot. Repeat with a soda, but do not blend the soda, just pour it directly into the strainer. Remind students of the 10 teaspoons of sugar that soda has, and "all that sugar will go into your blood, and sugar does not make us grow like fruits and vegetables do. So we eat or drink sugary foods only sometimes, and we eat fruits and vegetables everyday."

Lesson 16 Extensions

Next Steps

Children can taste test food from the garden (or other fruits and vegetables), but not junk foods. Children can imagine the stomach blending all the food, and making it into a kind of juice that can be absorbed into the blood.

Educator's Notes


Blood Orange

Lesson 17 Vitamin C Foods and Your Skin

Overall Objective To increase children's access to (and interest in) fresh fruits and vegetables.

Learning Objective To learn how to recognize foods that contain Vitamin C and that Vitamin C foods can heal cuts and make strong skin.

Grade Level 1 to 4

Process

- ❑ Begin by asking, "Where's your skin?"
  - ❑ Ask, "Do oranges and tomatoes have skin too?" Show tomato and an orange.
  - ❑ Ask, "What does the skin do?" Dip the tomato in a clear bag full of sand. "The skin keeps the sand out of the tomato, and out of the inside of our bodies."
  - ❑ Say, "Let's see what can happen to skin." Show a tomato and the sand paper. "Pretend sandpaper is the sidewalk, and the tomato is your knee, let's see what happens. Mr. Tomato is walking down the sidewalk and then he falls and scrapes himself" Rub the tomato on the sandpaper. Dip it into a clear bag full of sand. "See how the dirt sticks to the inside of the cut?"
- ❑ Ask, "Has anybody scraped their knee or hand?" Encourage children to share their stories. "What happens when we scrape our knee or hand? Yes, the skin tears open and blood comes out."
  - ❑ Say, "This is not safe, because dirt can go inside your body."
- ❑ Ask, "What does the skin do?" It keeps dirt and germs out of our body so we can dig into dirt, plant seeds, and not get dirt inside our bodies.

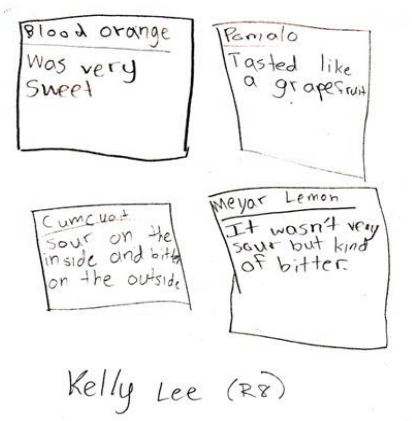
... Process continued on following page ...

Materials Needed

- ❑ Fresh tomato
- ❑ Fresh orange
- ❑ Sand paper
- ❑ Quart size clear plastic bag full of sand
- ❑ Examples of vitamin C foods, either fresh or food models (see list below)
- ❑ Band aid
- ❑ Neosporin antibiotic cream

Process *(continued from previous page)*

- Ask, "How do we protect our skin?"
  1. "We wash our hands."
  2. "If we have a cut or a scrape, we wash the cut and scrape, although it may hurt a little."
  3. "We can add a special cream to cut or scrape." (Antibiotic cream such as Neosporin).
  4. "Put on a band aid."
  5. "Eat Vitamin C foods. Vitamin C foods make new skin. They help make a "spider web" over the cut and it becomes new skin. A vitamin is a something your body can not make. We need to eat Vitamin C foods to get Vitamin C."
- Ask, "What are some Vitamin C foods?"
  - Spend time discussing these and other Vitamin C foods: broccoli, guava, blood oranges or regular oranges, kiwi, mango, jicama, tangerines, tomato, bell peppers, strawberries, grapefruit, and cantaloupe.



Lesson 17 Extensions

Art

Using watercolors, paint, or crayons, children can draw or paint Vitamin C foods, especially rare ones.

Next Steps

Taste the Vitamin C foods listed above, especially those unfamiliar to children at your site.

When the opportunity arises, such as during field trips or during other learning activities related to food, ask students which foods have Vitamin C.

Educator's Notes

Sample a variety of citrus fruits such as oranges, mandarins, grapefruit, pomelo, and kumquats. Or make some fresh lemonade!


Vegelicious,
Fruitilicious!
How do we know what's in the food we eat?
What are we putting inside our bodies?
THAT'S A LOT OF SUGAR!
Reese's
Doritos
CAPRI SUN

Lesson 18 Reading Food Labels and Measuring the Sugar and Fat in Snack Foods

Overall Objective To increase children's access to (and interest in) fresh fruits and vegetables.

Learning Objective To learn to recognize the "Nutrition Facts" food label, and learn how to find the amount of sugar and fat in foods by reading the label.

Grade Level 2 to 4

Process

- ❑ Ask, "Who likes Cheetos? What about candy bars?" Show a Snickers bar. "And sweet drinks?" Show a Capri Sun. "But what is in these foods?" Listen to children's answers.
- ❑ Say, "Let's see what's in a " 99 cent Flamin' Hot Cheetos bag (about 3 oz. bag)." The total fat grams in an entire 99cent Cheetos bag is 32 grams. Each ¼ teaspoon (tsp) equals 1 gram, so the package contains 32 of the ¼ tsp. Before saying the answer begin to scoop ¼ teaspoons full of shortening into a baggie. Use the spatula to make this easier. Count out loud with each scoop. Ask children to join along, "1, 2, 3...", and ask them to tell you to stop when you have put the amount of fat that's in the Cheetos bag.
- ❑ Ask, "How can we know how much fat is in the Cheetos?" Listen to children's answers. "We can look at the food label on the package. Today we will learn how to read food labels and measure the amount of sugar and fat in some snack foods." Display the large food label poster for Cheetos.

... Process continued on following page ...

Materials Needed

- ❑ Draw a large "Flamin' Hot Cheetos" food label
- ❑ ¼ teaspoon measuring spoons or similar sized spoon for every student
- ❑ 3 pounds of sugar
- ❑ Large container of vegetable shortening
- ❑ Empty Cheetos bag, Snickers wrapper, Capri Sun drink, and other sugary or fatty snacks food labels
- ❑ Small paper cups (1 per student)
- ❑ Small spatulas for each student
- ❑ Snack-size plastic baggies

Process *(continued from previous page)*

- Say, "First let's find the "serving size" on the poster. For Cheetos it is 21 pieces which give us 11 grams of fat, or 11 scoops using the ¼ teaspoon. But how many servings are in the package? Almost 3 servings in the entire package. So, 3 x 21 pieces is 63 pieces in the whole bag. And 3 servings x 11 grams of fat is 33 grams of fat, or about 33 of the ¼ teaspoons. This label tells us that the entire package contains exactly 32 grams of fat. But not all food labels tell you what is in the entire package, usually we have to figure this out."
- Steps 1-4 can be repeated using other "sometimes" foods like candy bars, sweet drinks, and other packaged treats. Students can bring a food wrapper to class, or can be provided by the teacher. Using the food label look for the word "sugars." The amount of "sugars" in a 12 ounce can of 7up soda is 38 grams. Each ¼ teaspoon (tsp) equals 1 gram, so the can contains 38 of the ¼ tsp. Before saying the answer begin to scoop ¼ teaspoons full sugar into a baggie. Count out load with each scoop. Ask children to join along, "1, 2, 3...", and ask them to tell you to stop when you have put the amount of fat that's in the can of soda. This can be repeated with a candy bar that has both "fat and sugar" to be counted and added to a baggie.
- Break the class into teams of two. Each team can share one food label and work together to figure out how much sugar and/or fat is in the product. Fill 3 oz. paper cups with shortening, and some with sugar for children to use. Each team receives a clear plastic baggie, spatula, and ¼ teaspoon to use for measuring.
- At the end, each team can share the food label they worked with and show the class the amount of fat and/or sugar in that product.
- Finally remind the class of the difference between "sometimes foods" that we eat on special occasions, and "everyday foods" that make us grow and can be eaten every day. See lesson #15 for more ideas.

Lesson 18 Extensions

Next Steps

Post the large "Flamin' Hot Cheetos" food label poster and similar food label for a soda can on a wall to reinforce the learning. Staple clear plastic baggies filled with fat (vegetable shortening) or sugar showing the amounts found in both the Cheetos and the soda.

Educator's Notes

Lesson 19 Learning About Bones and Foods Good for Your Bones

Overall Objective To increase children's access to fresh fruits and vegetables.

Learning Objective To learn about their skeleton. They also learn that certain foods help make their bones strong.

Grade Level 1 to 4

Process

- ❑ Start a group discussion by asking children what they already know about bones.
- ❑ Introduce a diagram or model of a skeleton. Explain to children that they will be drawing their own skeleton.
- ❑ Pair up group of 8-10 children.
- ❑ Lay out large pieces of butcher paper. Children will take turns tracing each other's body outline on the paper.
- ❑ Using books and diagrams of skeletons, children then work on their own body outline and start filling in their skeleton and labeling bones with the appropriate names.
- ❑ Follow-up with a tasting of foods good for your bones. Explain that bones need calcium to be healthy and strong and that certain foods have calcium in them, such as broccoli, leafy greens, and dairy products.

Materials Needed

- ❑ Butcher paper
- ❑ Pencils or marker
- ❑ Reference books with skeleton diagrams

Wayne: "Giving my sister broccoli."
Kindergarten 2008

Lesson 19 Extensions

Art

Visit the garden to look at broccoli growing there. Harvest some if it is ready or plant some broccoli seeds.

Books

Young Genius: Bones by Kate Lennard

Uncover the Human Body by Luann Colombo

Educator's Notes

Harvest some broccoli or leafy greens from the garden and sauté with garlic. Compare the taste of broccoli that is raw, steamed or sautéed.

3. Explore New Foods!

Lessons at the table


Seeds
Fruits
Buds


Leaves
Stem
Roots
Bulbs

Lesson 20 Sorting Fruits and Vegetables According to Plant Parts

Overall Objective To increase children's gardening skills; to increase children's access to fresh fruits and vegetables.

Learning Objective To learn that all fruits and vegetables come from plants, learn to classify food according to plant parts, and explore a variety of foods.

Grade Level 1 to 4

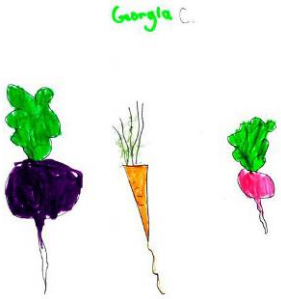
Process

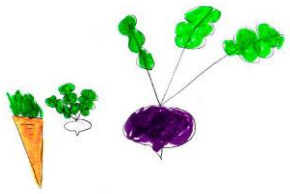
- ❑ Set up empty plastic bins in front of classroom.
- ❑ During circle time, ask children to name all the parts of a plant. As they name each part, pull out the appropriate sign and attach it one of the clear plastic bins. When they run out of ideas, add in parts they may have missed.
- ❑ Pick an easily identifiable plastic fruit or vegetable such as a carrot or an apple and ask children which category of plant part it belongs in. Place it in there. Continue with another example.
- ❑ Call on children volunteers to pick something out of your collection, hold it up for everyone to see and then try to put it in the right bin. If stuck, they can call on another child to help.
- ❑ Continue until all fruits and vegetables are used up.

Materials Needed

- ❑ 6 bins
- ❑ Card with pre-printed words for each of the following: Roots, Stems, Leaves, Flowers, Fruit, Seeds
- ❑ Plastic fruits and vegetables that represent all the parts of a plant, (e.g., carrots and radishes for roots, lettuce for leaves)
- ❑ For older kids, you may want to include Bulbs (onions and garlic) and Tubers (Potatoes)


Malia Rose Jenkins


Georgia C.


DJenna
2-21-08


Salad Bar
Tomato - Fruit
Broccoli - flower bud
Radish-Root
Sunflower seeds - seed
Lettuce - leaf
Celery - Stem
Carrots - root
Bell Pepper - fruit
Peas - seed
Cucumber - fruit

Lesson 20 Extensions

In the Garden

Organize seed packets according to leaf vegetables, root vegetables, and flower bud vegetables. Let children choose which seeds they want to plant.

Books

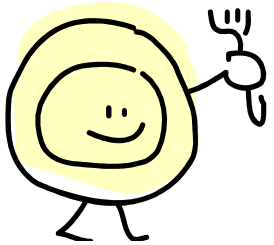
Bear and Bunny Grow Tomatoes by Bruce Koscielniak

The Giant Carrot by Jan Peck

Scarlette Beane by Karen Wallace

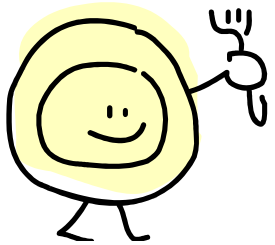
Educator's Notes

Let's Eat!



Set up a "salad bar" that includes representatives of all plant parts. Include harvests from the garden if possible. Encourage children to try something from each bowl.

Let's Eat More!



Set up a "root snack" or a "stem snack." Encourage children to try the vegetables new to them and record their impressions of the taste or texture.

Lesson 21 Field Trip to the Produce Section of the Nearest Grocery Store

Overall Objective To increase children's access to fresh fruits and vegetables.

Learning Objective To expose children to a greater variety of fruits and vegetables.

Grade Level Preschool to K

Process

Pre-Trip:

- ❑ Start a discussion with children of which vegetables and fruits they are familiar with, what they eat at home, which are their favorites, etc.
- ❑ Tell them they will be going shopping at a store that sells vegetables and fruits and that each child will get to choose one vegetable or fruit to buy.
- ❑ Show them small paper bag that each kid will get later for their purchase.
- ❑ Optional: Discuss what might fit in the bag and what might not (e.g. pumpkins versus apples).

At the store:

- ❑ Let small groups of children slowly circulate with an adult through all the fruits and vegetables, letting adult handle some to let them smell and touch.
- ❑ After seeing everything available, hand out one bag per child.
- ❑ Let children choose a fruit or vegetable to put in their bag.
- ❑ Take bags to cash register.

... Process continued on following page ...

Materials Needed

- ❑ One small paper bag (lunch bag size) per child

Process *(continued from previous page)*

In the classroom:

- ❑ Display all fruits and vegetables for the classroom to look at and discuss.
- ❑ Let interested children draw them.
- ❑ Eat them as soon as you can!

Lesson 21 Extensions

Art

Make your own re-usable shopping bags with vegetable print art. Use fabric paints and a variety of fruits and vegetables cut in cross-section.

Books

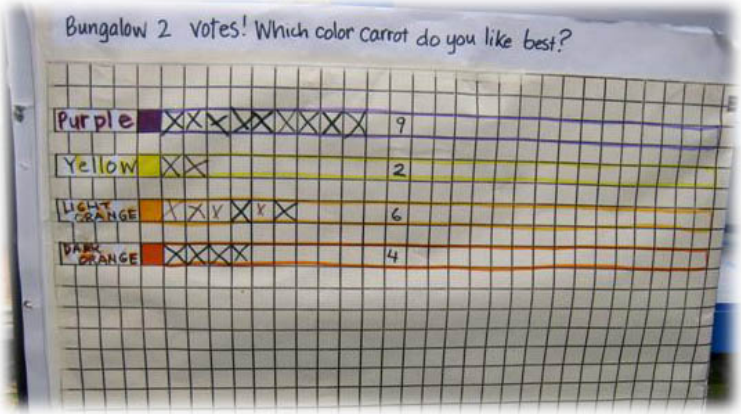
Gus and Button by Saxton Freymann

On the Farm by Anna Milbourne and Alessandra Roberti

Cabbage Soup Solution by Erika Oller

Educator's Notes


Alex
Madeleine
Nicholas
Caleb
Kevin
Destiny
Amanda
Sophia
Ben
Cassie
Pierce
David
Shirley
Jeremy
Wilson
Diya
Ye Jia


Bungalow 2 votes! Which color carrot do you like best?
Purple
9
Yellow
2
LIGHT ORANGE
6
DARK ORANGE
4

Lesson 22 Tasting, Comparing, and Charting Food Preferences

Overall Objective Increase children's access to fresh fruits and vegetables.

Learning Objective To learn to chart their food preferences (math). For young preschoolers, this is also a lesson in name recognition.

Grade Level Preschool to K (can be modified for older grades)

Process

- ❑ Set up two choices for tasting.
- ❑ Explain to a small group of children that they will try each food and then write their name or put a label with their name in the column below the picture of food they preferred. If they like both equally they can put their name in each column. This is easiest with two adults, one leading the tasting, the second helping children with the chart.
- ❑ When everyone has had a turn, show the chart to the group. Discuss which food has more names listed under it. Count the number of names in each column, look at which is longer, and what that demonstrates, etc.
- ❑ Young children will have a lot more confidence with this process if you repeat the activity again with a different fruit or vegetable on another day.

Materials Needed

- ❑ Two kinds of fruits or vegetables
- ❑ A chart prepared in advance, with 2 columns
- ❑ Sticky labels with children's names if preschool


apple
pear
both
Howard
TreVian
Callahan
Howard
TreVian
Callahan
TreVian
Callahan

Lesson 22 Extensions

Art

Save some samples for children to draw the inside and outside of the fruit or vegetable.

Books

The Monster Who Ate My Peas
by Danny Schnitzlein

Educator's Notes


Bill pome
granate


Wayne
pome granate


Pomegrante
Sophie

Lesson 23 Tasting and Drawing Fruits and Vegetables

Overall Objective To increase children's access to fresh fruits and vegetables.

Learning Objective To taste new fruits and vegetables; to observe them closely through drawing.

Grade Level Preschool and K-4

Process

- ❑ Set up half of the produce for tasting and set the other half aside. For example, cut a pomegranate in half in front of the children, but put half aside.
- ❑ Share half with the children. Encourage them to smell it as well.
- ❑ Ask children to share their experience of how it tastes and smells.
- ❑ After everyone is done eating, explain that they will be drawing the rest of the fruit before they eat it. Let children share observations first, for example colors they see, shapes they see.
- ❑ Pass out paper and color pencils or markers to children.
- ❑ After everyone is done drawing, eat the second half.
- ❑ Take leftover peels, if any, to the garden compost.

Materials Needed

- ❑ Fruits and vegetables for tasting
- ❑ Paper
- ❑ Color pencils, markers, or oil pastels

Lesson 23 Extensions

Books

One Lonely Sea Horse by Saxton Freymann and Joost Elffers

The Monster Who Ate My Peas by Danny Schnitzlein

Botany on your Plate: Investigating the Plants We Eat by Barrett, White, and Manoux.

Educator's Notes


Apples
Orange
Lemon


Jack And
The Beanstalk
Restaurant

Lesson 24 Encouraging Children's Creative Play around Fruits and Vegetables

Overall Objective To increase children's knowledge of fruits and vegetables.

Learning Objective To learn about a variety of healthy foods; to classify foods; to learn about new fruits and vegetables.

Grade Level Preschool and K-2

Process

- ❑ Set up a 'grocery store' area for the children in their dramatic play area.
- ❑ Include a variety of toy fruits and vegetables and any other toy healthy foods you can find.
- ❑ Add some 'shopping baskets' and a toy cash register.
- ❑ A cabinet can serve as a 'refrigerator.'
- ❑ Let children organize and label all the produce in their pretend grocery store.
- ❑ Children may want to set up a nearby area as a 'restaurant' or a 'kitchen'. Providing toy pots and pans will further encourage their pretend cooking play.
- ❑ Invite children to come up with a name for their store.
- ❑ Let them play!

Materials Needed

- ❑ Plastic food

Lesson 24 Extensions

Field Trip

Visit a real grocery store to see how food is organized there.

Literacy

Invite children to share their favorite recipes from home.

In the Garden

A variety of bowls near a mud or sand box will also inspire pretend cooking by the children.

Books

Play with Your Food by Joost Elffers

The Little Red Hen Makes a Pizza by Philemon Sturges

The Cabbage Soup Solution by Erika Oller

Pumpkin Soup by Helen Cooper

Salad People by Mollie Katzen

Educator's Notes