Junior Master Gardener Training Program

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Fun Insect Mixer!!!!
Secret Smells😊

Junior Master Gardener®
growing good kids℠
JMG Program Overview

Mission & Benefits

Junior Master Gardener

growing good kids

4-H
**Mission**: Growing good kids by igniting a passion for learning, success, and service through a unique gardening education.
JMG: Igniting a passion for learning

“It enhances the student and teacher learning process ...serves as a catalyst for student interest in science.”

JMG Group leader response
National JMG Leader Survey
JMG: Igniting a passion for success

For all students

The JMG program currently serves students in public school, home school and private school settings. Also in camps, summer programs, and businesses!
JMG: Igniting a passion for service

“The children are learning far more than what the ground can produce... they are learning to be active participants in their community to help their fellow man.

Gonzalo Salazar - Principal
Los Fresnos Consolidated ISD
2016 JMG is…

Program is 16 years old!

• 1,000,000 youths impacted in USA
• Represents large portion of Texas 4-H Program
• Land grant system
• JMG in all 50 States
• 38 State Partners
• International Program – Guatemala, Honduras, Costa Rica, Canada, South Korea, and others
• Partnerships-Borlaug Institute for International Agriculture

• South Korea – Programs with Gweocheon National Science Museum, United States Embassy, and expansion to other museums and schools

• Programs through US Military, National Guard, and Peace Corp
Garden Education

- Garden natural way to incorporate
  - Science inquiry
  - Math concepts
  - Study of organisms and systems
  - Knowledge of plant parts/growing
  - Tasting and trying vegetables
  - Inclusion of children's books and writing
Share with others and develop leadership

Express creativity!

Ownership

Develop friendships and pride from being successful and working together in the garden!
Students that participated in Junior Master Gardening program and curriculum scored higher on science achievement tests that students in traditional science classes.
Benefits of JMG to children?

- Increased fruit and vegetable consumption
- Reduction in BMI
- Increase in family engagement – family mealtime, gardening at home, physical activity
- Increased leadership and personal responsibility
- Improved academic achievement
- Increased parent and mentor involvement with youth in schools with JMG
- Exposure to career exploration paths
- Engagement in community service/service learning projects
- Youth certification as Junior Master Gardeners
Starting a JMG Group

Junior Master Gardener

Growing Good Kids

4-H
Registering Your Group

- Leader/Teacher/Volunteer
- 5 Children
- Register group online through [www.jmgkids.us](http://www.jmgkids.us)
- Schools, After school, Camps, Community clubs, etc.
- Registered groups help counties to know what JMG activity is going on in the community
- Registered groups get information through newsletters, email, and children can work toward certification.
How Can You Implement the JMG Program with students?

- Pick and choose some JMG activities to start with as quick, fun, activities!
- Formal JMG recognition opportunities
- JMG Certification information is available on the JMG website and in all curricula
JMG Program and Curriculum Design

- Hands-On and project based
- Integrated, hands-on, aligned to academic standards for science, math, language arts, social studies
- Flexibility of use
- Choices available in group and individual activities for youth
- Community service and leadership incorporated in all units
- Training for teachers/leaders to utilize program with young people
Junior Master Gardener®- Level One
Core Curriculum

JMG Youth Handbook

Teacher/Leader Guide

Available in English and Spanish
teaching concepts:

- Habitat Gardening Basics
- Essential Elements
- Birds
- Mammals
- Insects
- Reptiles and Amphibians
- Wildlife Habitat Sites
- Life Skills & Career Exploration
Junior Master Gardener®
Golden Ray Series Curriculum

teaching concepts:
• Teaching concepts are built around 6 children’s books
• Brings gardening to life
• Great way for teachers to integrate science, reading, and language arts
Junior Master Gardener®
Golden Ray Series Curriculum

- Integration of gardening, nutrition, and physical activity
- Strong evidenced based
- Family Engagement
Level 2 Core Curriculum

- Operation Thistle – Seeds of Despair
- Operation WATER – Water and the Earth’s Resources... Thistle Goes Underground –
www.jmgkids.us

- Resources for Teachers, Volunteers and Extension staff
- Registration and certification information
- Activities for Kids
- Kid-Friendly Resources
- Online ordering of JMG curricula and recognition items
- JMG on FB, twitter, Instagram, Pinterest
JMG Certification
JMG Certification

- Completion of lessons in curricula
- Completion of community service project
- Completion of life skills/career exploration project
- Certification options – JMG Certification and Golden Ray Certification
JMG - Curricula Overview

Level One
Sing with me!

Parts of the PLANT (snap snap)
Parts of the PLANT (snap snap)
Parts of the plant, parts of the plant, parts of the plant (snap snap)

There’s roots and stems and leaves
Flowers, fruits and seeds
You put them all together
You have the parts of the plant

Tune: Adam’s Family Song
Table Activity

Bug Suckers

Complete this at your table
Suck-A-Bug

1. Punch a hole in the canister.
2. Cut two pieces of the tubing the desired length.
3. Cover one end of one piece of tubing with gauze and insert it into one of the holes on the canister.
4. Insert the other piece of tubing into the canister and surround the hole with clay.
5. Your Suck-A-Bug is now ready to use.
Grow Cards

1. Tear up colored construction paper and mix together with water in a blender until it has an oatmeal consistency.
2. Select a cookie cutter design and fill it with a thin layer of the mixture over a screen and a container.
3. Sprinkle flower seeds on top of the shape and gently mix together with the paper mixture.
4. Remove the cookie cutter and press out excess water with a towel. Set cards aside to dry.
Plant People

Have fun providing for P.L.A.N.T.S. needs with a desktop plant person
How Tall is That Tree?

What do you need?

✓ Tape Measure
✓ Pencil

Take your students outside!

* Super activity to reinforce math vocabulary, reasonableness, and estimation/graphing
1. Attach a bag to a leaf.
2. Let the bag sit on the plant for a couple of hours. After the time has passed, remove the bag and observe.
3. Plants are part of the water cycle. How much water is lost through the leaves?
Plant Parts We Eat

1. Ask students to recall all of the parts of the plant and ask which ones they think are edible.
2. Read story “Tops & Bottoms.”
3. Point out that many plant parts are edible across different plants.
4. Have students help categorize vegetables they eat into the plant part chart.
Monster Flowers
Umbrella
Craft materials
Paper
Label
Garden-Based Learning

- Provides a context for meaningful, integrated learning
- Associated with real-life issues with relevancy for students/youth
- Integrates concepts across the curriculum
- Vehicle for higher order thinking
- Students engaged in constructing knowledge and synthesis skills

• What location/environment provides best support for vegetable garden? Why?

• Use data collected and supporting evidence

• Elicit responses such as, I used to think…. But now I think… because....”

• Think of ways for children to journal and write about observations, cause and effect, comparisons, data analysis and to draw conclusions

• Great resource – *Writing in Science*, by Betsy Fulwiler
Science in Writing

Can support Expository Writing & Science!

- Literacy skills acquired in meaningful context - EX: students learning to write a conclusion after they have completed a scientific investigation and need to share results

- Writing in science can provide students with opportunity to engage in types of expository writing that they typically do not encounter at other times in school day

- Students increasing scientific literacy while also developing critical thinking and literacy skills
JMG® Level Two
Operation Thistle: Seeds of Despair

Plant Growth and Development

teaching concepts:
Importance and Uses of Plants
Plant Classification
Plant Parts
Plant Needs
Plant Processes
Plant Growth
Seed Propagation
Vegetative Propagation
Operation Thistle: W.A.T.E.R.
water and the earth’s resources

...Thistle Goes Underground

teaching concepts:

• Soil Color, Texture, & Structure
• Nutrients
• Soil Improvement
• Soil Conservation
• Water Cycle and You
• Water Movement
• Watersheds, Wetlands and Aquifers
• Water Conservation
JMG Table Activity

Indoor Botanical Garden of Art
Make craft materials available and allow partners to bring any other desired materials from home the next day. Items may include:

- natural seed parts
- cloth
- sticks and leaves
- plaster
- styrofoam
- string
- confetti
- scissors
- staplers
- yarn
- etc.

Students think about:

- Coats?
- Dispersal strategy
- Seedling
-简介
- The plant
- How is the color
- Make oral
- Describing the
- Seedlings.
Operation W.A.T.E.R.

Micro-Baked Dirt Cake (p36)

what happens when soil organisms are not present?
what happens when you do a better job watering just the root zone?
Operation W.A.T.E.R.

2 Liter Compost Capsule (p49)

Determine variables that make composting happen most efficiently
Supporting Implementation!

✓ Building Local Coalition Teams - IE: facilities department, administrators, teachers, parents, students, and community leaders. This team provides leadership for program at a school campus!

✓ Train the Trainer training - JMG can offer train teachers, other volunteers, offer State Board of Education CEU credit

✓ Tap Volunteer Talents - parent, other organizations, youth

✓ Consider maintenance, use, watering, etc. - involve facilities department and cafeteria!

✓ Involve the community - sweat equity and improves sustainability and “buy in”
Community Volunteers
Master Gardeners...Resource to help with Implementation

- Be an expert and resource for school personnel and students

- Assist the students/teachers/county leaders with gardening knowledge via partnerships; demonstration; knowledge; mentoring

- Help with ideas and opportunities to secure resources for schools for sustainability
Community Volunteers

Master Gardeners...Resource to help with Implementation

- Assist and help with hosting and facilitating special events both at the school and in the community

- Build JMG activity kits/supply bins for schools to check out

- Adopt a school to build and support school-to-county sustainability

- Provide gardening workshops for teachers to improve their confidence in gardening! (TIE SHOES!)
JMG Group Demonstration

Gas Gobblers
Learn, Grow, Eat & GO!

Growing good kids through an interdisciplinary program combining academic achievement, gardening, nutrient-dense food experiences, physical activity and school & family engagement.
Learn, Grow, Eat & GO!
Introduction & Overview
A school and community program engaging youth in gardening, nutrition and physical activities emphasizing science, math, language art/reading, social studies and health. And it promotes positive parent and child health behaviors! Healthy eating and being more physically active are predictable outcomes.
Purpose of TGEG Study

- **Overall goal**: To assess the effects of a Coordinated School Health program enhanced with two theory-based, family-focused & experiential “garden, nutrition and physical activity programs” on the prevalence of child obesity in 3rd grade students (n=1600)

  - **CATCH** as evidence-based Coordinated School Health (CSH) program-Control
  - Walk Across Texas (WAT) revised to include family engagement components – family bonus miles, walking bingo, family newsletters
  - Junior Master Gardener (JMG) Curriculum: *Health and Nutrition From the Garden* revised to be LEARN! GROW! EAT! GO! to include gardens, veggie tastings, recipe demonstrations, student journal and student take home stories
## Behavioral Targets

<table>
<thead>
<tr>
<th>Child Behaviors</th>
<th>Parent/Adult Behaviors</th>
<th>Child &amp; Parent/Adult Interaction Behaviors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increasing fruit and vegetable consumption (F&amp;V)</td>
<td>Increasing access and availability of F&amp;V in the home</td>
<td>Gardening together</td>
</tr>
<tr>
<td>Decreasing sugar sweetened beverage (SSB) consumption</td>
<td>Limiting availability of SSB</td>
<td>Preparing snacks and meals together</td>
</tr>
<tr>
<td>Increasing physical activity (PA)</td>
<td>Providing PA opportunities for children</td>
<td>Engaging in PA together</td>
</tr>
<tr>
<td>Decreasing sedentary activity</td>
<td>Limiting children’s sedentary activity</td>
<td>Eating snacks and meals together</td>
</tr>
<tr>
<td>Student</td>
<td>CATCH</td>
<td>CATCH+ JMG</td>
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<td>-------------------------------</td>
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<tr>
<td>Vegetables preference</td>
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<td>*</td>
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<tr>
<td>Vegetable consumption at school</td>
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<tr>
<td>Knowledge</td>
<td></td>
<td>*</td>
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<tr>
<td>Engagement in moderate PA</td>
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<tr>
<td>Sedentary Behavior (decrease)</td>
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<tr>
<td>Vegetable consumption at home</td>
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<tr>
<td>SSB consumption (decrease)</td>
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<tr>
<td>Parent</td>
<td></td>
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<tr>
<td>Home availability Vegetables</td>
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<tr>
<td>Home availability SSB</td>
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<tr>
<td>Parental support for child PA</td>
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<tr>
<td>Parental support for decreasing sedentary behavior</td>
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<tr>
<td>Student/Parent Interaction</td>
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<td></td>
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<tr>
<td>Gardening together</td>
<td></td>
<td>*</td>
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<tr>
<td>Preparing food together</td>
<td></td>
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<tr>
<td>Eating meals together</td>
<td></td>
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<tr>
<td>PA together</td>
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</tbody>
</table>
LGEG Evidence Based Outcomes

Significant Improvements in:
- MVPA
- Total Physical Activity
- Vegetables Consumption
- Vegetable Preferences
- Healthy Beverage Preferences
- Self-Efficacy & Knowledge
- Parent/child cooking, physical activity and gardening
- Reaches into the home to support positive family health practices

BMI Significantly Reduced for CATCH + JMG and CATCH + WAT

Preliminary Conclusion: Family-focused garden, nutrition and physical activity programs significantly improve health behaviors in children.
GROWING good kids through an interdisciplinary program combining academic achievement, gardening, nutrient-dense food experiences, physical activity and school & family engagement.
LGEG Components
CLASSROOM INSTRUCTION

- 10 week – lessons aligned to TEKS, STAAR readiness and supporting standards
  - Student garden journals
  - Math within Garden Kitchen recipes
  - Family engagement resources online
  - Joseph Plants a Garden take home family stories and activities
  - WAT Teacher lesson plans online
  - Service-learning opportunity
  - JMG certification opportunity
• GARDENS - raised beds or container gardens
• Grow featured *nutrient-dense* vegetables

- Carrot
- Red leaf/loose leaf lettuce
- Broccoli
- Potatoes
- Swiss chard
- Bell pepper
- Cauliflower
- Spinach
- Oriental cabbage – Bok Choy
- Cherry tomatoes
- Sugar snap peas
- Squash
Food Exposure

- **1st exposure**: Evaluation of fresh vegetable sample in classroom

- **2nd Exposure**: *Garden Kitchen* recipe demonstrations in classroom with featured vegetables
• **GoStrong** - Physical “brain break” activities to use in the classroom
• Promotion of gardening physical activity components
• Walk Across Texas – enrollment
• Walk Across Texas – classroom lessons available online
CURRICULUM DESIGN

10 weeks,
2 lessons/week

Sequence, integration, pace, & flexibility
Base curriculum
2 lessons/week

To earn certification, the students in your class must complete the base curriculum and participate in a class service-learning project (pages 174-175).
Weeks 1-10 Lesson Overview
Learn, Grow, Eat & GO!

TEKS Correlations

*TEKS that are eligible for testing as either Readiness or Supporting Standards on STAAR Test are highlighted in yellow.

Concept 1

Know and Show Sonoreno

English Language Arts and Reading
3.26(A) Listening and Speaking/Literacy. Students use comprehension skills to listen attentively to others in formal and informal settings. Students are expected to: (A) listen attentively to speakers, ask relevant questions, and make pertinent comments.

Science
3.7(B) Organisms and environments. The student knows that organisms have characteristics that help them survive and can describe patterns, cycles, systems, and relationships within the environments. Students are expected to: (A) observe and describe the physical characteristics of environments and how they support populations and communities within an ecosystem. [Grade STAAR Supporting Standard]

Social Studies
3.17(B) Social studies skills. The student communicates effectively in written, oral, and visual forms. The student is expected to: (B) create written and visual material such as stories, poems, pictures, maps, and graphic organizers to express ideas.

5 Sense Food

English Language Arts and Reading
3.22(A) Oral and Written Conventions/Conventions. Students understand the function of and use the conventions of academic language when reading and writing. Students continue to apply earlier standards with greater complexity. Students are expected to: (A) use and understand the function of the following parts of speech in the context of reading, writing, and speaking: (ii) adjectives.

Science
3.5(A) Matter and energy. The student knows that matter has measurable physical properties and those properties determine how matter is classified, changed, and used. The student is expected to: (A) measure, test, and record physical properties of matter.

Garden Journal 1

Health
3.1 (A) (B) Health behaviors. The student explains ways to enhance and maintain health throughout the life span. The student is expected to: (A) explain how personal health habits affect self and others; (B) describe ways to improve personal fitness.

Concept 2

Plant Parts We Eat

English Language Arts and Reading
3.4(B) Reading/Vocabulary Development. Students understand new vocabulary and use it when reading and writing. Students are expected to: (B) use context to determine the relevant meaning of unfamiliar words or distinguish among multiple meanings within a word family. [STAAR Readiness Standard]

3.3(A) Reading/Comprehension of Literary Text/Fiction. Students understand, make inferences, and draw conclusions about the structure and elements of fiction and provide evidence from text to support their understanding. Students are expected to: (A) sequence and summarize the plot’s main events and explain their influence on future events. [STAAR Readiness Standard]

3.3(B) Reading/Comprehension of Informational Text/Facts. Students analyze, make inferences and draw conclusions and provide evidence from text to support their understanding. Students are expected to: (C) identify explicit cause and effect relationships in a text. [STAAR Readiness Standard]

Garden Journal 2

Health
3.1 (A) (B) Health behaviors. The student explains ways to maintain health throughout the life span. The student is expected to: (A) explain how personal health habits affect self and others; (B) describe ways to improve personal fitness.

Concept 3

Don’t Bite Me

Science
3.9 (A) Organisms and environments. The student knows that living things have characteristics that help them survive and can describe patterns, cycles, systems, and relationships: (A) describe how physical characteristics of organisms within an ecosystem are interdependent. [Grade STAAR Supporting Standard]
Plants need **P.L.A.N.T.S.**

**Objective**
Analyze what plants need.

**Supplies**
- assembled card deck
- large writing surface
- marker
- miscellaneous crafters
  - For each student:
    - 1 sheet of paper
    - For each group of 3:
      - scissors and stapler

Walk into the classroom. **Show Sunhero.** When you do, tell them that they will make one of their own. Answer a few questions.

Begin a discussion about how humans are able to live. As a class, create a list on a writing surface in front of the five basic needs that plants need:

- **Sun**
- **Water**
- **Soil**
- **Air**
- **Nutrients**

Ask students to check if any plants could have it. Next, ask: Is there anyone that plants don’t need? No. Why? Another needs air from their natural homes.

**Place Light Air Nutrients Thirsty Soil**

**Learn! Grow! Eat! Go!**
Table Activity Session
Know and Show Sombrero

WHERE TO FIND ME?
LGEG Manual
Week 1, page 2
### TASTING 1: Carrots

You've learned that eating something is not just tasting—it's using all 5 of your senses! Today you will give a report card to a carrot. Give it a separate grade for each sense—sight, smell, feel, sound, and taste.

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sight</td>
<td></td>
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<td></td>
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<tr>
<td>Smell</td>
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<tr>
<td>Feel</td>
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<td></td>
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<tr>
<td>Sound</td>
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<td></td>
</tr>
<tr>
<td>Taste</td>
<td></td>
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</tr>
</tbody>
</table>
Garden Journal: Week 1

Write a plant name beside each letter below:

PLANTS

Your teacher has given you a seed. What might it grow into if you plant it and give it everything it needs? Maybe it will grow into a tree, a flower, or some tasty new veggie that you’ve never even seen before.

1. Draw a picture of what you think this seed might become one day.
2. Write 2 sentences to describe what you think the plant would look like when it’s grown. (Include at least 3 describing words in these sentences.)
3. Write one more sentence to tell how this grown plant might be useful to you.

TASTING 1: Carrots

You’ve learned that eating something is not just tasting—it’s using all 5 of your senses! Today you will give a report card to a carrot. Give it a separate grade for each sense—sight, smell, feel, sound, and taste.
Know & Show Sombrero 45 mins
5 Senses Food 30 mins
a. Plant Parts We Eat

**Objective:**
Identify all of the edible plant parts from a variety of crops.

**Supplies:**
- Tongs
- Paper towels

---

**Tops & Bottoms**

*Author: Janet Stevens*

- **Roots**
- **Stem**
- **Leaves**
- **Seeds**
- **Flowers**
- **Fruit**

*Learn! Grow! Eat! GO!*
Week 2

Which plant parts do people eat? Let’s find out!

Explain that we can eat different parts of many kinds of plants. Students often find it hard to believe that many of the vegetables we enjoy actually are the fruit part of the plant.

Some parts of food contain obvious plant parts but you, your students, and your fellow teachers may be surprised to learn that some vegetables don’t come from the plant part you may have thought. The table below includes some of those connections of the foods you enjoy and the surprising plant parts they come from:

<table>
<thead>
<tr>
<th>Food</th>
<th>Plant part it originates from</th>
</tr>
</thead>
<tbody>
<tr>
<td>Artichoke</td>
<td>Leaf (the edible part that comes from the leaves around the flower)</td>
</tr>
<tr>
<td>Asparagus</td>
<td>Stem</td>
</tr>
<tr>
<td>Beet</td>
<td>Root</td>
</tr>
<tr>
<td>Broccoli</td>
<td>Flower (immature flower bud and stem)</td>
</tr>
<tr>
<td>Cinnamon</td>
<td>Stem</td>
</tr>
<tr>
<td>Coffee</td>
<td>Seed</td>
</tr>
<tr>
<td>Garlic</td>
<td>Stem (classified as a bulb, which is a modified stem)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Food</th>
<th>Plant part it originates from</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green beans</td>
<td>Fruit and seeds</td>
</tr>
<tr>
<td>Greens</td>
<td>Leaves</td>
</tr>
<tr>
<td>Onion</td>
<td>Leaf</td>
</tr>
<tr>
<td>Peas in the pod</td>
<td>Fruit and seeds</td>
</tr>
<tr>
<td>Peas only</td>
<td>Seeds</td>
</tr>
<tr>
<td>Potato</td>
<td>Stem (classified as a tuber, which is a modified stem)</td>
</tr>
<tr>
<td>Pumpkin</td>
<td>Fruit</td>
</tr>
<tr>
<td>Rice</td>
<td>Seed</td>
</tr>
<tr>
<td>Sweet potato</td>
<td>Root</td>
</tr>
<tr>
<td>Yam</td>
<td>Root</td>
</tr>
</tbody>
</table>

Point out that these edible parts give us many of the nutrients that our bodies need to grow strong and healthy. Tell the students that all of the plants on this web—some that they’ve already eaten and some that they’ve never heard of—provide a huge variety of healthy and tasty foods to enjoy.
b. Nutrients to Grow 45 minutes

After the performances, close the lesson by asking a few students to explain why we need to eat a variety of foods containing all of these nutrients to get what we need to grow, learn, and play.

Skill: Following directions

Materials:
- Plant-o-grams or bulletin board paper (2-foot lengths)

Preparation:
- Students have learned about what plants need to grow. Now, let’s learn what we need to grow, learn, and play.

What You’ll Do:
- Give each group a Nutrients to Grow card and a poster and a performance-to-explain its nutrients. Students can create a poster, sign, chart, or other graphic.
- Ask the group to dramatize the poster, or other performance, and present their presentation.

Performance Ideas:
- Brainstorm foods
- Cut foods
- Eat foods
- Make foods
- Observe foods
- Play with foods
- Present foods
- Review foods

Close with the students working together to create a group poster, sign, chart, or other graphic with ideas about what to do with the foods in the Nutrients to Grow card.
This week's lessons:
a. Don't Crowd Me 15 Mins
b. Paper Towel Gardening 45 Mins

Weekly À la Carte Features:
Fresh Food Exposure, page #
Garden Kitchen Recipe Demo, page #
Quick Classroom Power-up

Tip of the Week:
During the Paper Towel Gardening lesson, your students will use paper towels, school glue, and seeds to make easy, plantable seed templates for the school garden. To begin the lesson, you will practice by making a carrot garden to take home. Thinner paper towels are best for this lesson.

Curriculum
Nutrient-dense

Snap peas
Chard
Beans

Part of the sources below: information, see each crop above, with the words "these are those for the man-

Planting
Building
Maintain

4 chairs
2 packets of carrot seeds
Several packets of other kinds of vegetable seeds
b. Paper Towel Gardening

**Objective**
Create planting templates to ensure that the plants have enough room to grow.

**Supplies**
- 1 roll of paper towels (each towel about 1 foot square)
- 6 packets of carrot seeds
- For each student: School glue; 2 paper towel sheets; 1 Garden Planting Chart (Page 27); 1 marker; 1 packet of vegetable seeds from the six crops that will be planted in the school garden this season; 1 clipboard; 1 sheet of paper; 1 pen or pencil

Ask your students how a roll of paper towels could help them make sure that their plants will have just the right amount of space.

Tell them that they will learn how to use this tool today when they begin planning their garden.

Divide the class into partners. Give each team two markers, two paper towels, a copy of the Garden Planting Chart, a bottle of washable glue, and a packet of carrot seeds.

Lead the class through these steps:

- Hold up a paper towel. How many plants do you think would be able to grow in a garden that is only as large as this little space? (It depends on the type of plant. Different plants need different amounts of space. For example, broccoli grows larger than carrots do, so it needs much more space.)

- In this first paper towel garden, we will grow carrots. At the top of the paper towel, write in small letters your name and the word carrots.

- On your planting chart, find the column labeled Number of seeds or transplants per paper towel. Look down that column to the row labeled Carrots. Then the chart will tell you how many carrot seeds can be planted in an area the size of a paper towel.

- What did you find? 16 seeds per paper towel.

- We will use the paper towels to make seed templates. The templates will help us space out the seeds to give the plants the room they need.

- We will make the template so that we can space the seeds properly. We then plant our seeds with a toothpick and then put the seeds in a paper towel so that each seed gets enough space.
Table Activity Session
Paper Towel Gardening

WHERE TO FIND ME?
LGEG Manual
Week 3, page 23
How close together do we plant seeds?
What don’t we just put 16 seeds & plants in every square?
## Garden Planting Chart

<table>
<thead>
<tr>
<th>Crop</th>
<th>Recommended planting date</th>
<th>Number of days until emerging</th>
<th>Number of seeds or plants per paper towel</th>
<th>Planting depth</th>
<th>Number of days to harvest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beans (bush)</td>
<td>5-10</td>
<td>9</td>
<td>1 inch</td>
<td></td>
<td>45-60</td>
</tr>
<tr>
<td>Beans (pole)</td>
<td>5-10</td>
<td>8</td>
<td>2 inches</td>
<td></td>
<td>50-70</td>
</tr>
<tr>
<td>Beets</td>
<td>7-10</td>
<td>9</td>
<td>¾ inch</td>
<td></td>
<td>55-70</td>
</tr>
<tr>
<td>Bell peppers</td>
<td>9-14</td>
<td>1</td>
<td>½ inch</td>
<td></td>
<td>100-120</td>
</tr>
<tr>
<td>Bok choy</td>
<td>3-10</td>
<td>4</td>
<td>¼ inch</td>
<td></td>
<td>45-50</td>
</tr>
<tr>
<td>Broccoli</td>
<td>Transplant</td>
<td>1</td>
<td>Transplant</td>
<td></td>
<td>60-80</td>
</tr>
<tr>
<td>Brussels sprouts</td>
<td>5-10</td>
<td>1</td>
<td>½ inch</td>
<td></td>
<td>120-150</td>
</tr>
<tr>
<td>Cabbage</td>
<td>5-10</td>
<td>1</td>
<td>½ inch</td>
<td></td>
<td>60-120</td>
</tr>
<tr>
<td>Carrots</td>
<td>12-18</td>
<td>16</td>
<td>½ inch</td>
<td></td>
<td>70-80</td>
</tr>
<tr>
<td>Cauliflower</td>
<td>Transplant</td>
<td>1</td>
<td>Transplant</td>
<td></td>
<td>60-100</td>
</tr>
<tr>
<td>Collards</td>
<td>5-10</td>
<td>4</td>
<td>1 inch</td>
<td></td>
<td>45-80</td>
</tr>
<tr>
<td>Cucumbers</td>
<td>6-10</td>
<td>2</td>
<td>1 inch</td>
<td></td>
<td>50-70</td>
</tr>
<tr>
<td>Garlic</td>
<td>5-10</td>
<td>16 cloves</td>
<td>½ inch</td>
<td></td>
<td>100-200</td>
</tr>
<tr>
<td>Kohlrabi</td>
<td>6-9</td>
<td>1</td>
<td>½ inch</td>
<td></td>
<td>50-75</td>
</tr>
<tr>
<td>Lettuce (head)</td>
<td>5-8</td>
<td>4</td>
<td>½ inch</td>
<td></td>
<td>45-10</td>
</tr>
<tr>
<td>Lettuce (leaf)</td>
<td>6-8</td>
<td>4</td>
<td>½ inch</td>
<td></td>
<td>45-60</td>
</tr>
<tr>
<td>Mustard greens</td>
<td>3-8</td>
<td>4</td>
<td>½ inch</td>
<td></td>
<td>30-50</td>
</tr>
<tr>
<td>Onions</td>
<td>10-14</td>
<td>16</td>
<td>1 inch</td>
<td></td>
<td>80-120</td>
</tr>
<tr>
<td>Potatoes</td>
<td>14-28</td>
<td>1 seed potato piece</td>
<td>4 inches</td>
<td></td>
<td>70-90</td>
</tr>
<tr>
<td>Radishes</td>
<td>3-6</td>
<td>16</td>
<td>½ inch</td>
<td></td>
<td>25-40</td>
</tr>
<tr>
<td>Spinach</td>
<td>7-12</td>
<td>9</td>
<td>½ inch</td>
<td></td>
<td>40-60</td>
</tr>
<tr>
<td>Squash</td>
<td>4-6</td>
<td>1 seed per 4 squares</td>
<td>1 inch</td>
<td></td>
<td>45-90</td>
</tr>
<tr>
<td>Sugar snap peas</td>
<td>10-12</td>
<td>8</td>
<td>1 inch</td>
<td></td>
<td>60-100</td>
</tr>
<tr>
<td>Swiss chard</td>
<td>7-10</td>
<td>4</td>
<td>1 inch</td>
<td></td>
<td>45-80</td>
</tr>
<tr>
<td>Tomatoes</td>
<td>Transplant</td>
<td>1</td>
<td>Transplant</td>
<td></td>
<td>60-80</td>
</tr>
<tr>
<td>Turnip greens</td>
<td>4-8</td>
<td>4</td>
<td>½ inch</td>
<td></td>
<td>30-60</td>
</tr>
<tr>
<td>Turnips</td>
<td>4-8</td>
<td>9</td>
<td>½ inch</td>
<td></td>
<td>30-60</td>
</tr>
</tbody>
</table>

See page* for details of where to find recommended planting date information for your area.
**This week's lessons:**

a. Home Sweet Home 30 Mins  

b. Balloon Hot Potato 45 Mins  

**Weekly Ala Carte Features:**

- Fresh Food Exposure, page #
- Garden Kitchen Recipe Demo, page #
- Quick Classroom Exercise, page #

---

**Tip of the Week**

This curriculum involves students in every step of making a garden successful at your school. This week you will lead them in selecting the garden site, and in next week's lesson they will create garden rules and develop teams with specific responsibilities to make sure that the garden is cared for well.

---

Creating a new garden can be simple and inexpensive. If the soil is rich and well drained, you might be able to just plant into the existing ground. If not, a solution could be to make a small, easy-to-maintain raised bed garden that's filled with purchased soil.

See page # for ways to make your garden a success with little effort and money.

---

**a. Home Sweet Home** 30 minutes

**Objective**

Determine, observe, evaluate, and describe the characteristics of a garden location. 
Select a garden area that will provide for the needs of the seeds.

**Supplies**

- A Place to Grow book
- Glue
- Poster
- For each student: Home Sweet Home site evaluation sheet, pencil, or pencil; several packets of other kinds of seeds.

**Literature connection:**

*A Place to Grow Synopsis*

As it floats through the sky looking for a place to grow, a tiny seed lands in different places, looking for a home that provides for all its needs. Some places are too shady, too dangerous, or too crowded. Will the little seed ever find a place to grow?
Home Sweet Home

Name

You are trying to choose the best place to plant your garden. A rating of 1 means that the site is good, not good, very good, very not good, and excellent, respectively.

A. Site location
   Area has sunlight, __________
   Area is near a water source, __________
   Area has good, well-drained soil, __________
   Area is near where tools are stored, __________
   Area is close by and easy to get to, __________
   Add up all of the numbers in the box above and write it in the star.

B. Site location
   Area has sunlight, __________
   Area is near a water source, __________
   Area has good, well-drained soil, __________
   Area is near where tools are stored, __________
   Area is close by and easy to get to, __________
   Add up all of the numbers in the box above and write it in the star.

C. Site location
   Area has sunlight, 1 2 3 4 5
   Area is near a water source, 1 2 3 4 5
   Area has good, well-drained soil, 1 2 3 4 5
   Area is near where tools are stored, 1 2 3 4 5
   Area is close by and easy to get to, 1 2 3 4 5
   Add up all of the numbers in the box above and write it in the star.

Which environment provides the best support for a vegetable garden? How does it do this?
Base Curriculum
2 lessons/week
To earn certification, the students in your class must complete the base curriculum and participate in a class service-learning project (pages 74-75).

Choose 6 crops that will grow this season in your garden, and then assign a week to feature it!

Nutrients
- Bell pepper
- Cherry tomatoes
- Tuce
- Spinach
- Squash
- Broccoli

Garden start window of time
Soon after students evaluate & select the location in the Home Sweet Home lesson, the garden can be built.
**The Great MyPlate Debate Cards**

**Protein group**

Protein helps build, repair and renew our bodies. Some types of beans and peas like pinto beans and black-eyed peas are vegetables, but they also contain a lot of good protein. So they are included in the protein food group as well. Beans can be eaten as either a vegetable or as a protein food, but not both. Try having beans or peas mixed into meat.

- Black beans
- Roasted chicken
- Hard-boiled eggs
- Lean hamburger
- Grilled salmon
- Black-eyed peas
- Popcorn
- Green beans
- Peanut butter
- Black-eyed peas

**Grains group**

Grain foods are great sources of carbohydrates, which provide energy for our bodies. They also contain vitamins, fiber, and minerals.

There are two types of grains: whole and refined. Most of the grains you eat should be whole grains. It’s not necessary to eat 100% whole grain all of the time. But at least half of your grains should be whole grain.
This week's lessons:
  a. Rules are Rules and Schedule It 30 Mins
  b. MyPlate 30 Mins

Weekly Ala Carte Features:
  Fresh Food Exposure, page #
  Garden Kitchen Recipe Demo, page #
  Quick Classroom Exercise, page #

Tip of the week:
If you haven't already planned a day to build your class garden, now is the time. Even if you are starting a brand-new garden, it can be an easy and kid-friendly experience with just one or two volunteers. See the Quick and Easy School Garden Plans on page # for specifics on a class can be assembled.

a. Rules Are Rules and Schedule It 30 minutes

Objectives
- Recognize and solve problems by planning and assigning responsibilities.
- Establish routines and rules for outdoor safety.

Supplies
- 2 poster boards
- 2 markers
- 1 large calendar
For each team of 2 students: 1 sheet of paper; 1 pen or pencil

Ruling the garden
Before the garden is developed, ask the students to create rules that can help make it a safer place for plants and people. Brainstorm the rules with the students.

Then team up the students in groups of two.

Introduce the following situations to guide them in developing rules for their garden. Each team will create a rule to respond to the need of the situation. One teammate will write down the rule; the other will state how it would be helpful. They will switch roles after each scenario. After a few minutes, ask a few students to share their ideas.

⭐ Someone is dashing through the garden and accidentally runs over a plant.
⭐ A student is playing with a shovel by spinning it in the air and hits an animal.
b. MyPlate  30 minutes

**Objectives**
Use fraction names and symbols to describe MyPlate meals.

**Supplies**
For each student: 1 9-inch paper plate; 1 4-inch paper plate; crayons; colored pencils; 1 stapler; Choose MyPlate page; 1 blank sheet of paper.

Just as we plan to meet our plants’ needs, we must also plan our meals to meet our needs. Ask the questions below to guide the students in planning a meal that provides the right proportion of food groups and a variety of nutrients to maintain health.

★ Why is it important to plan when and how to water, weed, and harvest your plants? A plan helps us work together to complete all the garden tasks when they are needed. If we don’t plan, we might run out of time or forget to do something important like water the plants.

★ We know that if we do not plan, we might forget or run out of time to give our plants what they need.

★ Is it important to plan to provide for our own needs also?

★ Who in your house makes plans for meals?

★ Do you help decide what your family eats?

★ What should be on your plate at mealtime to make sure that you are eating all the nutrients your body needs? Foods from all the food groups.

★ Display the Choose MyPlate page.

How does this plate help us get all the nutrients our bodies need? It helps us include all the food groups and eat the right amounts from each group. If we include all of the groups, we’re more likely to eat all the nutrients that our bodies need to be healthy.

★ What are some of the benefits we get from the different food groups? Protein foods build our muscles; grains provide energy and give us fiber to clean our digestive systems; vegetables and fruits provide vitamins and fiber; and dairy foods build our bones and teeth.

★ Give each student crayons, one 9-inch paper plate, and one 4-inch paper plate or piece of cardboard.

Fold the large paper plate into halves.
Then open the plate and draw a line down the crease.
This Week's Lessons:

a. Veggie Research and Garden Graffiti  
60 Mins

b. Go, Slow, Whoa Classification 35 Mins

Weekly Ala Carte Features:
Fresh Food Exposure, page #  
Garden Kitchen Recipe Demo, page #  
Quick Classroom Exercise, page #

---

Tip of the Week:
This lesson combines color, creativity, and communication in the garden. You'll gather stones beforehand to students. These

---

Veggie Mania

Name: ________________________

Name of the plant: ________________________

Drawing of the plant

Drawing of the seeds

Use the foraging planting chart and Veggie Research to answer the questions below.

1. Is the plant grown in a warm or cool season? ________________________

2. How deep should the seeds be planted? ________________________

3. How many days after planting can the vegetation be harvested? ________________________

4. What color is the eldest part of the plant? ________________________

5. Name one U.S. state that produces this vegetable. ________________________

6. What resources does the vegetable produce? ________________________

7. What benefit do you get from eating this vegetable? ________________________

8. Write an interesting fact that you learned on this vegetable ________________________

---

Know your Stuff

Did you know that like oranges, broccoli, and carrots can help you see better at night?—and especially those who grow in the garden—contain a huge variety of nutrients. The students will not only learn about the benefits of eating vegetables, but they'll learn about the vegetables growing in the garden this season.
Class makes 3 different stones for each crop growing:

**label stone:**

**benefit stone:**

**nutrient stone:**
a Quick & Easy option to stones/paint:

Use stir sticks and permanent markers
b. GO, SLOW, WHOA Classification 30 minutes

Objectives
Classify foods into groups and describe their importance.

Supplies
1 Biggie, Cheesy Kids Meal advertisement
1 poster board
For each student: 1 UR What U Eat page (available at http://www.jmgkids.com).
1 paper towel
1 set of markers
1 set of magazines; 1 pair of scissors; 1 glue stick

Evaluate foods and classify based on amounts of:
unhealthy fats, added sugars, and salt

Whoa foods – contain the most
Go foods – contain the least

Protein: Wings
Dairy: Nacho cheese
Fruit: Apple

Ask:
★ True or false? All of the food groups are represented in this meal.
★ True or false? This meal is very good for you.

The students may already understand that French fries are in the vegetable group and that nacho cheese could be a dairy


It could be argued that they are BUT students come to consensus To classify each food as Go Slow or Whoa
Classification charts included to illustrate how foods are classified.
Week 7

This Week’s lessons:

a. 10 in 2 Color Box 30 Mins
b. 1-Week Dinner Tracker 45 Mins

Weekly Ala Carte Features:
Fresh Food Exposure, page 2
Garden Kitchen Recipe Demo, page 2
Quick Classroom Exercise, page 2

Tip of the Week
This week your students will track food groups in some of their meals outside of school. It will be up to you whether this assignment would be graded, if so, the success of that homework should be based on it being completed, not by what students are actually eating.

a. 10 in 2 Color Box 30 minutes

**Objective**
Investigate and compare foods to plan healthy meals.

**Supplies**
Large writing surface such as a poster, dry-erase board, or smart board
1 marker
For each student: 1 blank sheet of paper; 1 crayon (red, green, blue, brown, yellow, orange, or purple); 1 10 in 2 Color Box planning worksheet; crayons of all colors

Challenge your gardeners to recall as many kinds of vegetables as possible. Write them on the board.
Next ask for types of fruits, and add them to the list.
Have the students recall the nutrients that we need to grow and be healthy. Carbohydrates, fats, minerals, protein, vitamins, and water.
Reiterate that the only way to get all the nutrients our mind and body needs is to eat meals with a wide variety of foods from all five food groups—dairy, fruits, grains, protein, and vegetables.
Give each gardener one crayon (blue, brown, green, orange, purple, red, or yellow) and a blank sheet of paper.
Tell the students that they will draw a shopping list of any fruits or vegetables that they would like to eat for a whole week. The rule is that they may only draw pictures of fruits or vegetables that are the color of their crayon.
Give them 2 minutes to create their shopping lists. Although some students will be able to think of several options of fruits and vegetables with
10 in 2 Color Box

Can you eat 10 fruits and veggies in 2 days? Fill in the boxes and try to include as many different colors of fruits and vegetables as possible in your meals or snacks.

**Day 1: Plan 2 fruits and 3 vegetables**

<table>
<thead>
<tr>
<th>BREAKFAST</th>
<th>SNACK ONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>LUNCH</td>
<td>SNACK TWO</td>
</tr>
<tr>
<td>DINNER</td>
<td></td>
</tr>
</tbody>
</table>

Colors you plan to eat on Day 1:

__________________________  __________________________

**Day 2: Plan 3 fruits and 2 vegetables**

<table>
<thead>
<tr>
<th>BREAKFAST</th>
<th>SNACK ONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>LUNCH</td>
<td>SNACK TWO</td>
</tr>
<tr>
<td>DINNER</td>
<td></td>
</tr>
</tbody>
</table>

Colors you plan to eat on Day 2:

__________________________  __________________________
b. 1-Week Dinner Tracker  30 minutes

Objective
* Create and compare foods to plan healthy meals.

Week 7

GO = 0

This Week’s Menu

Monday—Burger Barn
Fries, soda, burger

Tuesday—Chicken and rice
Baked chicken, rice, milk

Wednesday—Taco Hut
Crunchy tostadas with meat, beans, and water

Thursday—Spinach Quesadilla
Whole-wheat tortilla, low-fat cheese, spinach

Friday—Pizza Planet
Deep-dish pizza with extra cheese, soda

Guiding questions:
* Why should we eat a variety of foods to provide for our bodies in a variety of ways?
* Sketch an outline of an empty MyPlate on the board.
* If I order a hamburger, fries, and a soft drink from a fast-food restaurant on Monday, which MyPlate food groups will I be eating from? Protein in the meat patty, Grains in the bun, and Vegetables in the fries.
This Week’s lessons:
a. Fruity Beauty and Blind Taste Test 40 Mins
b. Ugly Vegetables, The Tasty Unknown 40 Mins

Weekly Ala Carte Features:
Fresh Food Exposure, page #
Garden Kitchen Recipe Demo, page #
Quick Classroom Exercise, page #

a. Fruity Beauty and Blind Taste Test 40 Mins

Objectives
Predict the produce that will be the most desirable
and correlate the findings with blind taste tests.
Develop an appreciation for trying unfamiliar foods.

Supplies
Large writing surface such as a poster board, dry-eras
Marker
3 varieties of apples for judging by appearance
Same 3 apple varieties, with skin removed and cut
for tasting

Taste Test graph:

1. Jonagold 6 13
2. Red Del 11 2
3. Granny Smith 3 6

Feed A, B, or C. Unless
in separate, labeled
brown. Once
labeled plates.
b. The Tasty Unknown Paper Chain 40 minutes

**Objectives**

Develop an appreciation for trying unfamiliar foods.

Work individually to achieve a classroom goal of creating a paper chain to document the unusual foods the students have tried.

**Supplies**

1 copy of The Ugly Vegetables, by Grace Lin

A station in the classroom with:

- A variety of colors of paper and cut into 1-inch-long strips
- 1 stapler

**For each student:** 5 paper strips for the Tasty Unknown Paper Food Chain; pencils, crayons, or colored pencils

**Literature connection: The Ugly Vegetables Synopsis**

The neighbors' gardens look so much prettier and so much more inviting to the young gardener than her family's garden of "black-purple-green vines, fuzzy wrinkled leaves, prickly stems, and a few little yellow flowers." Nevertheless, her mother assures her that "these are better than flowers."

Come harvest time, all the neighbors agree, as the ugly Chinese vegetables become the fastest, most aromatic soup they have ever known. As the neighborhood comes together to share flowers and ugly vegetable soup, the young gardener learns that regardless of appearances, everything has its own beauty and purpose.

Read Grace Lin's The Ugly Vegetables to the students.

Use the questions below to guide a class discussion about the vegetables. Encourage the students to use their own words.

Write the gardeners put markers by the plants as they answered. They wanted to know which answers. She plants looked the same wrong. She plants looked the same way. She plants looked the same way. They wanted to keep their garden
1 world map
8 sticky notes labeled 1–8
1 sheet of poster board
1 white potato
1 old white potato with eyes
1 large writing surface, such as a board
Marker
1 sheet of poster board
For each student: 1 sheet of paper

Literature connection: Two Old Potatoes
Book Synopsis
Have you ever found potatoes that have sprouted and tried to plant them? What's a kid to do with sprouted potatoes?

This is a story of a young girl who has sprouted potatoes in the cupboard. The potatoes are saved from the trash (with help from Grandpa) work to growing potato plants. Will the potatoes still sprout and pick off potato beetles lead to a surprise outcome?
b. Greasy Grid Evaluation

**Essential objectives**
Analyze, observe, collect, and compare data to explain the negative effects of food choices.

**Supplies**
Large writing surface, such as a poster board, dry-erase board
2 copies of Potato Nutrition labels
For each group of 3 students: 1 snack-size bag of fried potato chips; 1 snack-size bag of baked potato chips; 2 1-gallon sealable resealable bags; 2 copies of the Greasy Grid Evaluation page; 1 pair of scissors

Ask the class to guess the correct answer to some potato trivia: Who first introduced French fries to the United States? *Thomas Jefferson*

- a) Ronald McDonald
- b) Thomas Jefferson

<table>
<thead>
<tr>
<th>Greasy grid evaluation</th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
<th>Group 4</th>
<th>Group 5</th>
<th>Group 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>regular chips greasy squares</td>
<td>87</td>
<td>150</td>
<td>117</td>
<td>97</td>
<td>103</td>
<td>161</td>
</tr>
<tr>
<td>baked chips greasy squares</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td>2</td>
<td>0</td>
</tr>
</tbody>
</table>
meat/protein = 3 ounces
grains = ½ cup
vegetables = ½ cup
fruits = ½ cup
dairy = 1 cup
b. Menu Mind Makeover 40 minutes

Objectives:
- Collaborate on a menu
- Track food choices

Support:
- 1 copy Large Market
- 6 copies of 6 sets 6 sheet
- 6 copies of 6 sets Adhesive

NEW CHICKEN RANCH GORDITA
A Gordita has NEVER BEEN

Yo Quiero Taco Bell!

Vitamin A!

Vision CARROTS

Carrots are AWESOME for your eyes and helps you see in the DARK!
Starting School Gardens
Primary constraints & stressors of our teachers

- **Time & testing**
- Many others... funding, societal/family issues, training, etc.
- Empower teachers & grow sustainability through community collaborations
Lots of Options!
The LGEG school garden project specifically designed to be:

- Simple
- Easy
- Quick
- Inexpensive
Quick & Easy Garden Kit

Provides teachers with steps on:

• Getting Materials
• Building the Garden
• Planting It

with the help of one volunteer with a drill!
Quick & Easy Garden Kit

• **Getting Materials: What are we growing?**
  - *growing 6 seasonal crops*
  - *3 square ft. plantings of each*
  - *extra space for kids to choice plantings*
  - *simplicity of steps/supplies*

Sample cool season 3x7 raised bed:

<table>
<thead>
<tr>
<th>carrots</th>
<th>leaf lettuce</th>
<th>baby spinach</th>
<th>cauliflower</th>
<th>broccoli</th>
<th>swiss chard</th>
<th>kids' choice</th>
</tr>
</thead>
<tbody>
<tr>
<td>carrots</td>
<td>leaf lettuce</td>
<td>baby spinach</td>
<td>cauliflower</td>
<td>broccoli</td>
<td>swiss chard</td>
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<tr>
<td>carrots</td>
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<td>baby spinach</td>
<td>cauliflower</td>
<td>broccoli</td>
<td>swiss chard</td>
<td>kids' choice</td>
</tr>
</tbody>
</table>
Quick & Easy Garden Kit

- simplicity of steps/supplies

2 10’ boards
21 cubic feet soil
12 4” Screws

Boards can be cut at building store
Quick & Easy Garden Kit

How to get materials to school?
- can be loaded for you at building store
- whole garden fits in back of van or small truck

(borrowed vehicle, potential volunteer task?)
Garden Kit Materials

3- by 7-foot Garden Kit (21 Square Feet)

This garden provides all the space you need for implementing the Learn, Grow, Eat & Go! garden plus 3 extra square feet of “open space” to plant.

Materials:

1. 2 boards (2-inch by 12-inch by 10-foot untreated lumber)
2. 12 exterior wood screws (each 4 inches long)
3. 10 bags of garden soil (10 2-cubic-foot bags for a total of 20 cubic feet of soil)

Other basic materials that you’ll likely need for the class to care for the garden include:

- Water-soluble fertilizer
- 4-3 Hand Towels
- Rake
- Watering Can
- Seeds/Transplants
- Water Hose
- Shovel
- Milk/Water Jug

Quick and Easy Garden Build

A 5-Step guide to creating your garden project

Although the dates are flexible, the garden should be built and planted soon after Week 4. This timing allows your class to complete the lessons on how to select a garden site to provide for their plants' needs.

The garden kit can be assembled in less than an hour with the help of even just one volunteer working alongside your class with a power drill. To help make the garden build much easier, more successful, and a more meaningful learning experience for your class, consider sending a parent letter to solicit volunteers (sample on page 22).

Use the following steps to involve your students as much as possible in building the garden.

1. Step 1: Unloading
   - If it is possible, have the students team up to safely help unload the boards and carry them into the garden site.

2. Step 2: Boxing
   - Position the boards on their sides to form the garden perimeter. Have students hold the boards in place until the next step is completed.

3. Step 3: Corners
   - One corner at a time, have the volunteer drill pilot holes and screw a 4-inch screw into each hole as shown in diagram. It’s a good idea to start with one middle hole/screw at each corner. Then the volunteer can come back around to each corner to add screws at the top and bottom of each corner board.
Tips for Starting a Children’s Garden

• Funding & Starting Small
• Solicit Involvement of Others
  – kid – parent
  – PTA – business
• “Our Garden”
• Establish a Plan
  – what – site – materials
  – build – plant – maintain
  – off season – next season
Garden success!
Goals

– Exposure to new foods preparations thru food demonstrations will engage and excite children.

– Children will share those food experiences in the home environment by encouraging care providers to prepare foods from the garden.
Selecting Recipes for In-School Food Demonstrations

1. Identify viable recipes
   - Limited set-up space, cooking equipment, and time
   - Cost and availability
   - Cooking skills
   - Kid friendly
   - Model healthful food choices & safe kitchen practices
b. 5 Senses Food

Objective
Evaluate a food sample using all 5 senses.

Supplies
Large writing surface such as a poster, dry-erase board.

TASTING 1: Carrots

You've learned that eating something is not just tasting—it's using all 5 of your senses! Today you will give a report card to a carrot. Give it a separate grade for each sense—sight, smell, feel, sound, and taste.

<table>
<thead>
<tr>
<th>Sight</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smell</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>F</td>
</tr>
<tr>
<td>Feel</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>F</td>
</tr>
<tr>
<td>Sound</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>F</td>
</tr>
<tr>
<td>Taste</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>F</td>
</tr>
</tbody>
</table>

After washing and a little more firm, some really good carrots have a tangy, sour flavor in the very middle. Sometimes, the green tops add a little bitterness. After the first nibbles at the top of the berry, you'll find the juiciest!
A. Cinnamon Carrot Crunch

Ingredients
- 4 medium carrots, peeled
- 2 medium apples, peeled and diced
- 1 cup carrots, peeled and diced
- 1/4 cup lemon juice
- 1/4 cup raisins
- 1/2 cup rolled oats
- 1/4 cup milk
- 1/2 cup vanilla yogurt
- 1 teaspoon of cinnamon

Directions
1. Wash your hands and clean your cooking area.
2. Chop the carrots, apples, and celery.
3. With a knife or peeler, peel the carrots.
4. Chop the carrots, apples, and celery, and place them in a large mixing bowl.
5. Add the lemon juice, raisins, yogurt, and cinnamon to the bowl of chopped carrots, apples, and celery.
6. Stir them until they are coated evenly.
7. Chill the salad before serving it.

Kitchen Math
1. Carrots are a great source of what vitamin? Vitamin ________
2. On average, how many pounds of carrots does a person eat each year? ________ lb. (Use your Veggie Stats Research Chart.)
3. In 5 years, how many pounds of carrots does the average person eat? ________ lb.
4. How many cups does 1 stalk of chopped celery fill? ________
5. Circle the larger measure: tablespoon, teaspoon

Nutrition Facts

How the children can help: Wipe the produce, peel the carrots, measure the ingredients, and stir the salad.

http://jmgkids.us/garden-kitchen-recipe-demos/
Nutrition Facts

Serving Size: 1/2 cup
Servings Per Container: 12

Amount Per Serving
Calories 70
% Daily Value
Total Fat 0g 0%
Saturated Fat 0g 0%
Trans Fat 0g 0%
Cholesterol 0mg 0%
Sodium 30mg 1%
Total Carbohydrate 17g 6%
Dietary Fiber 2g 8%
Sugars 14g
Protein 1g

Vitamin A 70%  Vitamin C 0%
Calcium 4%  Iron 2%

Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs.

Calories 2,000 2,500
Total Fat Less than 65g 80g
Saturated Fat Less than 20g 25g
Cholesterol Less than 300mg 300mg
Sodium Less than 2,400mg 2,400mg
Total Carbohydrate 300g 375g
Dietary Fiber 25g 30g

Kitchen math

1. Carrots are a great source of what vitamin? Vitamin __________

2. On average, how many pounds of carrots does a person eat each year? __________ (Hint: Use your Veggie Mania Research Chart)

3. In 5 years, how many pounds of carrots does the average person eat? __________

   Show your work here:

4. How many cups does 1 stalk of chopped celery fit into? __________

5. Circle the bigger measure:
   teaspoon  tablespoon

How the Children can help:
Wash the produce, peel the carrots, measure the ingredients, and stir the salad.
EAT!

Food tastings and recipe demos with your kids

There’s no better way to encourage kids to try new foods than by offering them tasty and healthy options. At our food fairs, we introduce kids to new foods and encourage them to try new things. These food tastings can be a great way to introduce kids to new foods and encourage them to try new things. These food tastings can also be a great way to introduce kids to new foods and encourage them to try new things.

Some food tastings can be a great way to introduce kids to new foods and encourage them to try new things. These food tastings can also be a great way to introduce kids to new foods and encourage them to try new things.

Swiss chard
Serving size: 1 cup

Raw nutrient amounts
- Vitamin A: 45% DV
- Vitamin C: 20% DV
- Vitamin K: 374% DV

Edible colors: Green, orange, red, white, yellow

Amount needed to provide 1 bite-size sample each for 20 students: 3 medium-size leaves

Preparation tips
- Cut away the base stems.
- Wash the leaves carefully under cold water.
- Slice the leaves into thin, 1/2-inch-long strips, and give each student 1 or 2 strips.

Option: Give each student a few drops of low-fat ranch, vinaigrette, or other salad dressing for dipping the veggie sample.
GO Strong with
Learn Grow! Eat! GO!!

Grow Strong Brain Breaks Pg. 159-172
Substantial evidence shows that physical activity can help improve academic achievement, including grades and standardized test scores.*

Week 1: Take a Walk

Materials: 1 balloon, optional satellite photo of the school campus

Time: 15 minutes

At midmorning or the end of the day, introduce the idea of an outdoor activity break to the students.

Tell the class that you will continue with the lesson after their activity break. If the weather is nice, take the class outside to your favorite place or let them take turns walking around the playground or playground equipment. If your school has an all-weather gym, you could decide to stay indoors.

To learn more about activity breaks, visit www.learnongo.org.

Week 2: Team Bubble Burst

Materials: 1 balloon for each pair of students in the class

Time: 15 minutes

Outside, choose a start line and a finish line about 25 to 30 feet apart. Pair up the students and have each pair stand at the starting line facing each other with their hands clasped behind their backs.

Place a balloon between each pair, and have the students hold it there with their chests.

When you give the signal, the students will work together to get their balloon to the finish line. The students may touch the balloon with their hands only if it drops. Then one student may pick it up and place it back in its starting position. Both players will then clap their hands again behind their backs and then continue the race. If a balloon pops, that team must run back to the starting line, then to the finish line, and sit until all other teams have also crossed the finish line.

The winning team will be the first to cross the finish line and pop the balloon by stomping, squeezing, or sitting on it.

The race continues until all teams cross the finish line.
OR use YOUR State walking program!

http://walkacrosstexas.tamu.edu
Opportunities to Bridge

Into the Family Environment
Dear Parents,

Our class will soon be starting a unit on garden studies called Learn, Grow, Eat & Go! Over the next few weeks, you will learn about plants, including why they are important for us. As we begin to grow our own garden, we will also be learning about how plants help us live, grow, and thrive.

- Contact local businesses to ask for donations of soil to help with planting.
- Pick up garden supplies from local businesses.
- Help the class build the garden. (We are building the garden ourselves!)
- Help the teacher in class with special instructions.
- Assist with gathering supplies and preparing instructions.
- Help lead recipe demonstrations for our class.

You may want to know more about the questions:
- What are the benefits of growing your own food?
- How can you integrate gardening into your daily routine?

Sincerely,

[Signature]

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Samana 1

Claves para el jardín

Esta semana iniciamos la unidad de escuela de jardinería llamada Learn, Grow, Eat & Go! Durante las próximos 3 meses, aprenderemos qué significa tener un jardín orgánico y cómo podemos vivir mejor usando las plantas que nos proporcionan para comer. A continuación, la propuesta para que el día se inicie:

La ciudad invertirá más en sus zonas verdes, pero necesitamos cuidar de nuestras plantas. Aquí están las zonas verdes que el jardín puede ayudar a mejorar.

Los otros montajes, agua y tierra. También trabajamos en las semillas de siembra del sombrero que entrega el jardín. ¡Bienvenidos a la próxima!
FAMILY ENGAGEMENT!!

A Cinnamon Carrot Crunch

Recipe Card

Ingredients

- 1 cup brown sugar
- 1/2 cup flour
- 1/4 cup cinnamon
- 1/4 cup butter
- 1 egg
- 1 cup carrots

Directions

1. Preheat oven to 350°F.
2. Mix ingredients together in a bowl.
3. Pour into a greased baking dish.
4. Bake for 30 minutes or until done.

Quick & Easy Garden Kit

- Simplicity of steps/supplies

2
4 10" boards
21 cubic feet soil
4 4" Screws

Learn, Grow, Eat & Go!

Joseph Plants a Garden

Family Stories

Out and About

Dinner Tonight!

Week 1

Garden Journal: Week 1

Mother's Dinner!
Opportunities to Engage Volunteers
Utilizing Volunteers

• Volunteer descriptions and roles/responsibilities available
• ANY volunteer can be trained and utilized for assisting with school gardens, food demonstrations, physical activity events and curriculum activities.
• Volunteer training should “model” how you want them to implement!
• Who can volunteer? – Master gardeners, Master wellness, parents, community members, university interns, etc.
If you have access to volunteers, this page lays out specific tasks you can assign them to help:

<table>
<thead>
<tr>
<th>Sample Volunteer Schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Learn, Grow, Eat, &amp; Go!</strong> Base curriculum lessons</td>
</tr>
<tr>
<td><strong>Week 1</strong> A. Know &amp; Grow, Samhreko B. Grow a Variety of Food</td>
</tr>
<tr>
<td><strong>Week 2</strong> A. Tips for Eatin', Plant Parts We Eat B. Nutrients in Greens</td>
</tr>
<tr>
<td><strong>Week 3</strong> A. Don't Crowd Me &amp; A Paper Towel Gardening</td>
</tr>
<tr>
<td><strong>Week 4</strong> A. A Race to Grow Home Sweet Home B. Balloan &amp; Friends</td>
</tr>
<tr>
<td><strong>Week 5</strong> A. Pale Ale Beers and Schedule II B. MyPath</td>
</tr>
<tr>
<td><strong>Week 6</strong> A. Veggie Research and Garden Graffiti B. GO, SOW, WITH Classification</td>
</tr>
<tr>
<td><strong>Week 7</strong> A. 10 in 2 Color Box B. 1 Week Dinner Track</td>
</tr>
<tr>
<td><strong>Week 8</strong> A. 10 in 2 Color Box B. 1 Week Dinner Track</td>
</tr>
<tr>
<td><strong>Week 9</strong> A. Growing Her Baby Old B. Greedy-g轨迹 Formation</td>
</tr>
<tr>
<td><strong>Week 10</strong> A. Kitchen Coffee Conversion B. Fruit and Vegetable Mix</td>
</tr>
</tbody>
</table>

The sample schedule can help you organize projects to better utilize your help. This project is part of a larger initiative to increase community engagement, reduce food waste, and foster sustainable practices.
LGEG Support and Resources
## Program Costs

<table>
<thead>
<tr>
<th>Estimated costs for 1 classroom with 25 students</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Garden for 1 Fall or Spring Season</td>
<td>$150</td>
</tr>
<tr>
<td>Supplies for 6 food demonstrations and tastings</td>
<td>$100</td>
</tr>
<tr>
<td>Cost for providing a kit of supplies for LGEG and WAT</td>
<td>$200</td>
</tr>
</tbody>
</table>

- These costs can vary based on available resources in each county
- There are a variety of options for funding the program
Website Support

• Support for each component – Learn, Grow, Eat & GO! including garden/cooking videos, pictures, downloadable resources
• Resources for teachers & parents
• Cooperative Extension resources
• USDA Research study results

http://jmgkids.us/LGEG
Website Support

• Cooperative Extension: County Extension Agent Support
  – Evaluation surveys, interpretation guide, county report template
  – CEA toolkit – Volunteer position description, how to recruit and promote to schools, timeline, budgets, planning guides, Agent roles
  – Supply list – LGEG, WAT, & Recipes
  – Agent program planning guide
  – Workshop kit – ppt, training agenda, taped webinar

http://jmgkids.us/LGEG
Breakout Discussions

Use of JMG programs with various groups

Program planning, collaboration, training
Coalition/Advisory Committees

Who? Key Players & Stakeholders

Schools
Existing schools groups - PTO, SHAC, others
Community Volunteer groups - MG’s, Junior League, Lions Club
Churches/faith based groups
Health organizations
Businesses
Neighborhood associations
Parks/Recreation
Media Outlets

ENGAGE - at the beginning, ownership, PRIDE!

Value what others can contribute to the program!
Identify potential donors or funds

- School budget
- PTA
- School fundraising or donations
- Find out who might be willing to support your project and their funding cycle/previous funding
- Individuals, Organizations, Local businesses
- Learn about regional foundations in your area
- Websites like [www.foundations.org](http://www.foundations.org)
- Large corporations in your area often have a foundation: IE: Lowes, Home Depot, etc.
First Steps, Goals, and Timelines

- Identify tasks to be done
- Identify who will be lead on tasks
- Set goal for implementation and completion
- Celebrate success
Creating an Implementation Plan

Use planning document for JMG, LGEG, or both to help get you started.
Program Highlights from the Field!
Wrap Up and Door Prizes!