

Class Name: _____ Academic Year: ____ Term ____

Outcome	Proficient (P)	High Performance (HP)	Instructional Activities
<p>What I expect you to be able to do and know when you complete this part of the class.</p>	<p>You have shown and acceptable level of skill/knowledge. I believe you are good enough at this outcome.</p> <p>You will get a C if 80% outcomes are proficient.</p>	<p>You have shown a high level of understanding and ability. Excellent work.</p> <p>Creating your own projects, or teaching others are good ways to show high performance.</p> <p>You can get a B or A with more HP outcomes</p>	<p>Ways you can show me <u>evidence</u> you are proficient (or HP) with this outcome</p> <p>If you can think of other ways to show me evidence of these skills, feel free</p>
<p>1. Show a good work ethic consistently</p>	<p>Finish assigned tasks in the garden</p> <p>Apply classroom learning to outdoor work/ decision making</p>	<p>HP: Identify what needs to be done and do it on your own</p> <p>Mastery: Show creativity and attention to detail on the job. Show ability to train others on the job.</p>	<p>Daily outdoor work in the garden</p>
<p>2. Demonstrate safe work habits, be able to explain and follow safety procedures consistently to keep yourself and others safe on the job. (Hand tools, power tools, tractor)</p>	<p>Work safely at all times</p> <p>Do not use tools that you are unfamiliar with</p> <p>Ask questions report dangerous situations to the teacher</p>	<p>Be able to create safety procedures for specific situations</p> <p>Be able to evaluate potential dangers and create a safe work plan for a job</p>	<p>Safety must be observed on a daily basis</p> <p>Student written work plans or procedures</p>

UNIT 1: Botany Outcomes	Proficient (P)	High Performance (HP)	Instructional Activities
<p>3. Define the 3 life sciences, and the eight applied sciences. Be able to describe the differences between them. (1301)(5.01)</p>	<ol style="list-style-type: none"> 1. Explain the fundamental difference between applied and life or pure science, and define them. 2. Categorize different agricultural activities into the applied sciences 3. Investigate different careers in the applied science fields. Which would you enjoy most? 	<ol style="list-style-type: none"> 1. Write a paragraph explaining what this difference between applied and pure science says about the way we think. 2. Explore the other life sciences; which do you think are useful in agriculture 3. Create another concept chart showing the life science that make up applied sciences 	<p>Make a concept chart of the life and applied sciences, and define each.</p>
<p>4. Explain the purpose of a leaf. List its separate parts both visible and too small to see. (14.00) Describe how the parts work together for the leaf purpose.</p>	<ol style="list-style-type: none"> 1. Explain the two major functions of a leaf 2. Name the major visible parts of a leaf 3. Name the smaller leaf part and explain what they do 	<ol style="list-style-type: none"> 1. Investigate modified leaves and leaf functions and explain how they are adapted to special situations. (Like carnivorous leaves or CAM systems) 2. Learn the names of different leaf margins and give some examples of the different trees that have them. 	<p>Draw a leaf including all the parts named in the curriculum, and another one illustrating leaf functions.</p>
<p>5. Explain stem and root function, and their separate parts, both external and internal, and know how they work (14.00).</p>	<ol style="list-style-type: none"> 1. Give the functions of the stem (2) and root (4) 2. Name the external and internal parts of the stems and roots. How do they work to serve the stem/root functions? 3. What can you tell by looking at the stem parts? 	<ol style="list-style-type: none"> 1. Why do the internal stem parts create annual rings? 2. Define dendrocronology, what does it tell us and why has it been important for scientists 3. How does stem growth control lumber quality? What makes a tree a good lumber tree? 	<p>Diagram the stem inside and out. Find stems outside and identify all the parts.</p>

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<p>6. Explain the function and parts of flowers and fruit? Define Complete and incomplete flower. (14.00)</p>	<ol style="list-style-type: none"> 1. Give the function of a flower 2. Name all the flower parts and explain how they work toward that function 3. Explain the purpose and parts of a fruit. 	<ol style="list-style-type: none"> 1. Investigate different types of pollination, how does the flowers morphology differ depending on its pollination strategy. 2. Look at different animal pollinated flowers and how they are adapted to specific animals 	<p>Diagram a flower and the fruit that results from it. Dissect an actual flower and identify its parts.</p>
<p>7. Identify the parts of a plant cell, and explain how cells and tissue work together so plants can grow and live</p>	<ol style="list-style-type: none"> 1. Explain basic cell theory and define "Cell." 2. Identify the major organelles of the cell and explain what they do. 3. Compare plant and animal cells, describe the differences. 3. Describe how plant growth occurs on a cellular level. 4. Define tissues and name and compare six different kinds. Describe how tissue controls plant growth & life. 	<ol style="list-style-type: none"> 1. Describe the role of hormones in controlling plants and tissues. Name four plant hormones and describe how they function and how we use them. 2. Explain how GMO crops are produced and used in today's agriculture, make a pro and con chart about GMO crop use. 	<p>Plant cell poster (group or individual project)</p>
<p>Unit 2: Applied plant science:</p>	<p>Proficient (P)</p>	<p>High Performance (HP)</p>	<p>Instructional Activities</p>
<p>8. Explain and demonstrate different types of sexual and asexual propagation. [18.00]</p>	<ol style="list-style-type: none"> 1. Explain the 4 main factors that influence germination 2. Define the six types of asexual propagation and demonstrate two 3. Diagram eight types of grafting. 4. Explain the pro and cons each propagation method. 	<p>Choose one:</p> <ol style="list-style-type: none"> 1. Demonstrate more complex types of propagation using rooting hormone or leaf cuttings. 2. Research and perform a graft 3. Research tissue culture and write a procedure for one. 	<p>Notes, discussion, notes, diagrams t-charts demonstration.</p>

Unit 2: Applied plant science:	Proficient (P)	High Performance (HP)	Instructional Activities
9. Create an experiment to demonstrate a property of photosynthesis in the greenhouse	<ol style="list-style-type: none"> 1. Develop a hypothesis about plant growth we can test in our greenhouse 2. Write a procedure for the experiment and perform it 3. Record the results and verify or revise your hypothesis 	Create an experiment to test another variable like nutrient availability or soil temperature and perform the experiment.	Experiments in greenhouse and lab write up
10. Create a cultivation guide for a plant we will grow this year; grow and assume care for this plant in the greenhouse.	Research and describe the germination, growth, transplant, harvest and special need and features of your plant.	1. Create a cultivation guide that is in depth, edited and suitable for publication to the internet.	Use the template to build your cultivation guide.
11. Design and care for a spring garden plot including your crop and others.	<ol style="list-style-type: none"> 1. Plan, plant and care for your garden plot 2. Show ability to transplant and care for different plants 3. Show the ability to use garden tools/resources safely and effectively 	<ol style="list-style-type: none"> 1. Show attention to detail and creativity in your garden 2. Harvest and eat and share your produce. Tell me how good it was, and how it changed your life 	Student garden plots
12. Identify evergreen plants based on physical characteristics. Create a leaf collection or illustrate a guide containing five separate genera, with defining characteristics.	<ol style="list-style-type: none"> 1. Be able to identify evergreen plants from the hort 1 plant list, common and scientific name 2. Describe their uses and adaptations 	<ol style="list-style-type: none"> 1. Explain the natural history of a group of evergreens. 2. Describe a natural plant community that includes evergreens; explain the role that they play in that ecosystem. 	Sort evergreens out of the plant list and identify their unique features Identify plants and plant samples using a dichotomous key
13. Identify deciduous plants based on physical characteristics. Create a leaf collection or illustrate a guide containing five separate genera and their defining characteristics.	<ol style="list-style-type: none"> 1. Be able to identify deciduous plants from the hort 1 plant list, common and scientific name 2. Describe their uses and adaptations 	<ol style="list-style-type: none"> 1. Explain the natural history of a group of evergreens. 2. Describe a natural plant community that includes evergreens; explain the role that they play in that ecosystem. 	Sort evergreens out of the plant list and identify their unique features Identify plants and plant samples using a dichotomous key

