

NAME _____

DATE _____

Introduction to Lichens

In this activity, you will be introduced to a group of plant-like organisms, the lichens. Lichens are pioneers; they are often the first organisms to establish themselves on cooled lava flows, new rock exposures, or on buildings. They are found from the tropics to as far north of the Arctic Circle.

Go to a workstation that has a lichen sample. Use your Lichen Types Bioreview® Sheet and the following information to identify the form of the lichen at the station. Draw the lichen.

Crustose lichens are tightly fastened to the substrate (rock or tree bark) on which they grow. They cannot be removed from the substrate without damage.

Foliose lichens are leaf-like in growth. They are attached to a substrate but have lobes that are free.

Fruticose lichens are erect and branching.

Fruticose pendant lichens are branching but hang from their point of attachment.

Lichen Type and Notes	Drawing
1. _____	
2. _____	

Lichen Type and Notes	Drawing
3. _____	
4. _____	

Place a drop of water on a microscope slide. Use scissors to cut off a portion of lichen (foliose, fruticose, or fruticose pendant) measuring about 2 mm in diameter or length. Place this piece of lichen into the drop of water. Use the blunt end of the handle of a dissecting needle to macerate the lichen into several small bits. Add a coverslip and observe under low and high power. You will first see numerous clear strands. These are the hyphae of a fungus. Look carefully and you will see that the body of the lichen is composed of an interwoven mass of these hyphae. Look about for cells that are green and round. These are unicellular algae. Look back at the mass of the hyphae and see if you can find algal cells within the mass.

Make a drawing of the algae and the fungus.

In many cases the fungal and algal components of a lichen can be separated and grown in culture. Neither, when grown by itself, resembles the lichen. Should lichens be classified as organisms with their own scientific names, or should their fungal and algal components be classified but not the lichen? Explain your answer, giving supporting evidence.

Carolina Biological Supply Company

2700 York Road, Burlington, North Carolina 27215
Phone: 800.334.5551 • Fax: 800.222.7112
Technical Support: 800.227.1150 • www.carolina.com
CB163641305