

## LABS IV AND V – PLANTS

*Instructions*

Use your observation of the material from the different stations and the Biology II lab manual to find answers to the questions. Draw what you see and make sure to label relevant structures and observations.

PLANT STATIONS	QUESTIONS	ANSWERS	DRAWING
<p><b>I</b> <b>GAMETOPHYTES</b> (SLIDE, MODEL, SPECIMEN)</p>	<p>a) Are gametophytes haploid or diploid? b) What is the function of the gametophyte? c) In which group of plant is the gametophyte dominant?</p>		
<p><b>II</b> <b>ARCHEGONIA/ANTHERIDIA</b> (MARCHANTIA MOSS)</p>	<p>a) What is the function of the archegonia? b) What is the function of the antheridia? c) Where are Archegonia and antheridia found?</p>		
<p><b>III</b> <b>SPOROPHYTE</b> (FERN FROND)</p>	<p>a) Are sporophytes haploid or diploid? b) What is the function of the sporophyte?</p>		
<p><b>IV</b> <b>VASCULAR TISSUE: XYLEM AND PHLOEM</b> (SLIDE, FRESH LEAF)</p>	<p>a) What is the function of vascular tissue? b) Do all plants have vascular tissue?</p>		
<p><b>V</b> <b>PINE CONES</b></p>	<p>a) Are these female or male pine cones? b) What plant stages are found in cones?</p>		
<p><b>VI</b> <b>PINE POLLEN</b> (STAINED SLIDE)</p>	<p>a) What is pollen? b) What is the function of pollen? What limitation does pollen bypass? c) How is a pollen grain adapted for dispersal? d) Do all plants produce pollen?</p>		
<p><b>VII</b> <b>PINE SEEDS</b></p>	<p>a) What is in a seed? b) What are functions of seeds c) Do all plants have seeds?</p>		

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<p align="center"><b>VIII FRESH FLOWER</b></p>	<p>a) Identify the parts of the carpel b) Identify parts of the stamens c) What stages of the plant cycle are found in flowers? d) What are functions of flowers? e) Do all plants make flowers?</p>		
<p align="center"><b>IX FRESH FRUIT (STRING BEAN)</b></p>	<p>a) What do fruits develop from? b) What are functions of fruits? c) How many seeds can you observe? d) What do seeds develop from? e) How many ovules were fertilized in this fruit?</p>		
<p align="center"><b>X STOMA/TA (FRESH LEAF)</b></p>	<p>a) What are functions of stomata? b) When are they open?</p>		
<p align="center"><b>XI FLOWERING PLANT POLLEN (PREPARED SLIDE)</b></p>	<p>Looking at the pollen under microscope determine whether the plant is a monocot or dicot</p>		
<p align="center"><b>GENERAL QUESTIONS RELATIVE TO STATIONS VI -XV</b></p>		<p align="center"><b>ANSWERS</b></p>	
<ol style="list-style-type: none"> <li>List the general features of all plants</li> <li>What organism do plants descend from?</li> <li>What are the four groups of plants?</li> <li>What does the evolution of plants show?</li> <li>Complete the plant life cycle below (alternation of generations)</li> <li>Define homosporous and heterosporous</li> <li>Define "pollination". Is it the same as fertilization?</li> </ol>			