



Junior Master Gardener
growing good kids...

2019 JMG:

- 20th Anniversary
- JMG in all 50 States, 10 countries
- 38 State Partners
- 4 International Partners

An international youth garden program of the cooperative Extension network.

2019 JMG National Leader Training

Literature

Learn, Grow, Eat & GO!

COURSE INTRO

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

COURSE WRAP UP

01 Course Introduction and Overview

02 Importance and Role of Books

03 Plant Identification

04 Plant Parts

05 Plant Needs

06 Plant Growth

07 Plant Processes

08 Propagation

09 Life Cycle & Plant Evolution

2019

JMG Updates!

Partnerships:

- Borlaug Institute Intl. Agriculture
- American Horticultural Society
- Nursery/Landscape Associations
- Keep America Beautiful
- State Departments of Agriculture & USDA
- State Master Gardener Programs
- National 4-H Program

2019 JMG® National Leader Training



Our Mission: Growing good kids by igniting a passion for learning, success, and service through a unique gardening education.

2019 JMG® National Leader Training

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*



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Igniting a passion for success

For **all** students
The JMG program currently serves students in school settings with over



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Igniting a passion for success

“The high school students gain a better understanding of the concept being taught...they enjoy teaching horticulture and environmental science and have learned a greater respect for the teaching profession.”

High School Teacher



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Igniting a passion for success

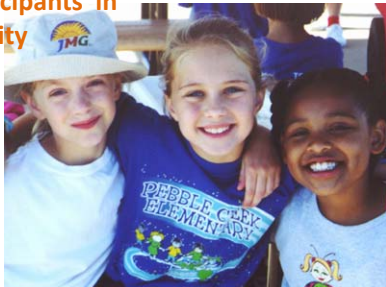
Recognition certifications for kids



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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.



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This training conference will equip you to:

- effectively lead proven, research-based JMG lessons
- prepare JMG teacher/leader training events for their local communities
- enroll & register children in the JMG program
- organize and engage youth in career exploration and service learning activities
- involve local schools, county Extension office, volunteers and parents with JMG programs

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National JMG Office:

- Assist states in starting JMG program
- Assist or conduct leader trainings
- Assist in pursuing financial support through sponsorships and grants
- Maintain national JMG database & website
- Publish and distribute curriculum
- Protect trademarks and program quality

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Dream Big!

If you are not the lead dog, the scenery never changes!



Together, we can all make the commitment and leave a legacy growing good kids!

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JMG Class/Group Registration

The JMG group/class:

- Public school
- Private/charter schools/home schools
- 4-H Clubs, Boy/Girl Scouts
- after school programs, YMCA
- Public and botanical gardens

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JMG Registration:

- Minimum of 5 youths
- One or more adult teacher/leader(s)
- Suitable meeting facilities
- An official group name

Register even if...



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Volunteer Screening Year: Not Screened

Gender

Female
 Male

Ethnicity

Are you of Hispanic ethnicity? No Yes

White
 Black
 American Indian or Alaskan Native
 Native Hawaiian or Pacific Islander
 Asian

Residence

Farm
 Town under 10,000 and rural non-farm
 Town/City 10,000 - 50,000 and its suburbs
 Suburb of city more than 50,000
 Central city more than 50,000

Delete Leader Return To Leader Summary Continue >>

4Honline Registration powered by 4HOnline

Add your group & print group registration certificate

Junior Gardener growing good kids.

Logged in as Bryant Patricia (Return to the Home Page)

Profile Leaders **Groups** Certificates

You may print group certificates once your registration is approved. You will receive an email upon approval.

Add a New Group

select a group.
 select a certificate.

Add Group Print Certificate

GROUPS

Title	Edit
North Sunter Bugs & Dirt Club	Edit

4Honline Registration powered by 4HOnline

Why Should Groups Register?

- Get a cool registration certificate.
- Get updates on upcoming JMG news and events.
- Be eligible for give-aways
- It's free, doesn't obligate youth to complete program.
- Allows youths in your group to earn recognition certifications.



4Honline Registration powered by 4HOnline

NEW tool to capture impact...



4Honline Registration powered by 4HOnline

Junior Master Gardener
growing good kids.
Put your JMG group on the map!
ADD YOUR CLASS TO JMG NATIONAL MAP

LEGS, Grow, Give, Engage & Learn (LEGS) is the new research-based, evidence-based curriculum project of the International Junior Master Gardener® Program.

LEGS grows good kids through an interdisciplinary program combining academic achievement, gardening, outdoor-dinner food experiences, physical activity, and school & family engagement.

PURCHASE LEGS CURRICULUM

JMG COLORADO
See JMG 7 offers for your class!

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Gardener
You using Junior Master Gardener at your campus?
Tell us and in a few clicks below, JOIN the NETWORK of other teachers/leaders that share in the mission of GROWING GOOD KIDS!
The map is just beginning to GROW! Complete mini-form to add your class.

Put your JMG group on the map!
Add your class or group below!

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NAME OF SCHOOL OR SITE: Nichols Elementary School
SCHOOL/SITE ADDRESS: 9540 Braun Road
CITY/TOWN: San Antonio
ZIP/CITY/STATE CODE: 78214
FIRST NAME: Lance
LAST NAME: Kaufer
E-MAIL ADDRESS: lance.kaufer@nisd.net
IS YOUR JMG GROUP BECKET? Yes
IS YOUR JMG GROUP USING? Yes
AND WHAT GRADES OF SITE? grade 3, grade 4, grade 5

www.JMGkids.us/map

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Junior Master Gardener
growing good kids. SM

JMG & the Core Curriculum

2019 National JMG Leader Training

Junior Master Gardener® Program

Program Purpose:

- Develop leadership skills
- Identify community needs/volunteer opportunities
- Peer and cross generation mentoring
- Foster personal pride and responsibility
- Increase knowledge in environmental & horticulture education

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Junior Master Gardener® Program

Levels of Instruction

Currently available

- Level 1 - Grades 3-5
- Level 2 - Grades 6-8

announcing!
 JMG Early Childhood Curriculum currently being piloted!

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Curriculum Design

- Hands-On and Project Based
- Integrated across all subject areas
- Flexibility of use
- Choices available in group and individual activities
- Community service and leadership incorporated in all units

Junior Master Gardener®

Level One Core Curriculum



JMG
Teacher
Guide



JMG
Youth
Handbook

2019 JMG® National Leader Training




CONTENTS

- Foreword..... vii
- Chapter 1. Plant Growth and Development 2
You'll learn how plants grow and make our world a better place.
- Chapter 2. Soils and Water..... 28
You'll get your hands dirty and learn how soil and water are important to plants and all living things.
- Chapter 3. Ecology and Environmental Horticulture 42
You'll get the big picture of how people, plants and animals all depend upon each other and how you can help to take care of our environment.
- Chapter 4. Insects and Diseases..... 64
You'll find out what's bugging you and your plants by exploring the world of insects and plant diseases.
- Chapter 5. Landscape Horticulture 98
You'll learn how to create and take care of beautiful gardens, and how to attract birds, insects and other creatures to your backyard or neighborhood.
- Chapter 6. Fruits and Nuts..... 124
You'll learn about many different kinds of fruits and nuts, and make fruit smoothies, raisins, and even peanut butter!
- Chapter 7. Vegetables and Herbs 158
You'll learn to grow many different kinds of vegetables and herbs and how to cook them in some yummy dishes.
- Chapter 8. Life Skills and Career Exploration 188
You'll learn more about you, your friends and your school, and discover how to make plans for your future.
- Recipes..... 176
- Appendix..... 185



The JMG® Teacher/Leader's Guide

- Introduction and management guide
- Chapter group activities
- Community Service Projects/Leadership
- Helpful appendices



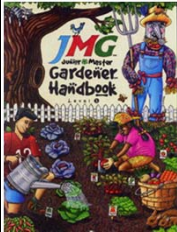
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Go and Do It !!!



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JMG Youth Handbook



2019 JMG National Leader Training

Activity Session 1

Secret Smells (pg. 79, *Teacher/Leader Guide*)

Know and Show (pg. 4)

Metamorphosis Bracelets(pg. 83)

Potato Vase (pg. 87)

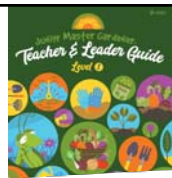
Plant People (pg. 165)

Grow Cards (pg. 63) **Plant Parts Rap** (pg. 8)



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Teaching Children About Insects



Complete Metamorphosis: egg, larva, pupa, adult



An adult insect lays its eggs in a protected place where the hatching larvae can easily find food. When the larvae hatch, they are eating machines! As a larva grows, it sheds its skin several times because its skeleton is on the outside of its body and cannot expand and grow with it. When it has reached full size as a larva, it is ready for the next stage, called the pupa (plural: pupae). The larva may form a cocoon or chrysalis. Inside the cocoon, the insect's body changes form and is transformed into the adult form. Then the adult insect breaks out of the cocoon and mates. The cycle starts over again.

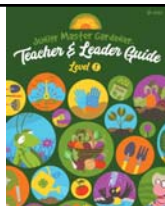
There are several types of incomplete metamorphosis. Incomplete metamorphosis may change features somewhat as they grow, may change very little except for the addition of such features as wings or six organs, or may not change at all. Some insects with this type of metamorphosis may live part of their lives underwater as aquatic insects.

Incomplete Metamorphosis: egg, nymph, adult

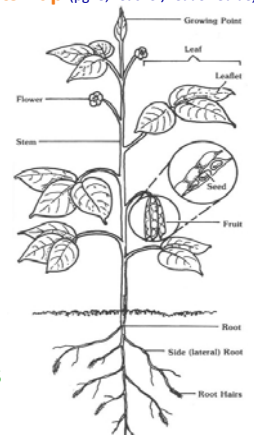


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Plant Parts Rap (pg. 8, *Teacher/Leader Guide*)



roots,
stems,
leaves,
flowers,
fruit,
seeds



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Teaching Children About Insects

Kids Love Bugs!

- 3 Body Regions
- 3 Pair of Legs
- Eyes
- Antennae
- Wings or no wings



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Grow Cards (pg. 63, Teacher/Leader Guide)

- Fund raiser
- Mothers day cards
- Thank you notes



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How is the Program Used?

Pick and choose some JMG activities for your youth to try

JMG Recognition Opportunities:

- Recognition Medals
- JMG Certifications



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JMG® Certification for Youths

- Certified Junior Master Gardener®
- Golden Ray Series Certification
- Learn, Grow, Eat & Go! Certification
- JMG® Level 2 Certifications

2019 JMG® National Leader Training

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Appendix 176



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For a JMG to be invited as a Junior Master Gardener, you and your school should be recognized for each service/leadership concept in this chapter. You, JMG, group should also select one leadership/service learning project for this chapter to complete.

Service Learning	Leadership
<ul style="list-style-type: none"> Planting a tree (p. 40) Planting a vegetable garden (p. 41) Planting a herb garden (p. 42) Planting a fruit tree (p. 43) Planting a nut tree (p. 44) Planting a vegetable garden (p. 45) Planting a herb garden (p. 46) Planting a fruit tree (p. 47) Planting a nut tree (p. 48) 	<ul style="list-style-type: none"> Planting a tree (p. 49) Planting a vegetable garden (p. 50) Planting a herb garden (p. 51) Planting a fruit tree (p. 52) Planting a nut tree (p. 53) Planting a vegetable garden (p. 54) Planting a herb garden (p. 55) Planting a fruit tree (p. 56) Planting a nut tree (p. 57)

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Complete 1 group activity per teaching concept

Complete 1 individual activity per teaching concept

Complete 1 service learning/leadership project



Junior Master Gardener Logout

Recognizing your kids...

Profile Leaders Groups **Completion**

Select a Group: Hot Hedgehogs

First Name:

Last Name:

Print:

Add Attendee

Attendees			
	First Name	Last Name	Edit
Certificates			
Completion Certificates			
Level 1 Certified Junior Master Gardener			
A Level 1 Certified Junior Master Gardener			

Print Certificate

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Logged in as Bryant: Patricia [Return to the National account] [Change Password](#)

Profile > Leaders > Groups > **Completion**

Select a Group: North Sumter Bugs & Dirt Club

First Name:

Last Name:

Print:

[Add Attendee](#)

Attendees

Print	First Name	Last Name	Edit
<input checked="" type="checkbox"/>	Patricia	Bryant	Edit

Certificates

Completion Certificates

Golden Ray Series Certifications

- Level 1 Certified Junior Master Gardener
- Golden Ray Series Certifications
- Level 2 Junior Master Gardener Certifications

[Print Certificate](#)



Activity Session A

Secret Smells (pg. 79, *Teacher/Leader Guide*)

Know and Show (pg. 4)

Plant Parts Rap (pg. 8)

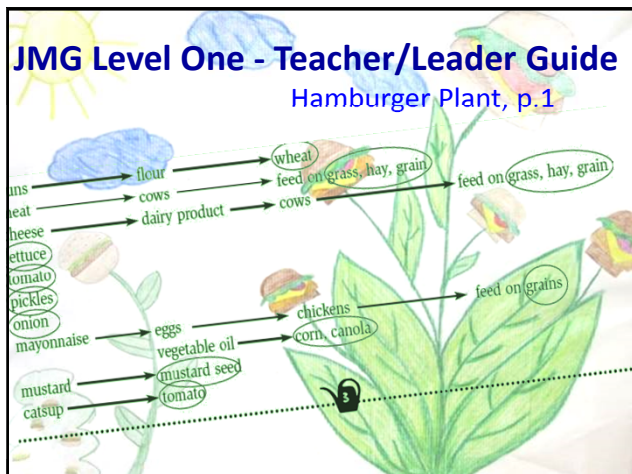
Grow Cards (pg. 63)

Chew on This (pg. 94)

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2019 National JMG Leader Training

Lesson features:
JMG Teacher & Leader Guide

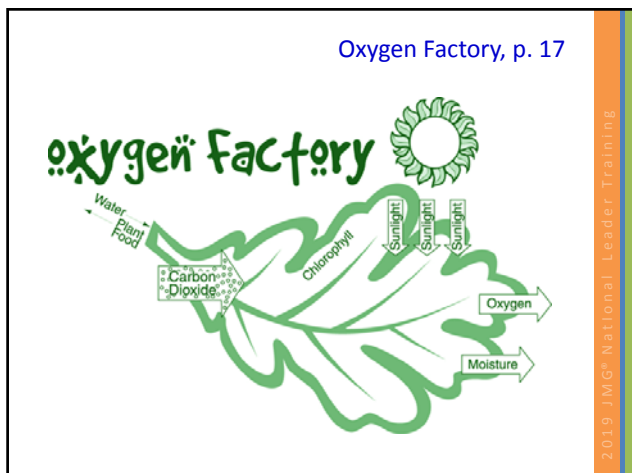


Seed Science, p.10

SEED SCIENCE EXPERIMENT PAGE

1. A glass of water with seeds floating on the surface.
2. A close-up of seeds on a white surface.
3. A seed in a small container.
4. A hand holding a seed over a tray.
5. A seed in a small container.

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Leaf & Seed Sort Chart, p.10

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Cylinder Gardening (p. 164)

2019 JMG® National Leader Training

How Tall is that Tree? (pg. 165)

A. 5 ft
B. 50 ft
C. 500 ft
D. 5000 ft

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Suck a Bug (pg. 79)

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Access to JMG curricula:

AgriLife Bookstore delivery!

Additional conference Bookstore orders must be placed by 2pm, Feb. 28

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Golden Ray Series

**Junior Master Gardener®
Golden Ray Series**
thematic Level One Curricula



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JMG. Certification for Youths

- *Certified Junior Master Gardener®*
- *Golden Ray Series_{sm} Certification*

**Junior Master Gardener®
Golden Ray Series**
thematic Level One Curricula

Golden Ray Series Certification

- A.** any combination of 12 activities
- B.** completing 1 Life Skills/Career Exploration activity
- C.** participating in 1 service project

2019 JMG® National Leader Training

Junior Master Gardener® Golden Ray Series

thematic Level One Curricula



teaching concepts:

- Basic Gardening
- Growing Techniques
- Thrifty Gardens
- Food Safety
- ABCs of Healthful Eating
- Healthful Snacks

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Junior Master Gardener® Golden Ray Series

thematic Level One Curricula



“Parents are excited that their kids are in the program. Their children have stopped going to the candy aisle first and are going to the fruits and vegetables.”

*Sandy Farber, JMG Coordinator,
District of Columbia*

2019 JMG® National Leader Training

Junior Master Gardener® Golden Ray Series

thematic Level One Curricula



teaching concepts:

- Gardening Basics



2019 JMG® National Leader Training

Literature in the Garden

- Brings children’s literature to life
- Integrates gardening across all subjects
- recognizes youths with certification



2019 JMG® National Leader Training

NATIONAL CHILDREN & YOUTH GARDEN SYMPOSIUM AMERICAN HORTICULTURAL SOCIETY

GROWING GOOD KIDS™

Excellence in Children's Literature Book Awards Program

Recognize those children's books that are uniquely successful in promoting an understanding of and appreciation for plants, gardening and the environment.



Junior Master Gardener and The American Horticultural Society

growing good kids™

2019 JMG® National Leader Training



Growing Good Kids Book Award

Excellence in Children's Literature Book Awards Program

2018 Winners:

What Will Grow?

Fresh-Picked Poetry: A Day at the Farmer's Market

2017
2016
2015
2014

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Junior Master Gardener® Golden Ray Series

thematic Level One Curricula




Dig into to gardening for wildlife!

Identify local birds, mammals, insects, reptiles and amphibians.

Investigate life cycles and interrelatedness of wildlife/plants.

Discover how to attract desirable wildlife to your garden.

Establish a NWF® Certified Schoolyard Habitat®!

www.nwf.org®

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Junior Master Gardener® Golden Ray Series

thematic Level One Curricula



teaching concepts:

- Habitat Gardening Basics
- Essential Elements
- Birds
- Mammals
- Insects
- Reptiles and Amphibians
- Wildlife Habitat Sites



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How do my kids become *Certified Wildlife Gardenerssm*?

Youths can earn certification as a *Wildlife Gardenersm* by completing:

- A.** at least 12 activities
- B.1** Life Skills/Career Exploration activity
- C.** establish a Certified Schoolyard Habitat or other service-learning project



How do my kids become *Certified Wildlife Gardenerssm*?



Junior Master Gardener® Golden Ray Series

thematic Level One Curricula



2019 JMG® National Leader Training

Junior Master Gardener® Golden Ray Series

thematic Level One Curricula

in one chapter/theme

- Plant Growth & Development
- Soils & Water
- Insects & Plant Diseases
- Ecology & Environmental Hort
- Landscape Horticulture
- Fruit & Nutrition
- Vegetables & Herbs
- Life Skills & Career Exploration
- **multi:** Growing a Vegetable Garden

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Activity Session 2

- Cookie Key**, *Wildlife Gardener* (pg. 82)
- Overhead Roots**, *Lit in the Garden* (pg. 113)
- The Great Cover Up**, *Wildlife Gardener* (pg. 88)
- Monster Flowers**, *Lit in the Garden* (pg. 23)
- Carnivorous Kid Plants**, *Lit in the Garden* (pg. 33)

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Teaching Concept 5

Activity 22 Cookie Key

Objective: Identify and classify insects using a Cookie Key Flow Chart

Cookie Key Flow Chart

1. This cookie is soft fig bar
 1. This cookie is hard Go to 2
 2. This cookie has chocolate in or on it Go to 3
 2. This cookie does not have chocolate in or on it Go to 4

cookie has chocolate pieces chocolate chip cookie
 cookie has filling chocolate sandwich cookie
 cookie is shaped like an animal animal cookie
 cookie is not shaped like an animal Go to 5
 cookie has a hole in the middle Go to 6
 cookie does not have a hole in the middle ginger snap
 cookie tastes like lemon lemon cookie
 cookie tastes like butter butter cookie

groups to share and eat the cookies when they are finished!

Students will be able to identify insects that insects can be identified using a key, too. Pass out an insect key to identify it.

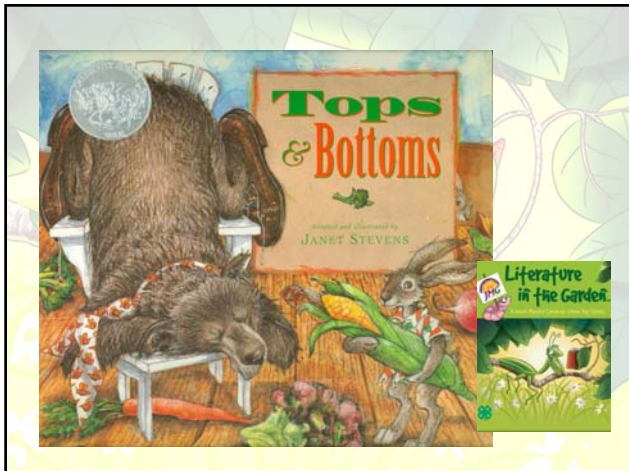
Students use the Insect Key, page 86, to determine what Order (a type of group) the insects belongs to. This key can come in handy when trying to tell the good guys from the bad guys in your garden habitat area.

Have the students take home a copy of their insect key to show a family member how to use a key to identify an insect that they find around their home.

The following are easy to "key out":

- Ladybugs
- Grasshoppers
- Crickets
- Aphids
- Ants
- Butterflies
- Flies
- Stink bugs

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Wildlife Gardener!

Far Out Feeder, p55





Activity 11: Far Out Feeders

Materials: 1 wire hanger, 1 bottle of Snapple, 1 hole punch, 1 string, 1 pair of scissors

Directions: 1. Use the hole punch to punch a hole in the cap of the Snapple bottle. 2. Use the scissors to cut a piece of string about 12 inches long. 3. Thread the string through the hole in the cap. 4. Tie the string to the wire hanger. 5. Hang the feeder from a tree branch.

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Carnivorous Kid Plants, p55



Activity 12: Carnivorous

Materials: 1 Venus flytrap, 1 pair of tweezers, 1 small piece of paper, 1 small piece of string

Directions: 1. Use the tweezers to carefully pick up the small piece of paper. 2. Gently touch the paper to the trigger hairs of the Venus flytrap. 3. Watch the Venus flytrap close its trap and begin to digest the paper.

2019 JMG National Leader Training

Literature in the Garden

Growing Clean Air Neck Pet, p40




Activity 13: Growing Clean Air Neck Pet

Materials: 1 clear plastic cup, 1 ball of blue yarn, 1 pair of pliers

Directions: 1. Use the pliers to punch a hole in the side of the clear plastic cup. 2. Thread the blue yarn through the hole. 3. Tie the ends of the yarn together to form a loop. 4. Hang the loop around your neck. 5. The cup will act as a filter for the air you breathe.

2019 JMG National Leader Training

Literature in the Garden

Growing Clean Air Neck Pet, p40




Activity 13: Growing Clean Air Neck Pet


Materials: 1 clear plastic cup, 1 ball of blue yarn, 1 pair of pliers

Directions: 1. Use the pliers to punch a hole in the side of the clear plastic cup. 2. Thread the blue yarn through the hole. 3. Tie the ends of the yarn together to form a loop. 4. Hang the loop around your neck. 5. The cup will act as a filter for the air you breathe.

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Ties that Coil, pg. 106

Ties that Coil, pg. 106

So, where do you get the ties?!

Host an Ugly Tie Day!



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A la Carte Garden, pg. 137



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Junior Master Gardener® Golden Ray Series

thematic Level One Curricula



stand-alone curriculum:

-  Literature in the Garden
-  Wildlife Gardener!
-  Health and Nutrition

chapters/themes:

- Plant Growth & Development
- Soils & Water
- Insects & Plant Diseases
- Ecology & Environmental Hort
- Landscape Horticulture
- Fruit & Nutrition
- Vegetables & Herbs
- Life Skills & Career Exploration
- **multi:** Growing a Vegetable Garden



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2019 National JMG Leader Training

Research & Evaluation

Is there a network to support?

Examples of networks that support JMG programs in the United States:

- Network of educators/volunteers in place – EFNEP, SNAP-Ed, and adult Master Gardener volunteer programs
- **Local farmers market and farm to school programs**
- State and local health organizations and agencies
- **State and local education organizations**
- Chef Associations
- **Community volunteer organizations**



National Interest

- USDA – Farm to Cafeteria
- Increase in sales of vegetable transplants through nurseries
- Concept of “local-vores”
- Organically grown
- Food labeling
- Personal relationship with food
- Food as health



2019 JMG National Leader Training

Does gardening work? *What does the research say?*



An Early Focus: 2007 issue of Hort Technology

Studies specifically examining the benefits of students participating in JMG Curricula :

“...results show once weekly use of gardening activities and hands-on classroom activities **help improve science achievement** test scores.”

Impact of Hands-on Science through School Gardening in Louisiana Public Elementary Schools

- “Students in the experimental group scored significantly **higher on the science achievement test** compared to the students in the control group .”

Growing Minds: The Effect of a School Gardening Program on the Science Achievement of Elementary Students



2019 JMG® National Leader Training

2007 issue of Hort Technology

Studies specifically examining the benefits of students participating in JMG Curricula :

“Qualitative data also indicated that the students **enjoyed the program, shared what they learned with others,** and wanted to participate in more JMG and gardening type activities .”

An Evaluation of the Junior Master Gardener Program in Third Grade Classrooms

- “... students in the experimental group did significantly **increase their overall life skills scores** .”

Growing Minds: The Effects of a One-year School Garden Program on Six Constructs of Life Skills of Elementary School Children



2019 JMG® National Leader Training

Gardening and Experiential Nutrition Education in Schools

A Promising Approach:

- **Students studying nutrition in classroom while growing vegetables outdoors increased nutrition knowledge and preference for vegetables.**

(Morris, Neustadler, Zidenberg-Cherr, 2001 and Morris, Zidenberg-Cherr, 2002)

- **Children who plant and harvest their own vegetables are more likely to eat them.**

(Morris, 2002; Foerster, et.al, 1998; Morris, et. al, 2001, Morris and Zidenberg-Sherr, 2002)



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Gardening and Experiential Nutrition Education in Schools

A Promising Approach:

- Nutrition Education plus gardening was found as an effective strategy for **improving in school consumption of fruit and vegetables** during school lunch times.

(Parmer et.al., 2009)

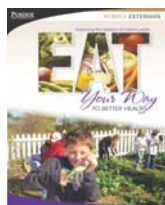
- Evidence of promising gains in fruit and vegetables interest and knowledge, but limited evidence-based, peer-reviewed research evaluating gardening programs on nutritional outcomes.

(Robinson-O'Brian, 2009)



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Indiana State-wide *Eat Your Way to Better Health* program



- Conducted and evaluated for 3 years
- Used JMG Curricula
- Youth higher healthy food choice self-efficacy
- Higher variety of fruit and vegetable consumption
- Family fruit and vegetable consumption was related to youth fruit and vegetable consumption
- Suggested that future program offering should include more parental/guardian involvement

Kararo, Matthew, K. Orvis, and N. Knoblock. 2016. Eat Your Way to Better Health: Evaluating a Garden-based Nutrition Program for Youth. HortTechnology 26(5): 663-668.

http://www.cfs.purdue.edu/extension/food_health/nutrition/better_health.html

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Summary of key research areas:

Personal, social, physical, and moral development including self-concept, self-esteem, and motivation (Bowker & Tearle, 2007; Dirks & Orvis, 2005; Hendren, 1998; O'Brien & Shoemaker, 2006; Robinson & Zajicek, 2005; Sheffield, 1992; Simone, 2003)

Positive environmental attitude and empathy (Berenguer, 2007; Dirks & Orvis, 2005; Skelly & Zajicek, 1998; Waliczek & Zajicek, 1999)

Increased food literacy and healthy eating habits (Canaris, 1995; Koch, Waliczek, & Zajicek, 2006; Lineberger & Zajicek, 2000; Morris, Neustadter, & Zidenberg-Cherr, 2001; Parmer, Salisbury-Glennon, Shannon, & Struempler, 2009; P. J. Morgan et al., 2010)

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Summary of key research areas:

School bonding, parental involvement, and formation of community (Brink & Yost, 2004; Brunotts, 1998; Cutter-Mackenzie, 2009; Mayer-Smith, Bartosh, & Peterat, 2009; Waliczek, Logan, & Zajicek, 2003) (p. 212).

Curricula connections made with school gardens enhanced academic achievement (Berezowitz, Yoder & Schoeller, 2015; Williams and Dixon, 2013)

Extension professionals and volunteers support through providing horticulture, nutrition, food safety and instruction (Black, Haynes, Schrock, Duerfeldt, & Litchfield, 2016; Dzubak, Shaw, Strohbehn & Naeve, 2016)



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Journal of Agricultural Education, 59(2), 143-166 <https://doi.org/10.5032/jae.2018.02143>
Journal of Agricultural Education 143 Volume 59, Issue 2, 2018 Outcome Framework for School Garden Program Development and Evaluation: A Delphi Approach John M. Diaz1, Laura A. Warner2 & Susan T. Webb3

Development & evaluation programs to optimize impact and sustainability

- Delphi technique – solicit, collate, and direct responses to achieve consensus among group of experts.
- Identify the most meaningful outcomes (short, medium and long term)
- Develop comprehensive set of indicators and integrate needs into framework
- 3 rounds of questions/responses – from 74 experts all across USA
- Teachers- all levels, university/Extension, state agency, non-profit, volunteer

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- **Short term** – school gardens should increase knowledge of food systems of healthy eating while nurturing a love of gardening among students
- **Medium-term** – school gardens should promote connection to nature, more engaged students, and sharing of gardening information
- **Long-term** – school gardens should result in better outdoor environments improved access to healthy produce and sustained school gardening programs



Information from this article can assist with components to maximize outcomes, create best practices, when and how to evaluate, framework to assist with grant writing and build sustainable programs.

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Research Project: Texas Grow! Eat! Go!
Expansion/Implementation/Research
Study Project



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Resources for Research

www.jmgkids.us/research



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AgriLife Bookstore delivery!
Additional conference
Bookstore orders must be placed by 3:30pm, Feb. 27

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Tomorrow:

- Breakfast & posters 7:45-8:20
- Start at 8:30
- Focus on *Learn, Grow, Eat & Go!* curriculum
- Panel lunch discussion

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