



Harvest Objectives

Children will describe the life cycle of a mandarin orange.
Children will identify that mandarin oranges grow on trees.
Children will taste a piece of mandarin orange.



Harvest Vocab

Firm Fruit Pollination Smooth Tree

Materials & Prep

Mandarin Oranges (enough for each child to taste small $\frac{1}{4}$ pieces)
1 Set Mandarin Orange Life Cycle large cards (see separate document to print)
5-10 Sets Mandarin Orange Life Cycle small cards (see separate document; set to print 4 pages per sheet and then cut each sheet into quarters for small cards)
Images (included at end of learning plan)
Taste Test Chart
Stickers (or small Post-It Notes)

Literature Connections

Orange Foods by Patricia Whitehouse
Eating the Alphabet: Fruits & Vegetables from A to Z by Lois Ehlert
A Fruit Is a Suitcase for Seeds by Jean Richards

Warm Up

- In order to engage the children and activate prior knowledge, show the children the mandarin oranges and pass them around so each student gets to hold and/or touch them. Do not tell them what they are. Tell them to think of the name for the food, but to keep their answer inside their head. Then when everyone has held a mandarin orange, ask them, "What is this called?" Consider having everyone say the answer aloud on the count of three, this way you'll know how many in the group know. Then discuss, have ever seen one before? Eaten one before? How was it prepared? Where do they think mandarin oranges come from? How do they grow? (On trees, bushes?)
- In order for the children to explore more about the mandarin orange life cycle, have a common experience, and think about what they know, put them in small groups (of 2-3 children), or have them work independently.
- Using the small cards, tell them that they need to put the cards representing the apple life cycle in order, starting with the tree with flowers. Allow one or two minutes for them to work and discuss. Ask them, "Why do they think one piece goes before, or after, another? How do they know?"
- It is okay if the order is incorrect. Have the children leave the cards in the order they think is best and continue as a large group (below.) Then the children will be able to go back and fix their own mistakes.



- Note: For very young preschool children, have them work independently with an adult, perhaps during small group time, give them only the first two pieces and ask them to put them in order. Then give them the next two, to add on, until the entire life cycle is complete.

Explain

- As a large group, using the large mandarin orange life cycle cards discuss the sequence of the cards. Have the children hold up the cards in the correct order, in front of the group.
- Then to review, have all the children act out the entire plant life cycle.
 - Mandarin tree with flowers--stretch arms up to the sky, as branches reaching out towards the sun and fan hands out to form flower blossoms
 - Pollination--one hand's pointer finger becomes a pollinator and touches a friend's flower respectfully
 - Petals falling down (wilting)--petals pretend to fall off of flower hand
 - Flower swelling--flower hand is a small fist representing the beginnings of a fruit
 - Immature fruit--flower hand grows a bit larger
 - Mature fruit--fruit grows larger (oranges are fruit because they have seeds inside)
 - Mandarin tree with mandarins--stretch arms up to the sky, as branches reaching out and hands are round, representing fruit
 - (optional) Picking and eating fruit--now pretend you are yourself standing in front of a fruit tree, reach and stretch wayyyy up for the best looking fruit on the tree, pick it off the tree, peel it and take a BIG bite of mandarin orange.
- Have the children go back to their small cards and make any corrections in the order. For children that need the reinforcement, ask them, "Why do they think one piece goes before, or after, another? How do they know?"
- As a large group, discuss the picture that shows the mandarin orange growing on the tree, and explain the word "tree" if needed. Can they think of any other foods that grow on trees? (Apples, avocado, pears, etc.) Explain the words "smooth" and "firm" along with other examples.
- Explain why we should eat mandarin oranges (healthy blood, healthy eyes, and healthy immune system) and for each come up with a reason to help the children remember. For example, for healthy immune system they can shake one finger while saying "no" and then put a hand on their forehead while saying "fever." Also explain how to pick a good mandarin orange (skin should be free of marks and bruises and a deep red-orange color.) Please see the next pages for images to share with the children.

Taste Test

- Peel and cut each slice into two pieces.
- Create a chart that says "I Like" with a smiley face and "I Don't Like" with a sad face. Give each child a sticker, and ask them to vote by placing it in a column. Count the number of children that like and don't like mandarin oranges and write that number in each column.
- Review how mandarin oranges grow and nutrition benefits.



Taste Test Extension

Rule of 15 “Put a food on the table at least 15 times to see if a child will accept it.” Susan B. Roberts, Tufts University Nutritionist and Co-author of Feeding Your Child for Lifelong Health

For an additional tasting experience, prepare this recipe with children in class using different stations, or ahead of time. Serve it with this lesson, or on a different day, to expand the Harvest of the Month experience.

Orange Butterflies (for 20 children)

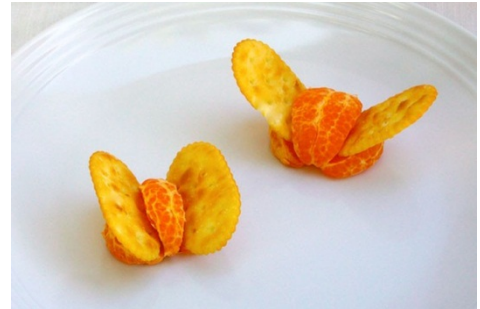
(adapted from: http://www.snackpicks.com/en_US/for-kids/fruit-bug-snacks-slideshow.html)

10 Mandarin Oranges (peeled)


1 Box Oval Crackers

Plate (1 per child)

1. Peel the oranges and break into halves.
2. Invite the children to wash their hands and come to the table for a cooking activity.
3. Demonstrate how to put two crackers between the mandarin orange wedges to hold the cracker wings. Have each child create one butterfly. Serve and enjoy, or save for a later snack by writing the child's name on the plate.




Vitamin A




Healthy eyes

Vitamin C



Healthy immune system
(prevents colds, heals cuts)

Folate



Healthy blood

How do Mandarins grow?

Mandarins grow on a tree with shiny leaves and fragrant flowers.

