

## Lichen Lesson Summary Table for Teachers

Lesson #	Learning Goals— Students will be able to:	Vocabulary	Location of Lesson	Time Needed	Materials
1	<ul style="list-style-type: none"> <li>-Describe symbiotic relationship within lichen</li> <li>-describe lichen habitat requirements</li> <li>-explain why lichen are good bioindicators</li> <li>-explain role of lichen in ecosystem</li> <li>-explain human uses of lichen</li> </ul>	Alga Bioindicator Cyanobacteria Fungus Lichen Mutualism Substrate Symbiosis	Indoors with computers	50-75 minutes	Computers
2	<ul style="list-style-type: none"> <li>-compare and contrast lichens, moss, fungi, and vascular plants.</li> <li>- recognize the three main growth forms of lichens.</li> </ul>	Cortex Crustose Foliose Fruticose Medulla Morphology Moss Niche Photobiont Rhizine Thallus Vascular	Indoor lab	50-75 minutes	Lichen samples Hand lens Computers or printouts
3	<ul style="list-style-type: none"> <li>-establish transect</li> <li>-develop and investigate a research question</li> <li>-conduct transect inventory</li> <li>- analyze data and present results</li> <li>-identify common lichen</li> </ul>	Line Transect Belt transect DBH	Outdoors Indoor preparation and post field work Outdoor transect work	50 minutes 50 minutes 50 minutes	-DBH or metric measuring tape -2 Data sheets (double sided), hand lens -clipboard, compass -Pencil, Pins -50m measuring tape -Flagging -Labels for trees 1-2 -ID photos, Camera
4	-write an essay to apply what they have learned about lichen ecology and biomonitoring for air pollution		Homework	1.5 -2 hrs	Access to computer

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