Forests in Your County

SUMMARY

In Part I, students use Google Earth to locate forested areas in their county, create their own land cover maps, and estimate the percent of forest cover. In Part II, a forester or another natural resource professional is invited as a guest speaker to provide information about forest areas and ownership within the county.

BACKGROUND

Forests are important global resources that are managed for many reasons, including the extraction of products such as pulpwood, fuel wood, and timber, as well as nontimber forest products such as mushrooms, berries, and medicines. Forests also provide wildlife habitat, open space, and recreational areas; protect water quality; produce oxygen; sequester carbon; and prevent soil erosion. When European settlers arrived in the U.S. in 1630, forest land was estimated at 1.05 billion acres. Since that time land-cover characteristics have changed drastically. Most notably, approximately 300 million acres of forest land have been converted to other land types, mainly agricultural croplands (Smith, Vissage, Darr, & Sheffield, 2001).

Today, it is estimated that forests cover an estimated 747 million acres, accounting for 33 percent of the total U.S. land area (Smith, Vissage, Darr, & Sheffield, 2001). In Florida, forests cover an estimated 16.2 million acres, accounting for 47 percent of Florida’s total land area (Carter & Jokela, 2002). Forest areas in the U.S. are distributed across the landscape and vary from scrub forests to pure and multispecies hardwood forests and coniferous forests (Smith, Vissage, Darr, & Sheffield, 2001).

In the U.S., many forests are managed for timber or pulpwood production; approximately two-thirds of U.S. forests are classified as timberland—forests that can grow merchantable tree crops (Smith, Vissage, Darr, & Sheffield, 2001). In addition, 67 percent of forested land in the U.S. is owned by nonfederal public agencies, the forest industry, and private individuals (Smith, Vissage, Darr, & Sheffield, 2001).

When considering the feasibility of a woody biomass energy facility, it is important to understand the size and location of forests, who owns the forests, how the forests are managed, and how often and for what purpose they are harvested. This activity engages students in learning about these topics in their county.
Preparation
1. Make copies of Group Worksheet and gather materials needed.
2. Download the Google Earth program onto all computers. (Go to http://earth.google.com to download the program for free.)
3. Go through the Group Worksheet instructions on your own to familiarize yourself with the activity.
4. For Part II, you will need to invite to your classroom a guest speaker who is knowledgeable about the county’s forested areas and forest ownership and management.
   - Begin by contacting your county forester or other local Florida Division of Forestry staff members. Visit http://www.fl-dof.com/field_operations/county_foresters/index.html to find your county forester’s contact information.
   - If he or she is unavailable to speak, ask for a recommendation for another person in the county who can provide similar information. Other options for guest speakers might include a natural resource extension agent, forest landowner, forestry association member, natural resource/environmental consultant, forest industry employee, land manager with a state or national forest, or a county/city arborist.

Procedure
Part I: Mapping Your County’s Forests
1. Divide your class into groups of two or three students.
2. When the groups are at computer stations, instruct them to open the Google Earth program.
3. Pass out copies of the Group Worksheet, 11x17 paper, and colored pencils.
4. Review instructions with your class.
5. After groups have completed the Group Worksheet, ask them to tape their county maps up around the classroom.
6. As a class, compare and contrast the maps.
7. Allow groups time to revise their map and revisit Google Earth to verify any changes.
8. As a class, discuss the answers to the Group Worksheet, Part I.

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Part II: Guest Speaker

1. To prepare for the guest speaker, ask each group to make a list of questions to ask the speaker. Suggest that students develop questions about the size and location of the county’s forests, who owns the forests, how the forests are managed, and how often and for what purpose they are harvested. Encourage groups to ask specific questions about their map if they need clarification.

2. Each group should be prepared to ask at least two questions during the guest speaker’s visit. You may wish to coordinate the questions as a class so groups have unique questions to ask the speaker. In addition, students should take notes during the guest speaker’s presentation. Tell groups that they will be given participation points based on how engaged they are in the speaker’s presentation. You will likely need to moderate the question and answer session to ensure that each group has a chance to ask the speaker their questions.

3. After the speaker leaves, lead a class discussion about the interaction with the guest speaker if time permits. Alternately, you can ask students to write a summary of what they learned about the county’s forests.

Extensions

- Help students (either individually or in groups) contact a local forest landowner for an interview. Students can use the county property appraiser Web site to locate forest landowners.

- Use an Internet search engine to determine if your county has a GIS mapping system available for public use. If so, you can introduce students to GIS and have them investigate forested areas in the county using this program.

- Take a field trip to a local forest to learn about management objectives. Ask your county forester for more information.

Resources

- Florida Division of Forestry: [http://www.fl-dof.com](http://www.fl-dof.com)
PART I: MAPPING YOUR COUNTY’S FORESTS

› Open the *Google Earth* program. Find your county by typing the county and state names in the “Fly To” field.
› In the “Layers” field, check the “Roads” and “Borders and Labels” boxes.
› Use the zoom and navigation features in the upper right corner to identify your county boundaries.
› Zoom in and out in *Google Earth* to further examine forested and agriculture lands you identified on the county map.
› Next, as a group, create your own county map.
   • First, draw an outline of your county’s shape.
   • Use colored pencils to denote forested and urban areas, major roads, and cities/towns throughout your county that you find using the zoom and navigation features.
   • Create a map legend that tells a viewer what the colors mean.
› As a group, use your map to answer the following questions:
  1. Describe the locations of the forested areas in your county.

  2. Estimate the percentage of land that is forested in your county.

  3. Are forested areas close to or far from urban areas in your county? Use the ruler feature on *Google Earth* to measure the distance.

  4. As a group, make a prediction: how might land use in your county change over the next 25 years? Explain why you think these changes will occur.
PART II: GUEST SPEAKER

As a group, come up with a list of questions to ask the guest speaker and record these below. Also, take notes on the guest speaker’s presentation.