

Expectations

You must have a computer to participate in this class and have access to PowerPoint, be able to read pdf's and listen to videos.

You will need an email address.

You will be given access to the class where you can register online. This information will be sent to you prior to the class start. It is expected that you look at the tutorial and review the course documents presented in the order shown on the homepage of the Class/

MAC and iPad Users

There are some differences between these devices and Windows PC. The files and PowerPoints have been saved in Moodle as PDF files to make them accessible to MAC's and iPads. When you are uploading any documents for an activity or a discussion, please save them as PDF's before you upload them, or your Teachers / Mentors will not be able to read them. Moodle will take PDF files and .txt files, but it cannot read .page files. For Windows users, docx files are accepted.

Class Structure

The class is a hybrid class consisting of online, self-paced modules, Zoom Meetings and Saturday Hands-on Labs and a final Action Project / Presentation.

Class Textbook: The Maryland Master Gardener Handbook, University of Maryland 2016 Edition

Module Structure

The format of each module is the same:

INTRODUCTION: Each lesson carries its introduction highlighting the key points of the lessons.

READ: This section usually carries selected articles on the topic, References to various Cornell databases that can be browsed to get familiar with the content and other *scientific based databases* related to the topic. All articles are mandatory readings.

WATCH: will have videos and PowerPoints specific to the topic. All videos highlighted on the page are mandatory.

DO: will have activities for the topic

- **Hands-on activities** – are usually homework assignments and may be done alone or in some cases, within a defined group. Some activities may be allocated to a Saturday session and will be so noted. You might have to bring certain materials to the Saturday sessions. If the instructor is providing additional reading material, that will be noted.
- **Discussion Forums** – Your chance to interact with other MGV and discuss your thoughts. It usually involves reading an article about a specific topic and commenting on the article in a general forum open to all primary gardeners all counties.

NOTE: discussion forums and Hands-on Activities can generate a great deal of email traffic. It is strongly recommended that you set your preferences to reset your preferences to push these to once a day. To do that follow these instructions.

After you are signed into your class:

1. Click on your user ID in the upper righthand corner to get the dropdown list.

Click on the Forum Preferences which will give you these options:

Complete Activity with full posts – If you choose this option it will give you the opportunity to see all the posts for the particular topic grouped together. You can see the original post as well as the threads aligned with the original posting. You can then choose which thread you might want to respond to.

Auto Subscribe: Yes When I post – this will automatically group all the replies to your original post – all in one place

Forum tracking: Highlight new posts

- **Hands-on Forums** – where you are directed to think about a topic with specific questions and then add your comments into a forum where you communicate your thoughts with your classmates. The hands-on forum is limited to your classmates, teachers and mentors and provides the opportunity to share your comments about a single topic.
- **Journal Entries** – are short papers on specific topics and is a paper between you and your teacher. Not all sessions have Journal Entries. If a Journal Entry is Mandatory – is noted as such. Some Journal Entries may be optional, which means you may do it if you are inclined to journaling.
- **Knowledge Checks / Knowledge Check Quizzes** are **mandatory open book quizzes** that will validate your understanding of the content of a module. You may take a Knowledge Check Quiz 4 times and the mark would be the highest mark attained for that Quiz. There are Knowledge Check worksheets for each quiz. This is an easy way to do the research for the quiz before you take the quiz. If you used the worksheet and do the research, you should have no problem with the associated Knowledge Check Quiz.
- **Quizzes** – some modules have multiple quizzes that you may take as many times as you choose. Quizzes give you an opportunity to self- check what you have read, watched, etc. They are graded but are not included in your final mark. They are there to help you understand the content for that lesson. There are a few Quizzes that are mandatory quizzes. These are indicated in a DO page and are identified as homework. These quizzes are mandatory and that mark is part of your grade.

EXPLORE AND LEARN MORE - Every module has additional readings, references, and videos that you may review at your leisure. The additional information is there to reinforce topics and

material covered in the READ- WATCH-DO pages. In the Explore and Learn More sections you can dive down into more detail. They are not required resources but do provide a wealth of additional information.

END OF LESSON - To complete a lesson, you must at a minimum open the Explore and Learn More Page and **Click on the End of Lesson** Button at the bottom of the page. This will show that you have completed the review of the topic. You can go back to the Explore and Learn pages at any time to check out the additional resources.

NOTE: End of Lesson – for every lesson, there are specific criteria that must be met before Moodle will check off that you have finished a topic. Most times this is a function of reading the articles, viewing the videos, and doing the required Hands-on Activities. Unlike the Pre-Session where the student could check off that they completed a review of a topic, you must satisfy the requirements for that lesson. The system monitors your activity; The Teachers can see your progress and see what you have completed and what might be missing but Moodle is determining if you really have completed a lesson.

Action Project / Presentation

You are responsible for making a 15-minute presentation on a Garden related topic of your choice. The schedule of the presentations is TBD but will start after Thanksgiving. As you progress through the class topics, think about what area of gardening interests you the most. Talk to your Mentor, your classmates. Agree with your coordinator as to what your final presentation is going to

Mentors

The Mentor partnership - each trainee will be partnered with a mentor who can help you. Your mentor is an experienced Master Gardener and is there to guide you, answer questions, give you direction and help you through the class and through the beginning of your year of your internship.

Getting Started – Creating Your Moodle Account

You have already received your instruction how to set up your Moodle Account. Once you have a confirmation email, you can logon to your class.

URL: <https://Moodle.cce.cornell.edu>

Login in the upper right-hand corner which will bring you to the home page for the Garden Based MGVT Training. The classes that you are enrolled in will be in the center course content block.

DUTCHESS: 2022 CCE Dutchess County - Cornell Garden-Based Learning Library Course

- Short name: DC22MGVC1

PUTNAM: CCE Putnam County - Cornell Garden-Based Learning Library Course

- Shortname: PutnamMGVLL

Sexual Harassment Training – This is a Cornell University mandatory class. Before you start the class, please do this training. Click on the link and follow the instructions. Confirmation of successful completion will be forwarded to your coordinator. When you get your confirmation letter back that you have completed your Sexual Harassment Training – you may click the button on the home page that you have completed the module. Forward that successful completion email on to your coordinator.

PRE-SESSION WORK

- New to Moodle -How to Enroll in the MGV Training class. You will have received the URL for the training class. [URL:https://Moodle.CCE.Cornell.edu](https://Moodle.CCE.Cornell.edu)
- Enter that in your web browser to access the module. Create a logon and a password. Moodle will send you a confirmation email. Once you have that email, you may log on to the system.
- Student Guide, Tutorial and Course Documents – includes Moodle tutorial, Course Curriculum and Moodle Navigation Tips
- Cornell Garden Based Learning Library Overview
- Volunteer Orientation – MGV Standards
- Cornell Cooperative Extension Overview
- Adult Peer Learning
 - Peer Learning Networks
 - Peer Learning Network Documents
 - Basics of Peer Learning
 - The CRAAP Resource Evaluation
 - Knowledge Check Quiz – Peer Learning – This is a mandatory check
- Zoom Meeting and Saturday On-Site Session Schedule
 - Every Tuesday evening from 6:00PM – 8:00PM will be set aside for Questions and Answers. The Zoom session may be at the end of a single topic or at the end of a module (more than one topic). In some instances, there may be additional lectures on a topic that will supplement the online segment. You are not required to attend the Q&A sessions, but if a lecture is scheduled, you are responsible for the content of that lecture. If you are unable to attend a zoom lecture let your coordinator know ahead of time.
 - [Saturday Sessions](#) – Will be held monthly. These sessions are joint sessions with Putnam and Dutchess Trainees. Locations is split between the two counties. You

are allowed 1 absence to the Saturday sessions and must notify your coordinator if you are unable to attend a Saturday session.

- Syllabus – Full Schedule and Course Content, Zoom sessions, Saturday Sessions. The Curriculum is there so you can see what is being covered and when. While there are no due dates for starting or ending a lesson, try to keep in sync with the curriculum timeframes. Yes, it is self-paced, but you do not want to get so far behind that you are facing November 30 and have many lessons to READ-WATCH-DO.

- Chat Room

- A Chat room has been set up where you can leave questions on a topic. It is not covered 24/7 so we ask that when you leave a question identify yourself (last name, first name, date your question) so that your Teacher / Mentor can find you and address your question. Check your news on the home page to see what time the chat room will be live. We will try to make the chat live time on a regular basis.

Master Gardener Volunteer Training Course Content

TOPIC 1 The Fundamentals

Module 1.1 Plant Biology

DELIVERABLES DUE FOR THIS LESSON

1. Quiz: Plant Id using Identification Keys Quiz
2. All activities identified in Do Section will be done on Saturday 9/17
3. Knowledge Check Quiz – when you are ready to take (you can take this quiz 4 times – the mark is the highest mark on those 4 attempts)

READ

- Cornell's Botany Language Basics (6-page infographic) – read before the Sept 17 lesson.
 - Copies of this doc will be available at the Sept 17 site
- Plant Biology for Gardeners – Read before the Sept 17 lesson
 - Copies of this doc will be available at the Sept 17 site
- What is in a Name - Latin 101 – this document explains the use for scientific naming conventions and the importance understanding the Latin scientific names of plants. That single plant may be identified by many different common names.

WATCH

- PowerPoint: Plant Biology for Gardeners with Barb Neal
- MGV Level 1: Introduction to Plants videos from the University of Wisconsin. There are 10 short videos which collectively run approximately 50 minutes

DO

- **Practice** using identification keys. Do the **Plant ID using Identification Keys Quiz** found on the home page. Below are a few online tools that might prove helpful. There are many print publications for plant identification. Work through one of these keys or a key from another source.
 - **NOTE: You do not have to know every one of these, just review 1 or 2 of them to see the type of information available and how they lead you through to help you identify a specific plant.**
 - **NOTE: Throughout the class, you will see Cornell Databases identified as a source for a topic. You might want to bookmark the ones that are of interest to you. They are excellent sources of reference information.**
- 1. Cornell's Woody Plant Database <http://woodyplants.cals.cornell.edu/home>
- 2. Cornell's Turfgrass and Landscape Weed ID <http://turfweeds.cals.cornell.edu/>
- 3. Cornell's online Guide to Viburnums <http://www.hort.cornell.edu/vlb/key/index.html>
- 4. The Plant List, a working list of all known species <http://www.theplantlist.org/> (this site gets updated frequently. If it does not open right away, check back later)

HANDS-ON ACTIVITY

The assignment for this module is to complete the activity: **A Close Look: Cultivating Plant Observation Skills and then discuss in this module's Hands-on Activity Review Forum**. Do not forget to identify yourself when posting to the Hands-On Review Forum.

NOTE: The activity will be done at the September 17 class. The Instructor will supply plant samples. You will be paired off with another trainee for the first exercise. There is also a second Plant Activity How to be a Plant Detective. Samples of Flowers, weeds, trees, shrubs will be given to you to work through using identification keys.

Both activities are geared to showing you what to look for and where to look for it to help you identify the plant in front of you.

KNOWLEDGE CHECK

All Knowledge Check Quizzes are **open book quizzes** that can be taken 4 times with your grade for that check your highest mark. You may want to investigate the questions first before you take the quiz. These are in the same folders as the quizzes. If you do the research ahead of time, you should have no problem taking the quizzes as they are based on the content covered in the class. In some cases, there are supplemental lectures on the same topic. You might want to wait until after the supplemental lectures to take the Quiz.

You might want to wait until you hear Jen Lerner's Botany session on Saturday September 17 before you take the Knowledge Check Quiz for this session.

EXPLORE AND LEARN MORE

- The Love Life of Plants (3 min)
https://www.youtube.com/watch?time_continue=170&v=tUZTdnO3Xw
- The Patterns Method of Plant Identification an Easier Way to Identify Plants by Thomas J. Elpel, author of Botany in a Day.
http://www.wildflowers-and-weeds.com/Plant_Identification/index.html
- *Botany for Gardeners*, Third edition, 2010 by Brian Capon.
- Oregon State University Basic Botany for Master Gardeners online very short course
<https://pace.oregonstate.edu/catalog/master-gardener-series-basic-botany>
- Botany Primer from National Phenology Network
https://www.usanpn.org/files/shared/files/USA-NPN_Botany-Primer.pdf
- Inner life of plants - slowLife video clips of photosynthesis, cell creation, phototropism, growth, and development
<http://plantsinmotion.bio.indiana.edu/usbg/index.htm>
- Photosynthesis: Fun in the Sun. Though way more than you might need to know this is well done and helps us appreciate the marvelous system that is the basis for life on earth. (~14 minutes).
https://www.youtube.com/results?search_query=photosynthesis+fun+in+the+sun

- The First Flower - Nova
- Twig Identification PowerPoint. This lecture will show you how to use the Virginia Tech Twig ID websites. YouTube
- “The Science and Politics of the GMO” MOOC course,
<https://www.edx.org/course/science-politics-gmo-cornellx-gmo101x#!>

Campus Links: Throughout the course you will see the Cornell Databases that are available to you. They are reliable sources of reference information.

- Cornell’s Plant Biology section, <https://plantbio.cals.cornell.edu/>
- Cornell’s Plant Breeding and Genetics section, <https://plbrgen.cals.cornell.edu/>
- Cornell’s Horticulture section, <https://hort.cals.cornell.edu/>

End of Lesson

On every Explore and Learn More webpage, there is a button End of Lesson.

NOTE: To get credit for completion of a module, you must click this button. Moodle has kept track of the webpages you have reviewed in the lesson and the amount of time spent on the lesson to ensure that the content has in fact been reviewed. Each activity has pre-established completion criteria for successful completion. All the completion criteria must be met before Moodle will flag as completed.

QUIZZES

- Plant Taxonomy – this quiz is definitions used in taxonomy
- Matching Family – put the vegetable into its proper family
- What is in a name – Scientific naming
- Plant Taxonomy Number 1 – more definitions and terms used
 - Plant ID using ID Keys – plant pic with some descriptors – find the plant scientific name using plant id keys. **This is a required QUIZ.**
 - **NOTE: This Quiz will be helpful for the Activity on Saturday Sept 17.**

Module 1.2 Right Plant, Right Place

DELIVERABLES FOR THIS LESSON

1. Discussion Forum: Systems Thinking
2. All Activities listed will be done on the October 1 Saturday session
3. Optional Activity - Discussion Forum Activity that if you have time to do, you are more than welcome to do any of them
4. Knowledge Check Quiz – when you are ready to take this quiz

READ

- **Introduction to Soil** (37 pgs.). Read pages 1 -8, 18-24 and 27 - 30.
- **Being a Systems Thinker** [2 pages] – See Explore and Learn more for the Full read on Systems Thinking and the 12 Habits of Mind
- **Site Assessment Checklist** [26 slides]

- **Landscape Design** (10 pgs.). University of Maryland Master Gardeners Handbook 2012 edition. You have this text 2016 edition.
- **FAQ Right Plant Right Place**

WATCH

- **Right Plant Right Place Session PowerPoint**, with Barb Neal
- **UW- Extension Master Gardener Program Level 1 Soils video, Soil Properties Important for Gardening** (18 minutes)
- **Healthy Soils, Healthy Communities** by Hannah Shayler, Extension Associate Cornell Waste Mgmt. Institute, GBL Program April 2020 (about an hour and 15 minutes)

DO

DISCUSSION FORUM

- Use the **Handout Being a Systems Thinker [2 pgs].pdf** to refer to.
- Join the **Discussion Forum on Systems Thinking** this week. Do not forget to identify yourself on your post. Think about the following questions:
 - What do you know about your soil?
 - How has your thinking about your soil changes in the time you have been gardening?
 - What do you do to your soil? Why? Join the **Systems Thinking discussion forum**.

ACTIVITIES

The following activities will be done at the **Saturday Lab on October 1**. For that session, bring the activity sheets and the Hands-on Resources to the October 1 session as well as a 1 QT zip lock bag of soil from your garden.

- **Jar Test Activity**
- Soil Texture: **Activity Soil Texture [4 pgs].docx**
- *Soil pH*: Watch the first 2 minutes of this video for guidance in collecting a soil sample: <http://soilhealth.cals.cornell.edu/testing-services/collecting-samples/>
- **Activity Soil**
- **Apple ID Activity**
- **Weed Scavenger Hunt Activity**

Resources for Hands-on Activities

- **Handout Activity Soil Texture Triangle [1 pg].pdf**
- **Resource Soil pH Ranges [2 pgs].pdf**
- **Sustainable Garden Practices Soil Posters 2018 [3 pgs].pdf**

OPTIONAL HANDS-ON ACTIVITY:

*This is optional if you have time. When you have completed the assignment post it to this module's Hands-on Activity Review forum by clicking on **discuss in this module's Hands-on Activity Review forum**. Don't forget to identify yourself on your post.*

Optional Hands-On Activities and Resources

- **Activity Directions Garden and Landscape Area [3 pgs].docx**
- **Activity Sit Spot at Home [2 pgs].docx**

- **Worksheet Existing Plant Landscape Values [3 pages].docx**

KNOWLEDGE CHECK

Complete the Right Plant Right Place Knowledge Check Quiz for this section which can be found on the Homepage.

EXPLORE AND LEARN MORE

SOME NOTES

Don't Forget to Click on the End of Lesson to complete your lesson

University of Wisconsin videos level 1 Master Gardener are well done. They are worth the read.

The Mazza reference is a well detailed reference on what to consider for site assessments.

- **Linda Booth Sweeney Thinking About Systems 12 Habits** of Mind
- **Site-Assessment-Booklet** - Site Assessment for Better Gardens and Landscapes [86 pages] Charles Mazza. This is very good reference material.
- **Cornell's Intro to Soil Lecture Channel** Video (1 hour)
- UW- Extension Master Gardener Program Level 1 Soils video, what is Soil (11 minutes)
- **USDA Soil Texture Calculator**,
https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/survey/?cid=nrcs142p2_054167
- **USDA Web Soil Survey**,
<https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>
- **Soil Science Simplified**, 4th Edition by Helmut Kohnke and D.P. Franzmeier

Campus Links:

- Cornell Healthy Soil www.gardening.cornell.edu/soil

QUIZZES

- Soil pH Questions – Acidity and alkalinity
- Soil and Its Properties – what makes up soil
- Soil Texture Questions – Sand, Loam Clay, and its variations

Module 1.3 – Beneficial Insects

DELIVERABLES DUE FOR THIS LESSON

1. Bug Identify Activity found in the Do section
2. Knowledge Check Quiz

READ

- **Basic Entomology for Identification** (2 pgs.) A copy of this document will be provided for the September 17 Entomology lesson, But you should read this ahead of time.
- **Insect Injury to Plants** (2 pgs.)

- **Beneficial Insects - Nature's Pest Control factsheet** (4 pages) Find it in this list of Cornell Insect Diagnostic Lab Factsheets: <http://idl.entomology.cornell.edu/factsheets>

WATCH

- Part One: Introduction – Goes over plants and insects in the garden (5 min)
- Part Two: Predators – goes over the types of insects that are predators (11 min)
- Part Three: Parasites – the types of insects that are considered parasites (11 min)
- Part Four: Pollination – Not just honeybees (5 min)
- Part Five: Attracting Beneficial Insects – How can we attract beneficial insects to our gardens (8 min)

DO

- Explore the online resource **BugGuide**: <http://bugguide.net/node/view/73>
- Complete the **Bug Identity in the Hands-On Activity** below.

HANDS-ON ACTIVITY:

Using *The Big Eight* document below and the *Bug Identity Worksheet*, try to identify the Order of each insect. The *Insect Order Trophic Level Worksheet* gives you order and trophic levels (are they herbivores, omnivores, pollinators, predators, etc.).

- **The Big Eight** – gives information on how to determine what is an insect and what is a bug (yes, they are different!)
- **Bug Identity** – here is a list of common insects / bugs we can find in our area.

KNOWLEDGE CHECK

Complete the Knowledge Check Quiz Beneficial Insects which can be found on the Homepage.

NOTE: This quiz is based on the contents presented in the videos. Insects and bugs may serve dual purposes; they might predominantly be classified as a predator but also serve as a pollinator. The quiz is identifying the predominant roles of the insect / bug noted.

NOTE: You might want to consider waiting until after you hear the Matt Frye lecture before you attempt the Knowledge Check Quiz for Beneficial Insects.

EXPLORE AND LEARN MORE

NOTE: Don't forget to Click on the End of Lesson button to complete the lesson.

- Putnam County Cornell Cooperative Extension's Create a Pollinator Paradise web resource: <https://putnam.cce.cornell.edu/gardening/pollinator-support-1>
- Cornell Entomologist's Naturalist Outreach YouTube videos including one on arthropod predators and insect phylogeny: <https://www.youtube.com/user/naturalistoutreach>
- 2018 All Bugs Good and Bad Webinar Series: Bees, Wasps, and Hornets, Oh My!
- 2018 All Bugs Good and Bad Webinar Series: Attracting Pollinators to Our Landscape
- MGv Level 1: Entomology from the University of Wisconsin. YouTube video series 5 parts - 60 minutes:
- Insect Structure, Function, and Metamorphosis - YouTube video ~20 minutes

Cornell Cooperative Extension – Putnam County and Dutchess County
Cornell Garden Based-Learning Participant Guide

- Managing Insects: Friend of Foe? YouTube video - ~18 minutes
- Dr. Entom YouTube video series on insects - 7 YouTube videos 5 to 11 minutes each <https://www.youtube.com/channel/UCZnWmkcky0RrayAjXVEmlZw>
- Cicada Metamorphosis Timelapse YouTube video ~3 minutes
- Insects: Their Natural History and Diversity: With a Photographic Guide to Insects of Eastern North America by Stephen A. Marshall, <http://www.fireflybooks.com/index.php/catalogue/adult-books/nature-and-science/insects/product/11548-insects-their-natural-history-and-diversity-with-a-photographic-guide-to-insects-of-eastern-north-america>
- A Field Guide to Insects: America North of Mexico by Donald J. Borror and Richard E. White, https://www.amazon.com/Field-Guide-Insects-America-Mexico/dp/0395911702/ref=pd_lpo_sbs_14_t_0?encoding=UTF8&psc=1&refRID=9H4T1J328GXWBNAX321X
- Garden Insects of North America: The Ultimate Guide to Backyard Bugs by Whitney Cranshaw, <http://press.princeton.edu/titles/7713.html>
- Insects that Feed on Trees and Shrubs by Warren T. Johnson and Howard H. Lyon, <http://www.cornellpress.cornell.edu/book/?GCOI=80140100626460>
- PCT Field Guide for the Management of Urban Spiders By Stoy A. Hedges and Richard S. Vetter; Dan Moreland, Editor <https://store.pctonline.com/en/pct-field-guide-for-the-management-of-urban-spiders-2nd-ed>
- Common Spiders of North America by R. A. Bradley (Author), S. Buchanan (Illustrator)

Campus Links:

- Cornell of Entomology Outreach: <https://entomology.cals.cornell.edu/extension/>
- Cornell Insect Diagnostic Lab: <http://idl.entomology.cornell.edu/>
- NYS Integrated Pest Management, <https://nysipm.cornell.edu/>
- Cornell's Biological Control: A Guide to Natural Enemies in North America, <https://biocontrol.entomology.cornell.edu/index.php>
- Pollinator Network at Cornell, <https://pollinator.cals.cornell.edu/>

QUIZZES

- Entomology Quiz 101 – questions about insects / Bugs
- Insect Order Trophic levels – Identify an insect's order and its main purposes are (trophic level)

Zoom Meeting – September 13

Q&A – if you have questions about the above three topics you can discuss at this zoom meeting. Questions posted to the topic Chat Rooms may also be discussed at the Zooms if they have not been answered prior to the Zoom.

Saturday On Site Meeting – September 17 is In the Dutchess CCE Office – Bring your lunch.

Coffee, Tea, Water, and Snacks will be supplied.

Bring the following documents with you for the activities for this day. You do not have to bring in any plant samples the teachers will supply the plant samples for both activities.

Cornell Cooperative Extension – Putnam County and Dutchess County
Cornell Garden Based-Learning Participant Guide

- Module 1.1 Cornell's Botany Language
- A Close Look from the Activity Section
- For the Entomology lecture, you might want to bring The Big Eight sheet with you as well.

Module 2.1 – Plant Pathology

DELIVERABLES FOR THIS LESSON

1. There is no required deliverable for this lesson. You may want to do the optional Journal Entry 2 if you want.
2. Knowledge Check Quiz

READ

- Plant Diagnostics: [What is “Wrong” With My Plant?](#) (3 pgs.)
- [Basic Plant Pathology Summary Factsheet \(pdf\) 25 pages](#)

WATCH

- ***Basic Plant Pathology, Margery Daughtrey, Senior Extension Associate, Section of Plant Pathology and Plant Microbe-Biology ~40 mins***
- ***Common Diseases in the Garden by Barb Neal. YouTube video ~ 22 minutes.***

DO

Take 30 minutes to explore and ***get acquainted*** with the following plant pathology resources:

- Cornell's Plant Disease Diagnostic Clinic <http://plantclinic.cornell.edu/>
- Cornell Vegetable MD Online Plant Pathology Web Page, <http://vegetablemdonline.ppath.cornell.edu/Home.htm>
- Cornell Berry Diagnostic Tool: <https://blogs.cornell.edu/berrytool/>
 - Scroll down to the Resources section at the bottom of the page
 - Explore the Factsheets tab at the top of the page

You may spend as much time as you like exploring the various databases. There are excellent sources of information. You can bookmark the ones that are of interest to you.

HANDS-ON ACTIVITY - There is no activity for this module.

OPTIONAL JOURNAL ENTRY # 2 – Plant Pathology

For those that enjoy journaling, you may do this journal entry.

Think about the following questions and then complete your Journal Entry # 2. Don't forget to identify yourself when you post your Journal.

- What plant diseases have you experienced in your garden endeavors?
- What type of disease was it, fungi, bacteria, viruses, nematodes or phytoplasma related? How did you know?
- What are the key steps to consider when addressing plant disease questions?

KNOWLEDGE CHECK

Complete the Knowledge Check Quiz for the Plant Pathology module which can be found on the homepage.

EXPLORE AND LEARN MORE

NOTE: The MGV Level 1 University of Wisconsin videos are well done and reliable sources of information

- *MGV Level 1: Plant Pathology* from the University of Wisconsin. YouTube video series - 9 parts lasting about 2 ¼ hours total. Good reference
- *MGV Level 1: Diagnosing Plant Problems* from University of Wisconsin video ~ 55 minutes
- *MGV Level 1: Diagnosing Plant Problems, Finding an Answer: The Hats of Plant Diagnostics. 7 short podcasts to listen to, about 40 minutes total.* <http://blogs.ces.uwex.edu/mgvlevel1/integrated-pest-management/diagnosing-plant-problems/>
- *Fantastic Fungi: The Forbidden Fruit* - YouTube video ~2.5 minutes
- *Wow! Fungi plant growth - The Private Life of Plants with David Attenborough* - BBC wildlife. YouTube video ~1.5 minutes
- *Become a Certified First Detector* <http://firstdetector.org/detector-modules>
- *Training videos here,* <https://www.firstdetector.org/videos>
- *Northeast Plant Diagnostic Network,* www.NEPDN.org
- *Ohio State Yard & Garden Fact Sheets,* <https://ohioline.osu.edu/topic/home-yard-and-garden>
- *Purdue University Diagnostic Lab* <https://ag.purdue.edu/btny/ppdl/Pages/default.aspx>
- *Missouri Extension Service,* <https://extension2.missouri.edu/find-your-interest/agriculture-and-environment/plant-health-and-production>

Campus Links:

- *Cornell Plant Disease Diagnostic Clinic,* <http://plantclinic.cornell.edu/>
- *Cornell Vegetable MD Online Plant Pathology Web Page,* <http://vegetablemdonline.ppath.cornell.edu/Home.htm>
- *Cornell Berry Diagnostic Tool:* <https://blogs.cornell.edu/berrytool/>
- *NYS Integrated Pest Management,* <https://nysipm.cornell.edu/>

Module 2.2-Troubleshooting Food Crop Pests

DELIVERABLES FOR THIS LESSON

1. **Activity: Troubleshooting** – You will be assigned to a group. You may do this activity as a single or as a team. Let your coordinator / mentor know if you are doubling up with another classmate. Each assigned group contains a different set of sick and ailing plants. You must first identify what the plant is and then figure out what the problem might be. You can join up with someone else in the same group and divvy up the problems to research. Once you have done the research the outcome of your research will be discussed at the Zoom meeting on October 11.

2. Knowledge Check Quiz for Problem Solving Troubleshooting Food Crops

READ / WATCH

- [Problem Solving Food Crop Pests](#) (PowerPoint 33 slides)
- What Gardeners Can Do: 10 Best Practices for Healthy Gardening (1 page) <https://ecommons.cornell.edu/handle/1813/48154>
- Cornell University Plant Clinic: http://plantclinic.cornell.edu/Resources/PDDCBrochure-estDontGuess_fourfold_FINAL.pdf

DO

- Review “Advanced Master Gardener Training- Diagnosing Plant Problems, A systemic approach to diagnosing plant damage” found at <http://plantclinic.cornell.edu/mastergardner.html>
- Review factsheets from Module 1.4 [Plant Pathology](#): “What’s Wrong with my Plant”.

HANDS-ON ACTIVITY

For this assignment, you will be assigned to a specific group to work on Food Crop problems. Your Coordinator will tell you to which group you are assigned. Review the [Activity Directions](#) and the [Activity Worksheet](#) to see what has to be done for this exercise. The actual discussion of the work will be covered in the **Zoom meeting on October 11**. Group assignment to follow. Each Group is assigned a diverse set of Food Crop pests which need to be identified, determine what damage has been done to the crop and what can be done about the problem.

- Troubleshoot Group A
- Troubleshoot - Group B
- Troubleshoot - Group C
- Troubleshoot - Group D
- Troubleshoot - Group E

KNOWLEDGE CHECK

Complete the Problem Solving: Pests of Food Crops and Ornamental Plants Knowledge Check Quiz which can be found on the Homepage.

EXPLORE AND LEARN MORE

- Take 30 minutes to become familiar with Cornell Garden-Based Learning Troubleshooting resources related to food gardening and go deeper into ones that catch your eye. <http://gardening.cals.cornell.edu/garden-guidance/troubleshooting/>
- Take 15 minutes to become familiar with Cornell Garden-Based Learning Food Gardening resources especially Varieties Resistant to Late Blight, and Growing Vegetables Guide. <http://gardening.cals.cornell.edu/garden-guidance/foodgarden/>
- Explore: Visit the Vegetable MD website to explore different diseases, resistant varieties and new updates at <http://vegetablemdonline.ppath.cornell.edu/index.html>
- Photo gallery: Vegetable diseases, <http://www.longislandhort.cornell.edu/vegpath/photos/index.htm>

- Complete additional First Detector Modules. If you complete all six-modules, you receive a First Detector Training Certificate of Completion, <http://firstdetector.org/detector-modules>

Campus Links:

- Cornell Plant Disease Diagnostic Clinic, <http://plantclinic.cornell.edu/>
- [Cornell Plant Pathology and Plant-Microbe Biology](https://pppmb.cals.cornell.edu/extension-outreach/extension-resources/), <https://pppmb.cals.cornell.edu/extension-outreach/extension-resources/>
- Cornell Insect Diagnostic Lab, <http://idl.entomology.cornell.edu/>
- Cornell Nutrient Analysis Lab, <http://cnal.cals.cornell.edu/>
- New York State Integrated Pest Management Factsheets for Vegetables <http://www.nysipm.cornell.edu/factsheets/vegetables/>

Module 2.3 Problem Solving: Troubleshooting Home and Garden Pests

DELIVERABLES FOR THIS LESSON

1. Explore databases diagnosing pests in the home
2. Knowledge Check Quiz

READ

- **Insect Diagnostic Lab** Sample Submission Directions, <http://idl.entomology.cornell.edu/sample-directions/>
NOTE: you can submit samples to your county hort lab - usually, we submit samples to the Cornell Lab when we are unable to diagnose a problem that comes into the county labs.
- **Cornell University Cooperative Extension's Role on Wildlife Control:** <http://wildlifecontrol.info/extension/>
- Review the Cornell Publications on **Nuisance Wildlife** at <http://wildlifecontrol.info/publications/cornell-publications/>
- Visit the **"What's Bugging You"** website at <https://nysipm.cornell.edu/whats-bugging-you/> and browse the sections on ticks, deer and other common pests found in the home and garden.
- **Ticks: Fact or Fiction** on the LI Gardening Blog
- Visit the **Weed Science** website at <http://ccesuffolk.org/agriculture/weed-science> and look at the: **"Weed-suppressive Groundcovers Brochure"** <https://s3.amazonaws.com/assets.cce.cornell.edu/attachments/1980/Weed-Suppr-Groundcovers-Brochure.pdf?1408469013>
"Ten Invasive Weeds to Watch for in the Landscape and Turf"

WATCH

- NYS IPM **"Ticks and the Diseases They Carry"** video playlist (~40 minutes),
 - "Life Cycle of the Black-Legged Tick (and Lyme Disease Prevention)"
 - "Lyme Disease an avoidable or unstoppable epidemic"
 - "Arthropod-Borne Diseases and Climate in NY"
 - "Reported Cases of Lyme Disease in the United States 2001-2016"

- “How to Remove a Tick”

DO

- Practice using the **Pest Identification Key for Household Pests in the Northeastern US**
- Learn how to send a sample or photo to your county CCE Diagnostic Lab and the **Cornell Insect Diagnostic Lab** for identification at <http://idl.entomology.cornell.edu/sample-directions/>
- The **Cornell Garden-Based Learning Troubleshooting** web page aims to collect most of the Cornell resources related to managing lawns, gardens, and landscapes. Take 30 minutes to become familiar with what is here and go deeper into ones that catch your eye, <http://gardening.cals.cornell.edu/garden-guidance/troubleshooting/>

KNOWLEDGE CHECK

Complete the Knowledge Check Quiz for this lesson which can be found on the homepage.

EXPLORE AND LEARN MORE

- NYS Department of Environmental Conservation: Nuisance Wildlife <https://www.dec.ny.gov/animals/7005.html>
- Horticulture Factsheets from your county and at: <http://ccesuffolk.org/gardening/horticulture-factsheets>

Campus Links:

- Cornell Insect Diagnostic Lab, <http://idl.entomology.cornell.edu/>
- New York State Integrated Pest Management “What’s Bugging You” <https://nysipm.cornell.edu/whats-bugging-you/>
- Wildlife Damage Control <http://wildlifecontrol.info/nuisance-wildlife-management/>

Module 3.1 – Vegetable Gardening Part 1

This module covers basic Vegetable Gardening principles

DELIVERABLES FOR THIS LESSON

1. Browse Cornell Vegetable gardening databases
2. Do the quizzes listed on the homepage for this lesson.
 - a. Match English Family to Latin Family
 - b. Match Crop to its family
 - c. Warm Season vs Cold Season

READ

- **Optional Read** - Chapters 1, 2 and 3 of Seed to Supper which can be found on your home page.
- Factsheet **Indoor Vegetable Seed Starting** (2 pages).
- **Vegetable Gardening FAQ's** (3 pgs.)
- **Key to Common Vegetable Crops** (2 pgs.)

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Cornell Garden Based-Learning Participant Guide

- Browse through some fact sheets available for Vegetable and Herb growing
<https://gardening.cals.cornell.edu/garden-guidance/foodgarden/>
- Review first planting dates for Putnam County
<http://putnam.cce.cornell.edu/gardening/food-gardening/first-planting-dates>

WATCH

- **Ten Things to Know PowerPoint, with Barb Neal**
- **Vegetable Garden Pests PowerPoint, with Barb Neal**

DO

Take about 30 minutes to explore the Cornell Food Gardening Resources - Both sites provide advice on growing 58 different vegetables as well as many herbs. Both sites are written for New York growing conditions. They provide more detailed information on saving seeds, container gardening and variety of recommendations. You might want to bookmark these sites on your computer. www.gardening.cornell.edu/vegetables and <http://www.gardening.cornell.edu/homegardening/scene0391.html>

HANDS-ON ACTIVITY

The quizzes for this lesson are located on the home page. They will help you identify the different vegetable plant families. Use the Key to Common Garden Crops Factsheet and the above links to help you.

KNOWLEDGE CHECK

Complete the Knowledge Check for Vegetable Gardening - Part 1.

NOTE: You may want to wait until after the Zoom Vegetable Gardening sessions are completed to do this Knowledge Check

EXPLORE AND LEARN MORE

- Cornell Garden-Based Learning Citizen Science projects related to growing vegetables: <http://gardening.cals.cornell.edu/citizen-science/>
- Plant Rotation in the Garden Based on Plant Families <https://extension.psu.edu/plant-rotation-in-the-garden-based-on-plant-families>
- *The Vegetable Gardener's Bible* by Edward C. Smith, 2009
- *Vegetable Gardening for Dummies* by Charlie Nardozzi, 2009
- *How to Grow More Vegetables* by John Jeavons, 2012 8th edition
- Eliot Coleman's Four-Season Farm books: <http://fourseasonfarm.com/read-our-books/>

Campus Links:

- Cornell Garden-Based Learning Food Gardening web page: www.gardening.cornell.edu/vegetables
- Cornell Vegetable Growing Guides: <http://www.gardening.cornell.edu/homegardening/scene0391.html>

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Cornell Garden Based-Learning Participant Guide

- Cornell Vegetable Varieties for Gardeners
database: <http://vegvariety.cce.cornell.edu/main/login.php>
- Cornell Vegetables: <https://www.vegetables.cornell.edu/>

Module 3.2 – Vegetable Gardening-Part 2

DELIVERABLES FOR THIS LESSON

1. Quizzes –
 - Garden Planning Considerations
 - Soil Considerations
2. Post to Discussion Forum: Garden Planning
3. Post to Hands-On Activity Forum: Frequently asked Vegetable Gardening Questions
4. Knowledge Check Quiz – Vegetable Gardening Part 2

READ

- Excerpt **Chapter 1 from Seed to Supper course book** (14 pages).
- **Planning Your Garden Considerations** (3 pages)
- **Making Your Garden Plan** (4 pages)

WATCH

YouTube video series UW-Extension Master Gardener Program: Vegetable playlist has several mostly short videos; collectively about 60 minutes.

DO

DISCUSSION FORUM

Go to **The Garden Planning Activity** page to complete the **Garden Planning Activity** and **Personal Planting Plan**. After your first draft of the plan, discuss your design ideas and plans in the **Garden Planning Discussion Forum**

HANDS-ON ACTIVITY

Using the Frequently Asked Vegetable Gardening Questions discuss with your teammates. Make any changes you want to make and when completed, post it on this module's Hands-on Activity Review Forum by clicking on discuss in this module's Hands-on Activity. **Frequently Asked Vegetable Gardening Questions, Dr. Steve Reiners, Cornell University** and then **discuss in this module's Hands-on Activity Review forum**.

KNOWLEDGE CHECK

Complete the Knowledge Check Quiz for Vegetable Gardening - Part 2

NOTE: You may want to wait to do the knowledge check quiz after the Zoom sessions on Vegetable Gardening

EXPLORE AND LEARN MORE

- Cornell Garden-Based Learning Citizen Science projects related to growing vegetables: <http://gardening.cals.cornell.edu/citizen-science/>

Cornell Cooperative Extension – Putnam County and Dutchess County
Cornell Garden Based-Learning Participant Guide

- Plant Rotation in the Garden Based on Plant Families <https://extension.psu.edu/plant-rotation-in-the-garden-based-on-plant-families>
- *The Vegetable Gardener's Bible* by Edward C. Smith, 2009
- *Vegetable Gardening for Dummies* by Charlie Nardozzi, 2009
- *How to Grow More Vegetables* by John Jeavons, 2012 8th edition
- Eliot Coleman's Four-Season Farm books: <http://fourseasonfarm.com/read-our-books/>

Campus Links:

- Cornell Garden-Based Learning Food Gardening web page: www.gardening.cornell.edu/vegetables
- Cornell Vegetable Growing Guides: <http://www.gardening.cornell.edu/homegardening/scene0391.html>
- Cornell Vegetable Varieties for Gardeners database: <http://vegvariety.cce.cornell.edu/main/login.php>
- Cornell Vegetables: <https://www.vegetables.cornell.edu/>

Module 3.3 – Fruit Gardening

DELIVERABLES DUE FOR THIS LESSON

1. Hands-On Activity – Calendar of tasks
2. Knowledge Check Quiz

READ

Cornell Guide to Growing Fruit at Home (pdf - 111 pages)

Read the 'Before You Begin' section (pg. 1-13) plus the

- 'Keys to Success' sidebars for each crop.
- Review the crop section to become familiar with the content.
- Use this as a reference to answer questions this week's Knowledge Check

While you may choose to read thoroughly about a crop that interests you, there is no need to read every bit or memorize the content in this resource. Simply bookmark for future reference. <https://ecommons.cornell.edu/handle/1813/67>

WATCH

These videos cover the concepts of Fruit Gardening in a Home Orchard environment.

Part 1 - (25 minutes) - addresses Fruit Tree basics of how to control the size, grow multiple successive ripening varieties. It addresses understanding your microclimate and selecting the right choice of root stock for the place you are planting.

Part 2 - (44 minutes)- Reviews key elements of root stocks, growth habits, and pruning considerations.

Part 3 - (29 minutes) will look at mulching, irrigation, fertilization and pest and disease identification and control.

DO

HANDS-ON ACTIVITY

- This hands-on activity addresses fruit crop farming. You can do this on your own or work with a teammate. The key to this activity has been included. Fill in your worksheet first and then check it against the key. [Feel free to discuss in this module's Hands-on Activity Review forum.](#)

Activity Materials for Activity Calendar for Fruit Crops:

- [Activity Directions Activity Calendar for Fruit Crops](#) [1 pg.].
- [Worksheet Activity Calendar for Fruit Crops](#) [8 pgs.].
- [KEY Worksheet Activity Calendar for Fruit Crops](#) [9 pgs.].

KNOWLEDGE CHECK

Complete the Knowledge Check Quiz for this lesson which can be found on the homepage.

EXPLORE AND LEARN MORE

- Regional Pest Alert article on Spotted Wing Drosophila (SWD) <http://fruit.cornell.edu/spottedwing/>
- Watch the following short videos to gain knowledge about pruning different types of fruit crops. (~15 minutes total)
 - Raspberries: <https://goodgardeningvideos.org/videos/how-to-prune-raspberry-canesh/>(~3 ½ minutes)
 - Apples: <https://goodgardeningvideos.org/videos/how-to-prune-an-apple-tree/>(~3 minutes)
 - Blueberries: <https://goodgardeningvideos.org/videos/how-to-prune-a-young-blueberry-bush/>(~5 minutes)
 - Grapes: <https://goodgardeningvideos.org/videos/how-to-care-for-young-grape-vines/>(~4 minutes)

Campus Links:

- Commercial fruit growers: <http://fruit.cornell.edu/>
- Minor fruit production: <https://blogs.cornell.edu/berries/productions/specialty-fruit-production/>
- Berry diagnostic tool: <https://blogs.cornell.edu/berrytool/>
- NYS IPM: <https://nysipm.cornell.edu/agriculture/fruits/>

Module 3.4 – Food Nutrition, Food Safety and Food Security

DELIVERABLES FOR THIS LESSON

1. Optional Journal Entry # 4 – Caring for Your Garden
2. Knowledge Check Quiz

READ

- [***Seed to Supper: A Beginner's Guide to Low-Cost Vegetable Gardening, Chapter 6: Harvesting and Using Your Bounty***](#) – Read the first few pages but no need to read about

every vegetable, just pick a few of those to read.

- **Seed to Supper Food Security**- spend 10-30 minutes exploring the **Hunger in America** web page and consider how vegetable gardening could be a tool to reduce hunger in our local communities, <http://www.feedingamerica.org/hunger-in-america/>

WATCH

- **Food Preservation and Food Safety (10 minutes)**
- **[SNAP-Ed NY](#)**
- Scroll down to chapter #4, watch “Caring for Your Garden and the Power of Food in Our Lives” (2 minutes). <http://gardening.cals.cornell.edu/program-tools/planning-organizing/effective-community-engagement/>

Bobby talks about the power of food in our lives – that people associate food *with* their lives. He names how this is embedded into the larger conversation about social justice and food justice, which is not only about access to food, but also include those foods that may be associated with a cultural preference.

DO

OPTIONAL - JOURNAL ENTRY # 4

After watching “Caring for Your Garden and the Power of Food in Our Lives”, consider these questions, then move onto the [Journal Entry #4 assignment](#) to answer them.

- How might you learn about food needs and desires in your community?
- What are some ways of telling stories related to food that touch the hearts of people involved in *Seed to Supper* and illuminate the power of food in our lives?
- How does your community view the food that they both need and want?

KNOWLEDGE CHECK

Complete the Knowledge Check Quiz for this lesson which can be found on the Homepage.

EXPLORE AND LEARN MORE

- Benefits of Garden-Based Learning: <http://gardening.cals.cornell.edu/program-tools/benefits-and-research/>
- United States Department of Agriculture’s Center for Nutrition Policy and Promotion: <https://www.fns.usda.gov/cnpp>
- Choose my Plate Resources: <https://www.choosemyplate.gov>
- SNAP-Ed: <https://snaped.fns.usda.gov/state-snap-ed-contacts/new-york>
- HUNGER 101 Foodbank of the Southern Tier: <https://www.foodbankst.org/hunger-ed-101>
- The New Face of Hunger (National Geographic)
<http://www.nationalgeographic.com/foodfeatures/hunger/>
- Confronting Poverty <https://confrontingpoverty.org/>
- So Easy to Preserve, 6th Edition – University of Georgia <https://setp.uga.edu/>
- Wild Harvest Table <http://ccesaratoga.org/nutrition-food/wild-game>

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Cornell Garden Based-Learning Participant Guide

- CCE Saratoga Food Preservation website: <http://ccesaratoga.org/nutrition-food/food-preservation>
- Food safety: <https://www.foodsafety.gov/keep/basics/index.html>
- Get connected. Get answers. <http://211nys.org/find-services>

Campus Links:

- Cornell Nutrition, Food Safety and Security, and Obesity Prevention:
<http://cce.cornell.edu/program/nutrition>

Module 4.1 – Woody Plants

DELIVERABLES FOR THIS LESSON

1. **OPTIONAL JOURNAL ENTRY # 5** – Beyond Natives / Exotic Debate
2. Knowledge Check

READ

- [Incorporating Native Plants in Your Residential Landscape](#) - Rutgers University 2010 - Explanation, Northeast USA list, Reading references and website reference
- Rakow and Weir (2005). [The Cornell Guide for Planting and Maintaining Trees and Shrubs](#)(25 pages)

WATCH

- [Tree Selection in an Urban Environment](#) - Purdue University, Lindsey Purcell, ISA Arborist

DO

- Spend at least a half hour playing with the Tree Pruning Guide, <https://www.arborday.org/trees/pruning/animation/launch.cfm>
- Look one or more of the How-to Pruning videos found at <https://goodgardeningvideos.org/videoscategory/pruning/>
Using online identification keys takes practice. There are many publications for woody plant identification. Below are a few online tools. If you are new to using identification keys, try starting with a plant that you already know the identification and attempt to work through one of these keys or a key from another source.
 - Enter different search characteristics to learn about appropriate trees and shrubs for different landscape conditions in the Cornell University Urban Horticultural Woody Plant Database: <http://woodyplants.cals.cornell.edu/home>
 - Cornell's online Guide to Viburnums <http://www.hort.cornell.edu/vlb/key/index.html>

OPTIONAL JOURNAL ENTRY # 5 - Don't forget to identify yourself in your Journal entry.

- How did the article [Beyond the Native/Exotic Debate](#) reinforce your perspective on native plants?

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Cornell Garden Based-Learning Participant Guide

- How did it change your perspective and knowledge about native plants?
- What do you think is contributing to the success or failure to thrive your woody plants? Answer these questions in your [Journal Entry #5](#)

KNOWLEDGE CHECK

Complete the Knowledge Check Quiz for this module which can be found on the homepage.

EXPLORE AND LEARN MORE

- Dr. Nina Bassuk shares how to use the Cornell University's Urban Horticulture Institute's Woody Plant Database (28 minutes). <https://vimeo.com/115137311>
- Tree and shrub selection and use resources produced by Urban Horticulture Institute: <http://www.hort.cornell.edu/uhi/outreach/>
- Journal articles and thesis from Urban Horticulture Institute on their Research page: <http://www.hort.cornell.edu/uhi/research/>
- MGVI Level 1: Woody Ornamentals from the University of Wisconsin. YouTube video series with 13 parts ~ 55 minutes
- Bassuk (May 2018) **Greening the inner city: How do we choose the best trees?** (3 pages) On pages 387 to 389 in electronic publication Open Access Government (ISSN 2516-3817). Find a link to the article on Cornell Urban Horticulture Institute's Outreach page under Plant Selection: <http://www.hort.cornell.edu/uhi/outreach>
- Bassuk and Sutton (March 2012) **Beyond the Native/Exotic Debate** (3 pages) in electronic journal Urban Habitats (ISSN 1541-7115). Find a link to the article on Urban Horticulture Institute's Outreach page: under Plant Selection: <http://www.hort.cornell.edu/uhi/outreach/>
 - Trees for Sun 25 mins,
 - Trees for Light Shade 15 mins,
 - Shrubs & Vines for Sun 29 mins,
 - Native Trees 17 mins,
 - Native Shrubs & Vines 29 mins,
 - Invasive Plants 24 mins,
- Detective Dendro Podcast: <http://www.isa-arbor.com/Online-Learning/Podcasts/Podcast/4/Detective-Dendro>
- National Tree Benefit Calculator, <http://www.treebenefits.com/calculator/index.cfm>
- Pruning Woody Landscape Plants, <https://extension.umaine.edu/publications/2169e/>

Campus Links:

- Cornell Woody Plant Database, <http://woodyplants.cals.cornell.edu/home>
- Urban Horticulture Institute, <http://www.hort.cornell.edu/uhi/outreach>
- Cornell Botanic Gardens
 - Tips for Pruning Your Landscape Trees video by Cornell Botanic Gardens, <http://www.cornellbotanicgardens.org/our-gardens/pruning>
 - A Rainbow in Winter video by Cornell Botanic Gardens, <https://vimeo.com/256490403>

- High Above pruning video by Cornell Botanic Gardens <https://vimeo.com/154224963>

Module 4.2 Herbaceous Plants

DELIVERABLES FOR THIS LESSON

1. Discussion Forum: Herbaceous Plants
2. Knowledge Check Quiz

INTRO SECTION

- **Discover** Cornell University's plant databases and other tools to help identify appropriate herbaceous plants:
 - <http://www.gardening.cornell.edu/homegardening/>
 - https://aggie-horticulture.tamu.edu/ornamentals/cornell_herbaceous/
 - <https://blogs.cornell.edu/trialgardens/>
 - <https://ecommons.cornell.edu/handle/1813/42430>

READ

There is a good deal of information here, choose what interests you:

- Sequence of Bloom of Perennials, Biennials and Bulbs (16 pages)
<https://ecommons.cornell.edu/handle/1813/3269>
- [*Growing Perennials*](#)
- Ornamental Grasses for the Home and Garden (24 pages)
<https://ecommons.cornell.edu/bitstream/handle/1813/3268/Ornamental%20Grasses%20for%20the%20Home%20and%20Garden.pdf?sequence=2&isAllowed=y>
- [**Herbaceous Plants**](#) Definition and Examples
- Browse Cornell University's plant databases and other tools to help identify appropriate herbaceous plants. (See links above)

WATCH

- Introduction - Herbaceous Plants

DO

DISCUSSION FORUM

- **Join the Discussion Forum** – Think about the following questions and join the Discussion forum on this topic and discuss with your classmates
 - With respect to gardening with herbaceous plants, how would you rate your current interest, experience, and knowledge?
 - Briefly describe how or from where you gathered your experience and knowledge in this area.
 - What will you do with herbaceous plants in the future?

Answer these questions and discuss with your classmates in the Herbaceous Plants [Discussion Forum](#)

KNOWLEDGE CHECK

Complete the Knowledge Check Quiz for this lesson which can be found on the Homepage.

EXPLORE AND LEARN MORE

The Missouri database is a very good database for plant characteristics

- Cornell Rock Gardens guide: <https://ecommons.cornell.edu/handle/1813/3282>
- Weed Suppressive Ground Covers brochure:
<https://ecommons.cornell.edu/handle/1813/42430>
- A Tour of (18 minutes) YouTube video series
MGV Level 1: Herbaceous Plants from the University of Wisconsin.
- EPA Ecoregion by State - Region 2 <https://www.epa.gov/eco-research/ecoregion-download-files-state-region-2>
- Missouri Botanical Garden Plant Finder – Over 7,500 plants by scientific or common name or characteristics (this is an excellent resource for plant characteristics)
<http://www.missouribotanicalgarden.org/plantfinder/plantfindersearch.aspx>
- Native Plant data base: <https://www.wildflower.org/plants-main/>
- Plants Do That <https://consumerhort.org/wp-content/uploads/2017/03/PlantsDoThat.pdf>
- Pat's top picks YouTube video series. Each video has a corresponding sheet that lists the plants and reference. Find those pdfs at: <http://blogs.cornell.edu/gblblog/garden-guidance/lawns-landscapes/pat-currans-top-plant-lists/>

Campus Links:

- Cornell Home Gardening
<http://www.gardening.cornell.edu/homegardening/index.html>
- Herbaceous Perennials Database
https://aggie-horticulture.tamu.edu/ornamentals/cornell_herbaceous/
- Annual Flower Research <http://www.hort.cornell.edu/bglannuals/>
- Flower Bulb Research Program <http://www.flowerbulbs.cornell.edu/>

Module 4.3 Lawn Care and Plant Ecosystem Services

DELIVERABLES FOR THIS LESSON

There are no hands-on or discussions forums for this lesson

1. Knowledge Check

READ

Lawn Care the Easiest Steps to an Attractive Environmental Asset

- Browse the rest of the publication. Available in web and PDF formats at: www.gardening.cornell.edu/lawn.
 - Focus on the **Four Steps to Success** sections and the **Choose Seed** section under Starting Fresh.
 - There are several less than 3-minute videos in the web version. Focus on the Four Steps to Success sections. Watch all of those.

WATCH

Make your Lawn an Attractive Environmental Asset

READ

- [The Basics of Ecosystem Services](#) (2 pgs. handout provided)
- [Landscape of Life Lesson 6 7](#) [26 pages] to learn about the role of plants in sustainable gardens and successful plant practices.
 - *Note: The link is broken to the EPA map and guide to eco-regions that are referred to in the Landscapes for Life chapter. This link could help you identify yours: <https://www.epa.gov/eco-research/ecoregion-download-files-state-region-2>*

DO

KNOWLEDGE CHECK

Complete the Knowledge Check Quiz for this section which can be found on the Homepage.

EXPLORE AND LEARN MORE

- Calibrating Your Fertilizer Spreader
<http://plantscience.psu.edu/research/centers/turf/extension/factsheets/calibrating-spreader>

Campus Links:

- Cornell's Turf Grass Program <http://turf.cals.cornell.edu>
- Cornell Turfgrass and Landscape Weed ID, <http://turfweeds.cals.cornell.edu/>

Module 4.4 Pollinator Support

DELIVERABLES FOER THIS LESSON

1. Discussion Forum: Pollinators (NOTE: Use the Herbaceous Forum and add Pollinator to the discussion name)
2. Knowledge Check

READ

- [About the Pollinator Pathway movement](#)
- [What is the Putnam Pollinator Pathway](#)
- [Pollinator Pathway 101](#)

WATCH

- [Pollinator Support Part 1 of 2](#)
- [Pollinator Support - Part 2 of 2](#)

DO

DISCUSSION

- Pick one area in your garden, patio, or even a local park and assess its conditions. Research 3 plants that would: a) succeed in those conditions and b) bloom at different points

throughout the season. Post your findings on the discussion forum for [Herbaceous Plants](#). Do not forget to label your discussion with your name and the topic **Pollinators**.

KNOWLEDGE CHECK

Complete the Knowledge Check Quiz for this lesson which can be found on the homepage.

QUIZZES

- Pollinator Basics

EXPLORE AND LEARN MORE

- **Native Bees: Our Un-stung Heroes**
- [Bee Decline](#)

Module 5.1 – Integrated Pest Management

DELIVERABLES FOER THIS LESSON

1. Discussion Forum: Integrated Pest Management (IPM)
2. Knowledge Check Quiz

READ

- **Defining IPM** <https://nysipm.cornell.edu/about/defining-ipm>
- **IPM in Communities** <https://nysipm.cornell.edu/about/defining-ipm/ipm-communities>
- Pest Problems and Solutions: Integrated Pest Management for your Home and Garden. There are 4 chapters.
 - [Cover](#)
 - [Chapter 1](#) - Your Yard, Your Microcosm, I {PM Basics
 - [Chapter 2](#) - Garden Basics
 - [Chapter 3](#) - Your Beautiful Flower Garden
 - [Chapter 4](#) - Your Bountiful Vegetable Garden
- *Cornell Guidelines for Pest Management Around Home- Part 1- **Cultural Methods**–* <https://cropandpestguides.cce.cornell.edu/Guidelines/HomePestCultural/>
 - Read these sections (13 pages total)
 - Cover and Introduction
 - Diagnosis and identification of plant disorders
 - Pest management options for home and garden
 - Tools for cultural pest management
 - Management Practices of Household pests

WATCH

Integrated Pest Management - *University of Wisconsin* playlist of 3 videos lasting about 50 minutes. It has 3 videos:

- *IPM Introduction,*
- *IPM - How it Works*

- *IPM Safety.*

DO

DISCUSSION FORUM

Join the IPM Discussion Forum: What defines a plant pest? Have you encountered any the plant pests you read about this week? What pest management strategies have you taken? Answer these questions in the [IPM discussion forum.](#)

KNOWLEDGE CHECK

Complete the Knowledge Check Quiz for this lesson which can be found on the homepage.

EXPLORE AND LEARN MORE

- Cornell Pest Management Guidelines Series - There are many books in this series which your local extension office may have in a resource library. The *Pest Management Around the Home - Part 1 Cultural Methods* book is one of the resources used in session activities.
<https://cropandpestguides.cce.cornell.edu/>
 - Identify disease resistant vegetable varieties using Cornell's Vegetable Varieties for Gardeners (<http://gardening.cals.cornell.edu/citizen-science/>) and Vegetable MD Online (<http://vegetablemdonline.ppath.cornell.edu/Home.htm>)

Campus Links:

- New York State Integrated Pest Management: <https://nysipm.cornell.edu/> Pesticide Management Education Program (PMEP) at Cornell University:
 - NYS IPM's Flickr page: <https://www.flickr.com/photos/99758165@N06/>
- <http://pmep.cce.cornell.edu>
- Cornell University Plant Disease Diagnostic Clinic: <http://plantclinic.cornell.edu/>
- Cornell University Insect Diagnostic Lab: <http://idl.entomology.cornell.edu/>
- Cornell University [Plant Pathology](#) and Plant-Microbe Biology Section: <https://pppmb.cals.cornell.edu/>
- Turfgrass and Landscape Weed ID: <http://turfweeds.cals.cornell.edu/plants>
- Cornell Turfgrass Program, Pests and Weeds: <http://turf.cals.cornell.edu/pests-and-weeds/>
- Cornell Vegetable Pathology- Long Island Horticultural Research and Extension Center: <http://blogs.cornell.edu/livegpath/extension/>
- Cornell's Biological Control: A Guide to Natural Enemies in North America, <https://biocontrol.entomology.cornell.edu/index.php>

Module 5.2 – Reading a Pesticide Label

DELIVERABLES FOR THIS LESSON

1. Read a Pesticide Label

NOTE: There is no Knowledge Check Quiz for this lesson

READ

The [Pesticide Management Education Program \(PMEP\)](#) [1 page]

"The Cornell Cooperative Extension Pesticide Safety Education Program (CCE-PSEP) (formerly known as the Pesticide Management Education Program) has a one page describing their programs.

WATCH

[The Label is the Law](#)

[Reading a Pesticide Label](#)

DO

Work individually or in small groups to read the [sample Triazicide® pesticide label](#) and answer the questions about the label on the [Activity – Reading a Pesticide Label](#) worksheet.

EXPLORE AND LEARN MORE

- National Pesticide Information Center (NPIC) - <http://npic.orst.edu>
- Pesticide environmental stewardship – homeowner <https://pesticidestewardship.org/homeowner>
- Pest control and pesticide safety for consumers - <https://www.epa.gov/safepestcontrol>

Campus Links:

- New York State Integrated Pest Management: <https://nysipm.cornell.edu/Pesticide> Management Education Program (PMEP) at Cornell University:
 - NYS IPM's Flickr page: <https://www.flickr.com/photos/99758165@N06/>
- <http://pmep.cce.cornell.edu>
- Cornell University Plant Disease Diagnostic Clinic: <http://plantclinic.cornell.edu/>
- Cornell University Insect Diagnostic Lab: <http://idl.entomology.cornell.edu/>
- Cornell University [Plant Pathology](#) and Plant-Microbe Biology Section: <https://pppmb.cals.cornell.edu/>
- Turfgrass and Landscape Weed ID: <http://turfweeds.cals.cornell.edu/plants>
- Cornell Turfgrass Program, Pests and Weeds: <http://turf.cals.cornell.edu/pests-and-weeds/>
- Cornell University Vegetable MD Online: <http://vegetablemdonline.ppath.cornell.edu/>
- Cornell Vegetable Pathology- Long Island Horticultural Research and Extension Center: <http://blogs.cornell.edu/livepath/extension/>
- Cornell's Biological Control: A Guide to Natural Enemies in North America, <https://biocontrol.entomology.cornell.edu/index.php>

Module 6.1 – Management Strategies – Composting

DELIVERABLES FOR THIS LESSON

1. Knowledge Check Quiz

READ

Click on the Tompkins County CCE on Composting.

- [Tompkins County CCE Resource on Composting](#) - Review the articles under the General Information Section, the Outdoor Composting Section, and the Indoor Composting Section.
- [Composting FAQ's](#)
- [Home Composting PowerPoint](#) (47 pages)

WATCH

- [Home Composting](#)
Please watch the following videos on the Tompkins County CCE Composting webpage:
 - Choose your Bin (8.38 min)
 - Lasagna Layering (8.25 min)
 - Welded Wire Composting Bin (4.32 min)
 - Composting in a Large Property (12.22 min)
- Videos from Cornell University's vermicompost research page: (3 min)
<http://cwmi.css.cornell.edu/vermicompost.htm>

DO

KNOWLEDGE CHECK

Complete the Knowledge Check Quiz for this lesson which can be found on the homepage.

QUIZZES

- Composting True or False

EXPLORE AND LEARN MORE

- Cornell Waste Management Institute (CWMI) has put most of its resources in Cornell eCommons: <https://ecommons.cornell.edu/>

Use the search tool to find resources in the CWMI eCommon's:

- Composting at Home – the Green and Brown Alternative <http://hdl.handle.net/1813/29111>
- Home Composting Slide Show <http://hdl.handle.net/1813/44789>
- School Composting <https://hdl.handle.net/1813/52083>
- Composting: Biology in the curriculum <http://hdl.handle.net/1813/45757>
- School Composting, Let us Start Composting curriculum <http://hdl.handle.net/1813/45757>
- Master Composter Curriculum <http://hdl.handle.net/1813/12933>
- Compost Resources from CCE Tompkins County Master Composter program: <http://ccetompkins.org/gardening/composting>
- EPA's Food: Too Good to Waste <https://www.epa.gov/sustainable-management-food/food-too-good-waste-implementation-guide-and-toolkit>
- Further with Food <https://furtherwithfood.org>
- New York State Food Recovery Campaign <https://nysfrc.home.blog/>

Campus Links:

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Cornell Garden Based-Learning Participant Guide

- Cornell Waste Management Institute (CWMI) <http://cwmi.css.cornell.edu>
- Cornell University's vermicompost research
<http://cwmi.css.cornell.edu/vermicompost.htm>

Module 6.2 – Soil Amendment and Fertilization

DELIVERABLES FOR THIS LESSON

1. Discussion Forum – Soil Contaminant
2. Start working on your Action Project / Presentation
3. Knowledge Check Quiz

READ

- **Soil Amendments and Fertilizers (21 pgs.)**
- **Soil Amendments and Fertilizers FAQ's**
- **Soil Organic Matter Factsheet**

EXPLORE

- **NY Cover Crop Guide and Cover Crop Decision Tool**, take 10-15 minutes to explore and try using the cover crop tool. <http://covercrops.cals.cornell.edu>
- **Cornell Garden-Based Learning Healthy Soil Page**, take 5-10 minutes to explore <http://gardening.cals.cornell.edu/garden-guidance/healthysoil>.
 - Read ***Getting the Most out of Your Vegetable Garden Soil Test Report*** (pdf) <https://blogs.cornell.edu/gblblog/files/2016/07/Veggie-Info-Sheet-2016-1jsq90e.pdf>
 - Browse other sections under '***For Nutrient Testing with Cornell Recommendations***' focusing on what you find most interesting or relevant.

WATCH

- **Understanding Fertilizer Labels**
- **Benefits of No-Till Farming** (~1.5 minutes)
- **Dangers of Compaction** (~4.5 minutes). This video is geared towards farmers but is useful for gardening too.

DO

DISCUSSION FORUM

Using the articles below, be prepared to discuss the following questions in [this module's discussion forum](#). **Soil Contaminant Discussion**

What are potential sources of soil contamination? What are factors that affect the fate of soil contamination, what are healthy gardening practices, what are the possible effects of soil contamination

- [Sources and Impacts of Contaminants in Soils](#) handout
- [What Gardeners Can Do: 10 Best Practices for Healthy Gardening](#)

ACTION PROJECT / PRESENTATION

It is time to start working on your **Action Project / Final Presentation**. Read the Action Project Overview document presented in Topic 7. Talk to your classmates, your mentor, your teacher, your MGV Coordinator for guidance.

KNOWLEDGE CHECK

Complete the Knowledge Check Quiz for this lesson which can be found on the homepage.

QUIZZES

- Soil Amendment Check

EXPLORE AND LEARN MORE

- Metals in Urban Garden Soils, <https://ecommons.cornell.edu/handle/1813/48147>
- Comprehensive Assessment of Soil Health, <http://www.css.cornell.edu/extension/soil-health/manual.pdf>
- The Garden Ecology Project, <https://blogs.cornell.edu/gep/gardeners/>
- University of Delaware, <https://www.udel.edu/academics/colleges/canr/cooperative-extension/fact-sheets/delaware-gardeners-guide-to-lawn-and-landscape-fertilizers/>
- *Soil Science Simplified*, 4th Edition by Helmut Kohnke and D.P. Franzmeier

Campus Links

- Cornell Soil Health, <https://soilhealth.cals.cornell.edu/>
- Healthy Soils, Healthy Communities, <http://blogs.cornell.edu/healthysouls/>
- Cornell Nutrient Analysis Laboratory, <https://cna1.cals.cornell.edu/>

Module 6.3 – Invasive Species

DELIVERABLES FOR THIS LESSON

1. Assignment submission: Invasive Species
2. Knowledge Check

READ

- ***Invasive Species - Putnam County*** - <http://putnam.cce.cornell.edu/natural-resources/invasive-species>
- ***Upstate Hemlock Trees under Attack from Woolly Invader***, an online article from the Rochester NY's Democrat and Chronicle. Found online at: <https://www.democratandchronicle.com/story/news/2017/09/18/upstate-hemlock-trees-under-attack-woolly-invader/677642001/>
- ***Invasive Species FAQ's***

WATCH

- Video ***Invasive Species: The Basics*** (6 minutes):
- ***Invasive Species Challenges and solutions in NY State***

DO

Invasive Species Assignment

Choose one of the following invasive species to research:

- Spotted Lantern Fly
- Japanese Stiltgrass
- Jumping Worms

In the [assignment submission section of this module](#), make a short list of

1. identifying characteristics of your chosen invasive species
2. information on what ecological problems it is causing
3. management strategies gardeners use to minimize its spread.

THINK:

- Consider what makes one non-native (like tulips) fine, and another one (like knotweed) 'invasive'? What is the difference between an invasive species, a weed, and an aggressive native species?

KNOWLEDGE CHECK

Complete the knowledge Check Quiz for this lesson which can be found on the homepage.

QUIZZES

- Natives – Alien-Invasive

ACTION PROJECT / FINAL PRESENTATION

Reminder: You should be working on your Presentation which is due shortly. Check assignment 2 in Topic 7.

EXPLORE AND LEARN MORE

- Plant Wise Brochure: http://www.dec.ny.gov/docs/lands_forests_pdf/plantwise.pdf
- Prohibited and regulated species in New York: <http://www.dec.ny.gov/animals/99141.html>
- New York Invasive Species Information: <http://www.nyis.info/index.php>
- DEC terrestrial invasive website: <http://www.dec.ny.gov/animals/95383.html>
- IMap invasives website: <http://www.imapinvasives.org/>
- Partnerships for Regional Invasive Species Management (PRISM): <https://www.dec.ny.gov/animals/47433.html>
- Hemlock Woolly Adelgid:
 - NYS Hemlock Initiative: <https://blogs.cornell.edu/nyshemlockinitiative/>
 - A Film About the Loss of an Ecosystem (23-minute documentary):
 - Hemlock Woolly Adelgid Fact Sheet: http://www.dec.ny.gov/docs/lands_forests_pdf/hwafactsheet.pdf
- Emerald Ash Borer
 - EAB Educational Packet, https://www.dec.ny.gov/docs/lands_forests_pdf/eabedpacket.pdf
 - Emerald Ash Borer in New York: <http://www.dec.ny.gov/animals/7253.html>
- Oak Wilt Fact Sheet, https://www.dec.ny.gov/docs/lands_forests_pdf/owfactsheet2.pdf
- Bugwood resource for images of and information on invasive species: <http://bugwood.org>

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Cornell Garden Based-Learning Participant Guide

- Washington Post Article “Dirty Dozen: https://www.washingtonpost.com/news/energy-environment/wp/2015/02/23/like-most-invasive-species-pythons-are-in-the-u-s-to-stay/?utm_term=.ec15178d2afc
- Biocontrol: More Than Cane Toads and Mongooses: <https://www.popsoci.com/blog-network/our-modern-plagues/biocontrol-more-cane-toads-and-mongoose>
- Doug Tallamy’s talk “Are Alien Plants Bad?”: https://vod.video.cornell.edu/media/Are+%22Alien%22+Plants+%22Bad%22F++Dr.+Doug+Tallamy/1_qi915ub2

Campus Links:

- Cornell University New York Invasive Species Research Institute: <http://www.nyisri.org/>

Module 6.4 – Gardening on a Warming World

DELIVERABLES FOR THIS LESSON

1. Optional Journal Entry # 7 – Climate Change

NOTE: There is no Knowledge Check for this lesson

READ

The 4 chapters in the Gardening in a Warming World

Chapter 1: Benefits of Systems Thinking for Sustainable Gardening

Chapter 2: Knowing our Garden Systems

Chapter 3: Climate Change Basics

Chapter 4: Climate-Smart Sustainable Garden Audit

WATCH

[How does Gardening help Climate Change?](#)

[*Gardening in a warming Climate*](#)

DO

OPTIONAL JOURNAL ENTRY # 7 – Climate Change

Think about how Climate Change affects your personal gardening practices, and discuss and submit in [Journal Entry #7.](#)

EXPLORE AND LEARN MORE

- Gardening in a Warming World curriculum <http://gardening.cals.cornell.edu/garden-guidance/gww/>
- Gardening in our Warming World: Youth Grow! <https://gardening.cals.cornell.edu/lessons/curricula/gardening-in-our-warming-world-youth-grow/>
- Cornell Botanic Gardens Climate Change Garden video <https://vimeo.com/103466340>
- Use search terms climate change to find several Cornell SIPS Horticulture videos related to the topic. <https://www.youtube.com/user/CornellHorticulture/featured>

Campus Links:

- Cornell Institute for Climate Smart Solutions: <http://climatesmartfarming.org>

Module 7.1 - Group Gardens and Seed to Supper

DELIVERABLES FOR THIS LESSON

1. Vegetable Matching Quiz
2. Discussion Forum: Group Gardens
3. Knowledge Check Quiz

Please review the following resources as supplements to the presentation.

- ***Liberated Roots*** - Review to become familiar with issues related to privilege and culturally responsive practices when engaging diverse groups in gardening. Article From: Teaching Tolerance, Issue 58, Spring 2018, pg. 19

<https://www.tolerance.org/sites/default/files/2018-01/Teaching-Tolerance-magazine-58.pdf> (pdf)

- ***Top 5 Things to Know about Community Gardens***
- ***The Complexities of Poverty and Hunger in New York State*** -Poverty and hunger in New York State is a complex issue – not one that can be introduced in just a page or two! As such, our aim with this brief overview is to begin to frame this multifaceted, challenging matter, particularly for those educators who may not have entered this arena before, and to offer some questions for sincere reflection prior to embarking on the Seed to Supper journey
- ***The Seed to Supper Program and Its Effect on Low-Income Beginning Gardeners in Oregon*** - Review this Journal of Extension Article to understand the potential benefits of Seed to Supper from its origins in Oregon, such as program participants reducing their grocery bills as a result of growing their own food and eating more fruits and vegetables than usual during the growing season: From Journal of Extension, June 2017, Volume 55: https://www.joe.org/joe/2017june/pdf/JOE_v55_3iw6.pdf
- ***Core Competencies for Seed to Supper Facilitators*** - Working with vulnerable populations requires a unique set of competencies – those skills, knowledge, and abilities, as well as the “inner ground” necessary for working in community. Review this planning sheet to reflect on how you can build a robust team of facilitators as you build your NYS Seed to Supper program.
- ***NYS Seed to Supper Program: Roles and Responsibilities*** - Review the Garden Educator role that Master Gardener Volunteers may fill in this overview of the communities and relationships at the core of the NYS Seed to Supper (S2S) program.

WATCH

- [Seed to Supper and Group Gardens PowerPoint](#)
- Introduction to Seed to Supper Program Elements:
- Chimamanda Ngozi Adichie: The Danger of a Single Story:

DO

- Be familiar with some of the activities surrounding cultural sensitivity in the garden:
 - Do the [Vegetable Matching Activity](#) Quiz found on the homepage.

DISCUSSION FORUM

After you have finished your readings, watched your videos and completed your activities, answer the following questions in this week's [discussion forum](#): What new ideas did you learn about when thinking through working with Group Gardens and Seed to Supper, and issues related to community tolerance and privilege? Where do you need support in your gardening outreach?

Practicing equity, diversity, and inclusion in relation to food security and gardening takes practice and dedication.

KNOWLEDGE CHECK

Complete the Knowledge Check Quiz for this lesson which is found on the homepage.

PRACTICE

- Practicing equity, diversity, and inclusion in relation to food security and gardening takes practice and dedication. Here are a few resources to support you as you take your knowledge to the next step:
 - The American Community Gardening Association has professional development events related to engaging with Community Gardens: <https://www.communitygarden.org/resources>
 - Teaching Tolerance has educational tools and self-guided professional development on: Race & Ethnicity, Religion, Ability, Class, Immigration, Gender & Sexuality. <https://www.tolerance.org/professional-development>
 - North American Association for Environmental Education has Environmental Justice Resources to practice using inclusivity frameworks: <https://naaee.org/eeopro/resources/environmental-justice-resources>
 - Free Civic Ecology Courses - Urban Environmental Education Approaches: <https://civicecology.org/course-uee/>

EXPLORE AND LEARN MORE

- [Multiple Social Identity Profile Overview](#) (pdf)
- [The Complexity of Identity: "Who Am I?"](#) (pdf)
- [The Culture of Power \(Paul Kivel\)](#) (pdf)
- [The Increasingly Diverse United States of America \(Washington Post\)](#) (url)

Campus Links:

- Cornell's Civic Ecology Lab: <https://www.civicecology.org/>
- Cornell Garden-Based Learning - Planning and Organizing: <http://gardening.cals.cornell.edu/program-tools/planning-organizing/>

Cornell Cooperative Extension – Putnam County and Dutchess County
Cornell Garden Based-Learning Participant Guide

- Cornell's Diversity and Inclusion Homepage: <https://diversity.cornell.edu/> Cornell LibGuides - Local and Regional Food Systems: http://guides.library.cornell.edu/local_food/cornell/
- The Program on Applied Demographics (PAD) brings skills in demographics, economics, statistics, data gathering and data analysis together to provide a variety of organizations with data, information and advice: <https://pad.human.cornell.edu/>

You have completed the Online portion of your training. Your coordinator will work with you for a time slot for you to make your presentation.