

Monera, Protista, Plantae, and Fungi Identification Lab

Station One	
1. -What are the two domains that divide up this kingdom? -What are the clumps of bacterial growth found on the agar gels called?	
2. -What domain does cyanobacteria belong in? -Are they heterotrophic or autotrophic? -What gas do they produce and what process of PS produce this gas?	
3. -What is the significance of cyanobacteria to the earth's history?	
Station Two	
4. These are not really fungi, but they are fungal-like protists. You are looking at fruiting bodies. What kind of cell division occurs at this stage and what kind of cells are created as a result?	
5. You are looking at dried up plasmodium. What is this and what unique characteristic does it have?	
6. What is a lichen?	
7. Describe the mutualistic relationship between the two organisms that makes up lichen.	
Station Three	
8. Name the phylum that brown algae belongs in.	
9. Name the root-like, stem-like, and leaf-like structures that you see.	

10. What is a common example of a member of this group?	
11. Name the phylum and the pigment responsible for making this algae "red."	
12. What is unique about their gametes compared to gametes of other algae?	
Station Four	
13. -Name this phylum. -In what ways are these related to plants?	
14. Explain the following sexual life cycles: isogamous, anisogamous, and oogamous.	
15. Is sea lettuce considered a colony or a multicellular organism?	
16. In what form do these store polysaccharides?	
Station Five	
17. A liverwort is an example of what phylum?	
18. What is the most dominant generation for this phylum?	
19. Are you looking at the gametophyte or the sporophyte generation?	
20. Look carefully at the single long stalk growing out of the middle of the main leafy sections. -Is this stalk the gametophyte or sporophyte generation? -What is the bulb at the end of this long stalk called? -What does it produce?	
21. These are gametophytes. What is the generic name for the organ that creates these gametes? -What is the male organ called? -The female organ?	

Station Six	
22. A Fern is an example of what phylum?	
23. Are you looking at the gametophyte or sporophyte generation?	
24. The dots you see are a type of sporangia. -What is the name of these dotted sporangia? -What do they produce?	
25. Horsetails are in the Pteriophyte phylum. What class are they in? -The small scale-like leaves grow out of what joints? -The large bulbous structure on the end of the large stalk is a type of sporangia called ____.	
Station Seven	
26. You are looking at a gymnosperm. -What are its distinguishing characteristics? -Ovules and seeds develop on leaves called ____ which aid in the seed's dispersal.	
27. This is an ovulate cone. -Is this a sporophyte or a gametophyte? -What does the ovulate cone contain? -What do these produce?	
Station Eight	
28. Name two evolutionary significance of angiosperms.	
29. The female reproductive structure in the center of this flower is called ____ and is made up of the ____, ____, ____. -The male reproductive structure surrounding the female structure is called ____, and is made up of the ____, and ____.	
30. Since the anther contains the N microspore, this microspore then germinates into a male gametophyte which is enclosed inside ____.	

Station Nine	
31. This is a cherry fruit. What flower part develops into this?	
32. The "bean" that we eat is also a fruit. The seed coat of the bean seeds is made of a tissue called _____. -What is the seed itself made up of?	
33. Why is an angiosperm considered a vascular plant? -What two vascular tissues are present in this stem and what do each of these tissues transport?	
Station 10	
34. Sac Fungi is in what phylum? -You are looking at a N mycelium which eventually goes through plasmogamy. Explain plasmogamy.	
35. This large fruiting structure is the ascocarp of a sac fungi. How is the ascocarp formed? Is the 2N nuclei of the cells separate or fused?	
36. As a result of karyogamy, the 2N nuclei fuse into a single cell. The hyphae of this fungus creates a 2N sack called _____ which undergoes meiosis to produce N _____.	
Station 11	
37. Bread mold is an example of what fungal phylum? -What is unique about its filaments?	
38. Is the fruiting structure 2N or N? -How are they formed?	
39. The fruiting body of a basidiomycota is the "mushroom cap" that we eat. What is this fruiting body called? -What are the gills underneath called? -What happens within these gills?	
40. The black dust you see are N _____. They germinate into _____.	