Navigating the Woodland Web Site

Activity Overview

Students will become familiar with the Earth Partnership Woodland Restoration web site as they research native woodland communities and plants as a precursor to implementing a woodland restoration on their school grounds.

Objectives

Students will:

- Use electronic sources (web site and database) to research woodland plants and communities
- Locate relevant information that can be used in a restoration on their school grounds
- Identify plants in Wisconsin biomes

Subjects Covered

Language Arts, Science, and Technology

Grades

6 through 12

Activity Time

45 minutes

Season

Any

Materials

Internet access, student worksheet

State Standards

Language Arts:

Use computers (E.4.1, 8.1)

Conduct then communicate research (F.4.1, 8.1)

Science:

Use scientific sources & resources (B.4.1)

Select multiple information sources (C.4.3)

Media and Technology:

Realize everyone is a technologist (A.4.2)

Explain purposes of objects (A.4.4)

Show how science and technology work together (A.8.1)

Background

The "Woodland Restoration for Wisconsin Schools" web site guides students through the process of restoring or enhancing a woodland on their school grounds. Students are able to choose appropriate plants for a restoration based on their site conditions using an interactive woodland database. Students can also learn about ecological and environmental characteristics of forest ecosystems, forest structure, environmental influences, and succession. The goals of this particular activity are to familiarize students with the contents of the woodland restoration web site so that they will be able to use it as:

1. a tool for the school restoration project

2. a way to learn about woodland plants and communities

3. a means to practice using technological sources that they can connect to a meaningful, real-life experiences on their schools grounds.

Activity Description

Use a computer and follow the directions on the student work sheet to complete the activity.

Extensions

- Identify woody plants in an existing woodland. Identify possible woodland communities where these plants would be found. Determine what plants, if any, might be missing from the community. Possibly add these plants.

- Create different scenarios. Choose plants from the database that will survive in each particular site condition.

- Research historical maps of your school site. If woodlands once grew at your site, use the information on the web site to reconstruct what plant and animal species may have lived there.

Assessments

- Retrieve 3 pieces of information from the web site.

- Given a specific site condition, choose one or two species for each forest layer that will match the site conditions.

- Explain what a plant community is and what environmental factors influence the composition of any particular plant community.

Additional Resources

- "eNature" at www.enature.com

- "Wisconsin Vascular Plants" at http:// www.botany.wisc.edu/herbarium/

- "Dendrology" at http://www.iastate.edu/~bot356/

Navigating the Woodland Web Site Student Worksheet

Name _____

1. After opening your internet browser, go to your address bar and type in http://www.uwarboretum.org/eps/ woodland_rest_int_work.php.

2. You are now at the welcome page for the UW-Madison Arboretum's Woodland Restoration Interactive Worksop. Scroll down to the section titled "How to Restore Woodlands at Your School". Read the introduction.

   True or False Planting a woodland is like planting an annual flower garden—sow seeds in May and flowers will bloom before August.

3. Click on "Restoration activities" and then "Study the Site". Read the introduction.

   Why would you conduct a site analysis or investigation (i.e., study, map and investigate your school grounds) at your school site?

   _____

   _____

   List one environmental, one biological and one cultural factor you could investigate at your school site.

   1. _____

   2. _____

   3. _____

4. Scroll to the top of the page and click on "Woodland Restoration Interactive Workshop" link to return to the welcome page or click the "Back" button on your browser's toolbar.

5. Next, click on "Woodland Community Models". Read "What is a Plant Community?", "How are Plant Communities Classified", "How are northern Wisconsin plant communities different from southern communities" and "How does climate affect northern and southern Wisconsin?".

   What are the five basic plant communities designed by John Curtis?

1._____	4._____
2._____	5._____
3._____	

Navigating the Woodland Web Site Student Worksheet

6. Choose one woodland (northern or southern) and read the introduction. Then choose a dry or wet climate, and then a specific community. Go to that web page.

    What community did you choose? (list the woodland) _____

    Locate and record the information about your community relating to the following:

    Topography: _____

    Dominate trees: _____

    Wildlife (if listed): _____

    Interesting Fact: _____

    _____

7. Click the "Back" button to take you back to the "Woodland Plant Community Models" page. Then scroll to the top and click on "Woodland Restoration Interactive Workshop" link or click the "Back" button again to take you to the welcome page. Next click on the "Woodland Database" link.

8. Click on the "Advanced Search" link. Type in a plant name (common or scientific) of a dominate tree listed under Step 6 and click "Search".

9. Click on the link for the same community you used in Step 6.

    Locate and record the following information:

    Common Name: _____

    Genus and Species: _____

    Height: _____

    Layer in Forest (listed with height): Circle the correct answer below.

    Large Canopy   Small Canopy   Large Understory   Small Understory

    How many communities is your plant found in? _____

    Fall leaf color: _____

    Bloom Time: _____

    Fruit Type: _____

    Interesting Fact: _____

10. Click on "Back" button twice to get back to the "Advanced Search" page. Now you can practice using the database.

    Type in one following choices from below, then record the number of possible results:

    Showy Flowers (Yes)_____   (Height) Small Canopy _____

    Note: To learn more about a characteristic or term click on the (?) link next to the word or the "Glossary of Terms" link in the lefthand margin.

    Try typing two different characteristics and then choosing a different plant community than the one you have already studied. Write down the common name and scientific name for one of the search results you receive.

    Characteristics: _____

    Results (pick one): _____

11. Click on the "Back" button four times to get to the welcome page. Next click on "Characteristics of Forest Ecosystems." Read the "Vertical Structures-Vegetation Layers" section.

    Where can the understory layer of the forest ecosystem be found? _____

    _____

    What kind of plants can be found in the groundlayer of a forest ecosystem? _____

    _____

12. Scroll down to read the "A Successional Model of Soutern Wiscosnin" section.

    What kind of native plants move in during the first stage?_____

    _____

    List one non-native plant species that is found during the second stage?_____

    How long can the woody pioneer stage last? _____

    Why is the old growth stage so unique?_____

    _____

You are now finished learning how to navigate through the Woodland Restoration Interactive Workshop web site. When you are ready to begin a woodland restoration on your school grounds you will find this web site a helpful tool for discovering which plants will grow successfully on your site and other useful information for immediate and long-term planning.