

Study Guide - Willamette Valley Ecology

Field Biology

For this study guide, do not simply gather the information for each question. You should also consider “What If” scenarios such as a) a different set of initial conditions, b) different ecological rules, or c) different behaviors by humans or other organisms.

1. Before European-American settlers came to the Willamette Valley, how did Native Americans influence the native vegetation in the valley? Why did the Native Americans do these things? (5 minutes)
2. Describe the process by which coniferous forest communities now dominate so many areas that were previously occupied by prairie and oak savannah. (10 minutes)
3. Describe the process through which prairies and oak savanna landscapes were maintained by fire prior to the 1800's. (10 minutes)
4. In general, describe the vegetation of the following types of plant communities (you can use the presentation on my web site as a resource): (10 minutes)
 - a. Open woodlands (Oak savanna)
 - b. Prairie
 - c. Wetland / Riparian
 - d. Douglas Fir Forest
5. The Crescent Valley area, prior to the 20th century, was an ash swale occupied by Native Americans. Describe the vegetation of the area as it might have appeared in 1850 and compare that to the vegetation of the area now (hint – some of this information was discussed in class; some of it should come from your own personal observations of the Crescent Valley area). (5 minutes)
6. Imagine that you were living in an open woodland / oak savanna that was maintained by annual burning. What do you think would happen if, you came through and picked up every plant seed that made it through the burning? Describe what the landscape might look like after one year, after five years, and after ten years. Use your knowledge of the processes we discussed in class to justify your response. (15 minutes)