

**BCCS**  
**High School PLANT SCIENCE Curriculum Map**  
(Revised 4-25-08)

<b>Month</b>	<b>Content</b> What topic(s) is being covered and what is the important vocabulary? What do students need to know?	<b>Skills</b> What do students have to be able to do connected to the Content?	<b>Essential Questions</b> What are fundamental, enduring questions that will guide study and instruction?	<b>Bench Marks</b> What benchmarks are met through this topic?	<b>Instruction</b> What activities are used to develop the Sills and knowledge?	<b>Resources</b> What materials, texts, videos, internet, software, or human resources support instruction?	<b>Evaluation</b> What evidence (products and/or performance(s) is collected to establish that the Content and Skills have been learned?
<b>September</b>	<ul style="list-style-type: none"> <li>▪ Course outline and expectations</li> </ul>	<ul style="list-style-type: none"> <li>▪ Ability to understand the value of plants to humans and to the environment</li> </ul>	<ul style="list-style-type: none"> <li>▪ How valuable are plants to other life forms?</li> </ul>	N/A	<ul style="list-style-type: none"> <li>▪ Instruction / lecture notes, class discussion</li> <li>▪ Text reading and related assignments</li> </ul>	<ul style="list-style-type: none"> <li>▪ Instructor notes and experience</li> <li>▪ Text: Introduction to horticulture</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Graded career report</b></li> </ul>
<b>September</b>	<ul style="list-style-type: none"> <li>▪ Careers related to plant science</li> </ul>	<ul style="list-style-type: none"> <li>▪ Ability to identify several potential career fields in the field of plant science</li> </ul>	<ul style="list-style-type: none"> <li>▪ What kinds of jobs can I expect to find related to plants?</li> <li>▪ Are there plant related jobs in our local community?</li> </ul>	N/A	<ul style="list-style-type: none"> <li>▪ Guest speakers from various plant related careers</li> <li>▪ Plant career research report</li> </ul>	<ul style="list-style-type: none"> <li>▪ Community members</li> <li>▪ Internet career search</li> <li>▪ High school career office</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Student created list of plant related careers</b></li> </ul>
<b>September</b>	<ul style="list-style-type: none"> <li>▪ Cells, cell parts and functions</li> <li>▪ Plant genetics</li> </ul>	<ul style="list-style-type: none"> <li>▪ Understand the basic parts of cells, and their functions probability / prediction</li> </ul>	<ul style="list-style-type: none"> <li>▪ How do cells relate to all living things?</li> <li>▪ What do cells do?</li> <li>▪ How small are cells?</li> </ul>	N/A	<ul style="list-style-type: none"> <li>▪ Lecture, videos, hand-out pictures and models</li> </ul>	<ul style="list-style-type: none"> <li>▪ Text book, instructor notes, cell video</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Quiz on daily notes, identification of cell parts and functions.</b></li> <li>▪ <b>Final test on cells</b></li> </ul>
<b>September</b>	<ul style="list-style-type: none"> <li>▪ Chrysanthemums</li> </ul>	<ul style="list-style-type: none"> <li>▪ Able to identify, propagate, and grow chrysanthemum plants</li> </ul>	<ul style="list-style-type: none"> <li>▪ How do you propagate mums?</li> <li>▪ Unique features and niche?</li> </ul>	N/A	<ul style="list-style-type: none"> <li>▪ Text reading, worksheet, lecture</li> <li>▪ Actual mum plants for study</li> </ul>	<ul style="list-style-type: none"> <li>▪ Unit 14 of text, notes, mum plants</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Graded worksheet and quiz</b></li> </ul>

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<b>September - Continued</b>	<ul style="list-style-type: none"> <li>▪ Introduction to forestry and forest production</li> </ul>	<ul style="list-style-type: none"> <li>▪ Ability to identify native tress</li> <li>▪ Measure tree volume</li> <li>▪ Recognize forestry tools</li> <li>▪ Ability to select trees ready for, or that should be removed</li> <li>▪ Understand tree growth and factors that affect growth</li> <li>▪ Identify careers related to forest binomial nomenclature</li> </ul>	<ul style="list-style-type: none"> <li>▪ How important is forestry to our local economy</li> <li>▪ How can I tell the difference between trees</li> <li>▪ What different volumes are there to measure in trees?</li> <li>▪ How are trees classified?</li> </ul>	N/A	<ul style="list-style-type: none"> <li>▪ Instructor lecture</li> <li>▪ Field trips to school forest for hands on labs</li> <li>▪ Leaf collection and ID labs</li> <li>▪ Forest text reading and worksheets</li> <li>▪ Forestry videos and guest lectures</li> </ul>	<ul style="list-style-type: none"> <li>▪ Forestry text</li> <li>▪ School forest land lab</li> <li>▪ Forestry measuring and harvest tools / equipment</li> <li>▪ Videos</li> <li>▪ Local people employed in forestry</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Written and hands on quizzes.</b></li> <li>▪ <b>Graded forestry labs</b></li> <li>▪ <b>Leave collection project</b></li> <li>▪ <b>Forestry test</b></li> </ul>
<b>September</b>	<ul style="list-style-type: none"> <li>▪ Plant classification</li> </ul>	<ul style="list-style-type: none"> <li>▪ Understand various methods of plant classification</li> <li>▪ Annual and perennial</li> <li>▪ Monocot and dicot</li> <li>▪ Deciduous and coniferous</li> <li>▪ Wood fiber and herbaceous</li> <li>▪ Understanding how plants reproduce and propagation</li> <li>▪ Asexual and sexual methods</li> </ul>	<ul style="list-style-type: none"> <li>▪ Why do we need methods of classification for plants?</li> <li>▪ What characteristics are used to separate or classify plants?</li> <li>▪ Plant anatomy and function</li> <li>▪ Major parts and operation of</li> <li>▪ How do plants reproduce?</li> <li>▪ Why do some plants grow from seed while other do not?</li> </ul>	N/A	<ul style="list-style-type: none"> <li>▪ Lecture notes</li> <li>▪ Text review / read</li> <li>▪ Plant labs</li> <li>▪ Video presentations</li> <li>▪ Propagation units of text</li> <li>▪ Propagation labs</li> <li>▪ Demonstration</li> </ul>	<ul style="list-style-type: none"> <li>▪ Text book</li> <li>▪ Soil</li> <li>▪ Seeds</li> <li>▪ Plant samples</li> <li>▪ Plant trays</li> <li>▪ Plants for cuttings</li> <li>▪ Seeds</li> <li>▪ Grafting materials</li> <li>▪ Rooting hormones</li> <li>▪ Grow lights</li> <li>▪ Rooting containers</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Worksheet,</b></li> <li>▪ <b>Quizzes</b></li> <li>▪ <b>Graded lab based on time on task</b></li> <li>▪ <b>Graded lab sheets</b></li> <li>▪ <b>Written work</b></li> <li>▪ <b>Graded projects</b></li> <li>▪ <b>Unit tests</b></li> </ul>
<b>September</b>	<ul style="list-style-type: none"> <li>▪ Hydroponics</li> </ul>	<ul style="list-style-type: none"> <li>▪ To understand the basic concept of hydroponics</li> <li>▪ Understand the benefits</li> <li>▪ Be able to operate various types of hydroponics systems</li> </ul>	<ul style="list-style-type: none"> <li>▪ What is hydroponics?</li> <li>▪ What are the its benefits over soil?</li> <li>▪ How does hydroponics work?</li> </ul>	N/A	<ul style="list-style-type: none"> <li>▪ Lecture notes</li> <li>▪ Video presentation</li> <li>▪ Hydroponic lab</li> <li>▪ Hydroponic projects</li> <li>▪ Hydroponic worksheet</li> <li>▪ Cals discussion of hydroponic systems and their benefits</li> </ul>	<ul style="list-style-type: none"> <li>▪ Water test kits</li> <li>▪ Hydroponic systems of various types</li> <li>▪ Plant seeds</li> <li>▪ Nutrient solutions</li> <li>▪ Hydroponic video</li> <li>▪ Written pamphlets</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Quiz</b></li> <li>▪ <b>Worksheet</b></li> <li>▪ <b>Lab grade</b></li> <li>▪ <b>Operation of hydroponic system</b></li> </ul>

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<b>October</b>	<ul style="list-style-type: none"> <li>▪ Leaf project</li> </ul>	<ul style="list-style-type: none"> <li>▪ Be able to identify native trees to northern Michigan</li> <li>▪ Learn skills in plant taxonomy</li> </ul>	<ul style="list-style-type: none"> <li>▪ What is the value of knowing how to identify trees?</li> <li>▪ What kinds of things should you look for when trying to ID a tree?</li> </ul>	N/A	<ul style="list-style-type: none"> <li>▪ Lecture information</li> <li>▪ Field trips to the school forest</li> <li>▪ Collection</li> <li>▪ Leaf ID quizzes weekly</li> </ul>	<ul style="list-style-type: none"> <li>▪ Instructor notes and knowledge</li> <li>▪ Michigan Trees book</li> <li>▪ School forest</li> <li>▪ Tree key for Northern Michigan</li> <li>▪ FFA forestry contests</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Weekly quizzes on native tree identification</b></li> <li>▪ <b>Leaf collection</b></li> <li>▪ <b>FFA forestry contests</b></li> </ul>
<b>October</b>	<ul style="list-style-type: none"> <li>▪ Tree reproduction</li> </ul>	<ul style="list-style-type: none"> <li>▪ Good understanding how different trees reproduce, both in nature and in nurseries</li> </ul>	<ul style="list-style-type: none"> <li>▪ What are the various methods of tree propagation?</li> <li>▪ How can I propagate trees for my own purposes?</li> </ul>	N/A	<ul style="list-style-type: none"> <li>▪ Lecture</li> <li>▪ Notes</li> <li>▪ Pine cone lab</li> <li>▪ Grafting lab</li> <li>▪ Hardwood cutting lab</li> <li>▪ Units 8, 10, 11 and 12 of text</li> </ul>	<ul style="list-style-type: none"> <li>▪ Instructor notes and knowledge</li> <li>▪ School forest</li> <li>▪ Lab pots and supplies</li> <li>▪ Text book</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Graded grafts</b></li> <li>▪ <b>Graded cone lab</b></li> <li>▪ <b>Seedling quiz</b></li> <li>▪ <b>Unit sheets</b></li> </ul>
<b>October</b>	<ul style="list-style-type: none"> <li>▪ Reforestation</li> </ul>	<ul style="list-style-type: none"> <li>▪ Understanding of how to regenerate forests of various species</li> <li>▪ Proper technique and equipment for planting seedlings</li> </ul>	<ul style="list-style-type: none"> <li>▪ How do forests get regenerated?</li> <li>▪ Why do we replant some species and never others?</li> <li>▪ What techniques help insure the success of a seedling?</li> </ul>	N/A	<ul style="list-style-type: none"> <li>▪ Class instruction</li> <li>▪ Demonstration of proper techniques</li> <li>▪ Drawing information from students</li> <li>▪ Examples of seedlings</li> <li>▪ Some traditional text work</li> </ul>	<ul style="list-style-type: none"> <li>▪ Instructor knowledge and experience</li> <li>▪ Test "Forests &amp; Forestry"</li> <li>▪ Forestry tools and equipment</li> <li>▪ Hands on labs</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Graded planting technique lab</b></li> <li>▪ <b>Graded worksheet</b></li> <li>▪ <b>Equipment quiz</b></li> <li>▪ <b>Propagation quiz</b></li> <li>▪ <b>Forestry unit test</b></li> </ul>
<b>October</b>	<ul style="list-style-type: none"> <li>▪ Plant propagation</li> </ul>	<ul style="list-style-type: none"> <li>▪ Knowledge of what species will repropagate naturally and which ones need to be replanted</li> <li>▪ Asexual methods of reproducing plants</li> </ul>	<ul style="list-style-type: none"> <li>▪ How can you get a new plant?</li> </ul>	N/A	<ul style="list-style-type: none"> <li>▪ Lecture</li> <li>▪ Demo</li> <li>▪ Lab exercise</li> </ul>	<ul style="list-style-type: none"> <li>▪ Greenhouse and lab work</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Quizzes</b></li> <li>▪ <b>Graded plantings</b></li> <li>▪ <b>Labs</b></li> </ul>

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October – continued	<ul style="list-style-type: none"> <li>▪ Binomial nomenclature</li> </ul>		<ul style="list-style-type: none"> <li>▪ Understand the reason for having scientific names and classifications</li> <li>▪ Where they came from</li> <li>▪ How they are used</li> </ul>	<ul style="list-style-type: none"> <li>▪ Why is the common name not good enough?</li> <li>▪ How do I find the scientific name?</li> </ul>	N/A	<ul style="list-style-type: none"> <li>▪ Lecture on scientific names</li> <li>▪ Leaf collection with scientific names listing scientific and matching with the common name</li> </ul>	<ul style="list-style-type: none"> <li>▪ Michigan Trees book</li> <li>▪ Instructor notes and knowledge</li> <li>▪ Text book "Forests &amp; Forestry</li> <li>▪ FFA contest</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Quizzes on common versus scientific names</b></li> <li>▪ <b>Graded leaf collection using Family, Genus, species</b></li> <li>▪ <b>Performance at FFA contests</b></li> </ul>
November	Topic: <ul style="list-style-type: none"> <li>▪ Pest Management</li> </ul>	Vocabulary <ul style="list-style-type: none"> <li>▪ IPM</li> <li>▪ Herbicides</li> <li>▪ Insecticides</li> <li>▪ Fungicides</li> </ul>	<ul style="list-style-type: none"> <li>▪ General understanding of what pests are, and how they are grouped</li> <li>▪ How to read pesticide labels</li> <li>▪ Calculation of pesticide calibration and application rates</li> <li>▪ How can we reduce the use of chemical poisons and protect the environment</li> </ul>	<ul style="list-style-type: none"> <li>▪ What constitutes a "pest"?</li> <li>▪ What are the negative affects of pests?</li> <li>▪ How can pest damage be controlled or reduced?</li> <li>▪ How much pesticide should be used?</li> <li>▪ What is IPM, and how does it help reduce chemical use?</li> </ul>	N/A	<ul style="list-style-type: none"> <li>▪ Lecture</li> <li>▪ Video</li> <li>▪ Labs on pests</li> <li>▪ Traditional reading and writing assignments</li> <li>▪ Audio / Visual</li> <li>▪ Rate of application worksheets</li> <li>▪ IPM meaning and structure</li> <li>▪ Demonstrations of plant and insect response</li> </ul>	<ul style="list-style-type: none"> <li>▪ Text unit 16, 17, 18, &amp; 20.</li> <li>▪ Demonstration materials on pesticides</li> <li>▪ Pesticide labels</li> <li>▪ Text book "Intro to Horticulture"</li> <li>▪ Insect traps</li> <li>▪ Pesticide video</li> <li>▪ Plants</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Quizzes</b></li> <li>▪ <b>Worksheets</b></li> <li>▪ <b>Graded lab exercises</b></li> <li>▪ <b>Sub unit quizzes</b></li> <li>▪ <b>Rate calculation worksheets</b></li> <li>▪ <b>Insect ID quiz</b></li> <li>▪ <b>Weed ID quiz</b></li> <li>▪ <b>IPM quiz</b></li> <li>▪ <b>Design of IPM program</b></li> <li>▪ <b>Unit test</b></li> </ul>

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November – continued	Topic: ▪ Poinsettias	N/A	<ul style="list-style-type: none"> <li>▪ Understand the unique features of a poinsettia plant</li> <li>▪ Recognize how special, niche market plants can be valuable to a commercial plant business</li> <li>▪ See how much preplanning and work goes into the production of specialty plants</li> </ul>	<ul style="list-style-type: none"> <li>▪ Where do poinsettias come from?</li> <li>▪ Are the bright colors actually the flower?</li> <li>▪ How can poinsettias be grown out of their native land?</li> <li>▪ How did poinsettias get associated with our Christmas Holiday?</li> </ul>	N/A	<ul style="list-style-type: none"> <li>▪ Text book worksheet</li> <li>▪ Instructor notes / lecture</li> <li>▪ Examination of actual poinsettia plants</li> <li>▪ Growing the actual poinsettia plant</li> </ul>	<ul style="list-style-type: none"> <li>▪ Unit 13 of text</li> <li>▪ Several poinsettia plants for inspection</li> <li>▪ Photo control chamber</li> <li>▪ Small, non-colorful plants</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Instructor notes and knowledge</b></li> <li>▪ <b>Unit worksheet</b></li> <li>▪ <b>Information quiz</b></li> <li>▪ <b>Plant parts quiz</b></li> <li>▪ <b>Plant grow lab results</b></li> </ul>
November	Topic: ▪ Seeds	N/A	<ul style="list-style-type: none"> <li>▪ Ability to identify seed parts and their functions</li> <li>▪ Understand germination</li> </ul>	<ul style="list-style-type: none"> <li>▪ How does a seed germinate?</li> <li>▪ What is inside a seed?</li> </ul>	N/A	<ul style="list-style-type: none"> <li>▪ Lecture</li> <li>▪ Drawings</li> <li>▪ Seed germination percentage lab</li> <li>▪ Worksheet – unit 6</li> </ul>	<ul style="list-style-type: none"> <li>▪ Seeds</li> <li>▪ Textbook “Intro to Horticulture”</li> <li>▪ Instructor notes</li> <li>▪ Soil and trays</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Graded worksheet</b></li> <li>▪ <b>Quiz on seed parts</b></li> <li>▪ <b>Graded seed germination lab</b></li> </ul>
December	Topic: ▪ Introduction of soil unit	N/A	<ul style="list-style-type: none"> <li>▪ Understand the value of soil to all life</li> <li>▪ Ability to list some features of a good soil</li> </ul>	<ul style="list-style-type: none"> <li>▪ What do we get from soil?</li> <li>▪ Other than food, how does soil help us?</li> <li>▪ Where does soil come from?</li> </ul>	N/A	<ul style="list-style-type: none"> <li>▪ Lecture</li> <li>▪ Question and answer exchange</li> <li>▪ Student general knowledge</li> </ul>	<ul style="list-style-type: none"> <li>▪ Soil profile</li> <li>▪ Instructor notes</li> <li>▪ Soil pamphlet from MSU</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Participation grade</b></li> <li>▪ <b>Graded writing assignment on the value of soil (type 1)</b></li> </ul>

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December – continued	Topic: ▪ Soil anatomy	N/A	<ul style="list-style-type: none"> <li>▪ Good understanding of what soil is made up of and how that affects its value and use</li> </ul>	<ul style="list-style-type: none"> <li>▪ Why are some soils better than others/</li> <li>▪ Why are soils different colors?</li> <li>▪ What is the difference between soil “texture” and soil “structure”?</li> </ul>	N/A	<ul style="list-style-type: none"> <li>▪ Lecture</li> <li>▪ Question and answer discussion</li> <li>▪ Soil texture triangle worksheets</li> <li>▪ Soil texture lab</li> <li>▪ Soil color, texture, structure review sheets</li> </ul>	<ul style="list-style-type: none"> <li>▪ MSU soil bulletins</li> <li>▪ Lecture note</li> <li>▪ Soil triangle sheets</li> <li>▪ Samples of different types of soils</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Texture quiz</b></li> <li>▪ <b>Graded worksheets</b></li> <li>▪ <b>Soil texture lab</b></li> <li>▪ <b>Soil texture collection</b></li> </ul>
December	Topic: ▪ Soil fertility and fertilizer	N/A	<ul style="list-style-type: none"> <li>▪ Ability to determine general soil fertility by visual inspection</li> <li>▪ Able to determine how much NPK is in a given amount of fertilizer</li> <li>▪ Able to follow soil fertilizer recommendations for a given plot of land</li> </ul>	<ul style="list-style-type: none"> <li>▪ How do you know how much fertilizer to apply?</li> <li>▪ What does the #12-12-12 mean?</li> <li>▪ What does NPK mean?</li> <li>▪ What does each element do for the plant?</li> </ul>	N/A	<ul style="list-style-type: none"> <li>▪ Lecture, fertilizer problem sheets</li> <li>▪ Fertilizer questions</li> <li>▪ Plant response example / demo</li> </ul>	<ul style="list-style-type: none"> <li>▪ Fertilizer bulletins</li> <li>▪ Instructor notes</li> <li>▪ Calculators</li> <li>▪ Fertilizer bags and bottles</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Graded fertilizer calculation sheets</b></li> <li>▪ <b>Fertilizer worksheet from MSU bulletin</b></li> <li>▪ <b>Fertilizer quiz</b></li> </ul>
December	Topic: ▪ Soil sampling and testing	N/A	<ul style="list-style-type: none"> <li>▪ Know how to take a “representative soil sample</li> <li>▪ Environmental impacts</li> <li>▪ Chronic versus acute exposure</li> </ul>	<ul style="list-style-type: none"> <li>▪ What will a sample tell me?</li> <li>▪ Where can I get soil tested?</li> <li>▪ Can we do some testing ourselves?</li> </ul>	N/A	<ul style="list-style-type: none"> <li>▪ Instructor lecture</li> <li>▪ Related worksheet</li> <li>▪ Soil testing lab</li> <li>▪ Soil sampling field trip</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Soil test kit</b></li> <li>▪ <b>Soil sampling probe</b></li> <li>▪ <b>MSU soil sampling bulletin</b></li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Graded sampling worksheet</b></li> <li>▪ <b>Quiz</b></li> <li>▪ <b>Grade soil testing lab</b></li> </ul>
December	Topic: ▪ Landscaping	N/A	<ul style="list-style-type: none"> <li>▪ Understand the modern career field of indoor landscaping</li> <li>▪ Recognize the reasons why landscaping is popular today over previous years</li> </ul>	<ul style="list-style-type: none"> <li>▪ How does “landscaping” differ from landscaping?</li> <li>▪ Why is landscaping popular today?</li> <li>▪ What are the benefits of landscaping</li> </ul>	N/A	<ul style="list-style-type: none"> <li>▪ Textbook worksheet</li> <li>▪ Lecture notes</li> <li>▪ Landscape design video</li> </ul>	<ul style="list-style-type: none"> <li>▪ Unit 23 of Intro to Horticulture</li> <li>▪ Landscaping video</li> <li>▪ Paper and drawing supplies for design</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Graded worksheet on unit 23</b></li> <li>▪ <b>Landscaping quiz</b></li> <li>▪ <b>Graded drawing</b></li> </ul>

**BCCS**  
**High School PLANT SCIENCE Curriculum Map**  
 (Revised 4-25-08)

Month	Content		Skills	Essential Questions	Bench Marks	Instruction	Resources	Evaluation
	What topic(s) is being covered and what is the important vocabulary? What do students need to know?		What do students have to be able to do connected to the Content?	What are fundamental, enduring questions that will guide study and instruction?	What benchmarks are met through this topic?	What activities are used to develop the Sills and knowledge?	What materials, texts, videos, internet, software, or human resources support instruction?	What evidence (products and/or performance(s) is collected to establish that the Content and Skills have been learned?
December – continued	Topic: ▪ Fruit tree pruning	N/A	▪ Ability to understand and the purpose and methods of fruit tree pruning	▪ Why are fruit trees pruned each year? ▪ When is the best time to prune?	N/A	▪ Pruning video ▪ Pruning tools ▪ Instructor notes and knowledge ▪ Unit 33 Intro to horticulture	▪ Classroom lecture ▪ MSU bulletin ▪ Worksheet ▪ Pruning video	▪ <b>Graded worksheet</b> ▪ <b>Graded hand on pruning lab</b> ▪ <b>Unit 33 quiz</b>
December	Topic: ▪ Soil erosion and leaching	N/A	▪ Understand the seriousness of soil lost due to erosion ▪ How to control / reduce erosion ▪ Understand the serious risk to groundwater from leaching	▪ What causes erosion? ▪ Why is erosion so serious? ▪ What can be done to reduce it? ▪ How does leaching threaten groundwater?	N/A	▪ Lecture ▪ Groundwater map drawing ▪ Soil leaching / erosion lab ▪ Demonstration of methods of control	▪ Demonstration and equipment ▪ Various types and textures of soil ▪ Leaching trays ▪ pH test kits ▪ Erosion table ▪ Seeds for planting a cover crop ▪ Basins for catching erosion run-off	▪ <b>Graded lab</b> ▪ <b>Graded worksheet</b> ▪ <b>Quiz</b> ▪ <b>Soil unit test</b>
January	Topic: ▪ Introduction of Scientific Method concept and project	N/A	▪ Be able to identify a problem area ▪ Form a hypothesis ▪ Design an experiment ▪ Collect data ▪ Draw conclusions	▪ What is the Scientific Method approach to science? ▪ How do I form a hypothesis? ▪ What am I trying to accomplish?	N/A	▪ Instructor lecture ▪ Video presentation ▪ Examples of former scientific method projects ▪ Demonstrations and examples of potential projects	▪ Video ▪ Instructor knowledge ▪ Sample of light based experiment ▪ Samples of former student project write-ups	▪ <b>Grade each part of project: Topic, hypothesis, experiment, daily activities, data sheet design, graphs of data and conclusion</b>
February	FEB. THRU JUNE UNDER CONSTRUCTION.		▪	▪		▪	▪	▪

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<b>Month</b>	<b>Content</b> What topic(s) is being covered and what is the important vocabulary? What do students need to know?		<b>Skills</b> What do students have to be able to do connected to the Content?	<b>Essential Questions</b> What are fundamental, enduring questions that will guide study and instruction?	<b>Bench Marks</b> What benchmarks are met through this topic?	<b>Instruction</b> What activities are used to develop the Sills and knowledge?	<b>Resources</b> What materials, texts, videos, internet, software, or human resources support instruction?	<b>Evaluation</b> What evidence (products and/or performance(s) is collected to establish that the Content and Skills have been learned?
March			▪	▪		▪	▪	▪
April			▪	▪		▪	▪	▪
May			▪	▪		▪	▪	▪
June			▪	▪		▪	▪	▪