



# CAREERS EXPLORATION

## NUTSHELL

*In this lesson, students read about eight professionals working in forestry-related careers. They examine the skills, education, and experience necessary for each career and decide if it is a job they are interested in. A final game of Who Am I? challenges students to guess who mystery professionals are.*

### BIG IDEAS

- Forest research and management involves professionals with backgrounds in many fields, including forestry, biology, wildlife, soils, water, land management, urban planning, engineering, sociology, geography, technology, environmental education, and chemistry. (Subconcept 52)

### OBJECTIVES

Upon completion of this lesson, students will be able to:

- Give examples of forestry-related careers and the skills, education, and experience needed for such positions.

### SUBJECT AREAS

Language Arts, Science, Social Studies

### LESSON/ACTIVITY TIME

- Total Lesson Time: 65 minutes
- Time Breakdown:
  - Introduction ..... 5 minutes
  - Activity ..... 45 minutes
  - Conclusion ..... 15 minutes

### TEACHING SITE

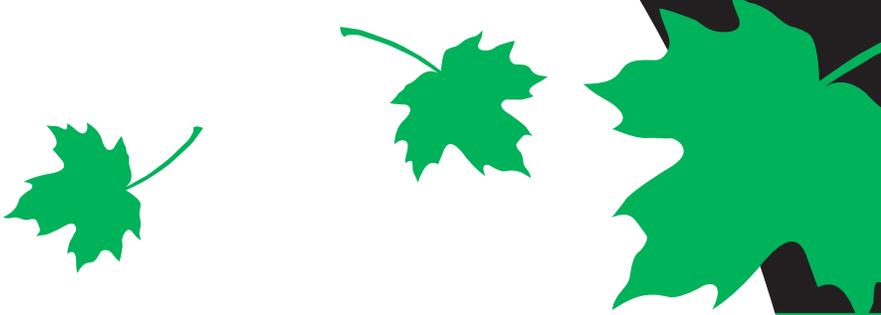
Classroom

### BACKGROUND INFORMATION

There is a wide array of forestry-related careers. They range from direct care of trees to landscape planning to the processing and production of lumber and products. One of the fastest growing specialty areas in forestry is in urban forestry, where people are involved in caring for trees in urban and suburban areas. In Wisconsin, the forest products industry is the second largest industry in the state (agriculture is the first). There are approximately 85,000 people directly employed in the forest products industry. The paper industry employs 40,000 people.

Careers in forestry-related fields generally require some type of higher education due to the level of science and technology used. Education may include an advanced degree and/or technical training. Well-developed people skills are also important for those in forestry-related careers. Communication with the public and professionals in other natural resource fields is important when managing resources.

Helping students to become aware of natural resource careers, such as those in forestry, gives them options for the future. Forestry-related jobs are important to the social, economic, and environmental health of our state.



## VOCABULARY

**Director (Cofrin Center for Biodiversity):**

A person who studies plants and animals in order to gather information that will be used to help manage resources.

**Forester:** A person who plans and makes decisions about forests to meet goals and support healthy ecosystems.

**GIS Specialist/Forester:** A person who uses maps and computers to manage forests.

**Parks Operations Manager:** A person who directs daily activities of park employees to maintain parks.

**Plant Pathologist:** A person who researches plant diseases.

**Product Developer:** A person who works with customers to create new wood products.

**Project Director (Nature Conservancy):** A person who works for the Nature Conservancy to oversee and plan the protection of natural communities.

**Public Affairs Specialist:** A person who shares material on key issues with others for the USDA Forest Service.

## PROCEDURE

### INTRODUCTION - FOREST-RELATED JOBS

Remind students that in Wisconsin there are many people who have jobs related to forests and the forest products industry. There are also people who do not work directly with forests, but are connected in some way. For example, sales associates who sell forest products, truck drivers who haul logs and lumber, and park rangers who provide information to visitors. Ask students if they, or any of their family members, have had summer/part-time jobs that relate to forests in some way. In this lesson, they will read about individuals who have a variety of jobs related to forests in Wisconsin.

## MATERIALS LIST

### FOR EACH STUDENT

- Copy of each of the eight *Career Profiles*
  - Jon, GIS Specialist/Forester - pg. 27
  - Robert, Director of Cofrin Center for Biodiversity - pg. 53
  - Steve, Forester - pg. 65
  - LindaLou, Public Affairs Specialist - pg. 78
  - Darren, Parks Operations Manager - pg. 98
  - Dave, Product Developer - pg. 121
  - Jessie, Plant Pathologist - pg. 136
  - Becky, Project Director - pg. 152
- Copy of Student Pages  **1A-D**, *What Does it Take?*

### FOR THE CLASS

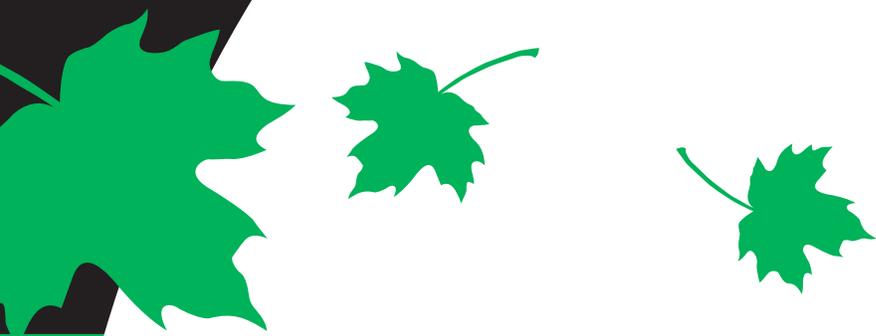
- Copy of Student Pages  **2A-C**, *Who Am I?* Cards on cardstock, cut out.

### FOR THE TEACHER

- Teacher Page  **1**, *What Does it Take?* Key for reference (to project - optional)

## ACTIVITY - WHAT DOES IT TAKE?

1. Ensure each student has been exposed to the eight career profiles from this unit. One profile is found at the end of each lesson. These can be posted around the room, read aloud, or given as handouts/homework.
2. When students have read the profiles have each student fill out Student Pages  **1A-D**, *What Does it Take?* When they fill in the education, skills, and experience sections for each career, encourage students to infer information that may not be written in the profile based on their knowledge and experience.



3. When students are finished, provide them with feedback on their work. Options include:

- Oral discussion and sharing as a class
- Project Teacher Page 🍁➦1, *What Does it Take?* Key so students can self-correct their work
- Collect, correct, and hand back the Student Pages

**EXTENSION:** Have students do Internet research on careers/organizations from the unit. Good search topics for finding career information include: Nature Conservancy, USDA Forest Service, Wisconsin Department of Natural Resources, Plant Pathologist, Forest Products, Biodiversity, Forestry. Enter “jobs” after any of the topics to find more information. Encourage students to find a job that they would like to have and provide the following information about it:

- Description of Position
- Location
- Education/Skills Required
- Salary
- Prior Experience Needed
- Job Title
- Why it interests them
- Current skills they have that would help them in the job
- Additional skills they need to get the job

### CONCLUSION - WHO AM I?

1. Students will now be playing a game with the cards on Teacher Pages 🍁2A-C, *Who Am I?* to learn more about the professionals featured in the career profiles. Choose eight students to play the roles of the career professionals.
2. Give each of the eight students one of the cards you have cut out from Teacher Pages 🍁2A-C, *Who Am I?*. Have these students stand in front of the class and read their card to themselves.
3. While they are doing this, have the remaining students in the class get into groups of two or three.
4. Tell the students that each of their classmates in the front of the room is playing the role of

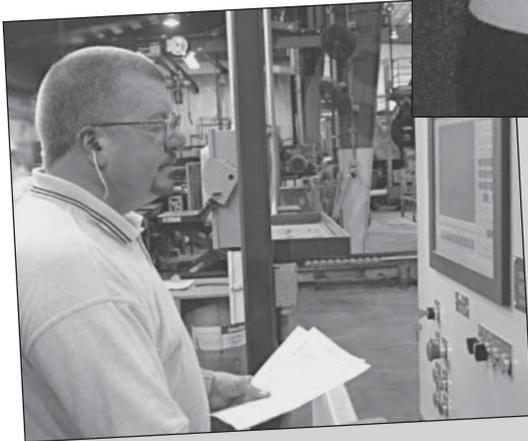
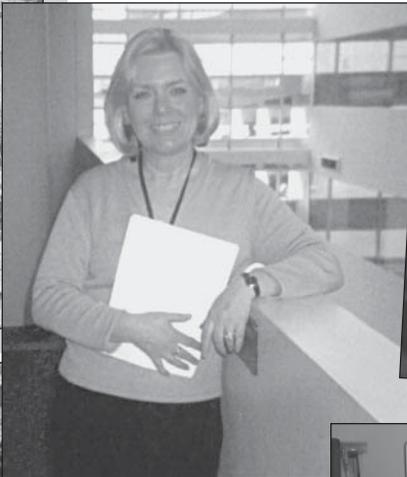
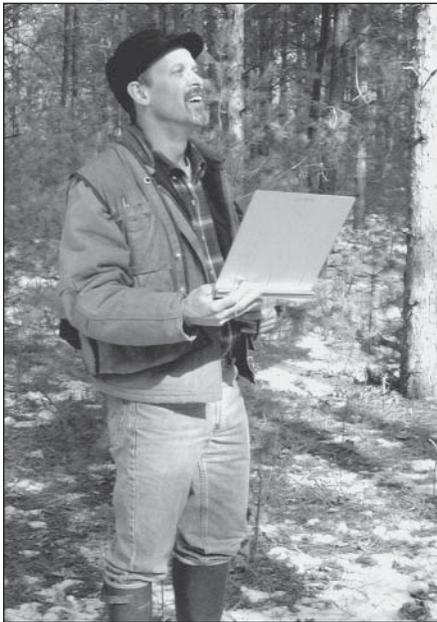
one of the people in the career profiles they read. The goal of the game is for the teams of students to guess who each person is based on clues that are read. The students in the class can use their career profile pages and Student Pages 🍁1A-D, *What Does it Take?* for reference.

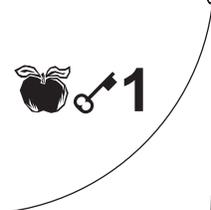
5. On the board, create a place to keep track of scores for each team.
6. Begin by having the first mystery professional read the first line on his/her *Who Am I?* card. If any of the teams think they know the answer, they should raise their hand. Call on the first team with a hand up. The professional who read the clue should tell the team if they are correct. If their guess is correct, they score three points. If they are incorrect, they lose three points. If the guess is incorrect, or no team wants to guess, move on to the next professional. Have the second professional read the first clue from his/her card. Continue in this manner until all the professionals have read one clue. Any unidentified career professionals after the first round should read a second clue from their card, and so on, until everyone is identified.
7. Add up each team’s score to determine the winner.

## RECOMMENDED RESOURCES

### ●●● WEBSITE ●●●

Dovetail Partners, Inc. maintains a website that includes teacher resources. A career resource section has multiple listings including curriculum, kits, and booklets. [www.forestinfo.org](http://www.forestinfo.org)





# WHAT DOES IT TAKE? KEY

## 1. GIS SPECIALIST/FORESTER

**Education:** Degrees in Science and Mathematics, Environmental and Forest Ecosystems, and Sustainable Resource Management. Education in Paper Science and Engineering, ArcView, and other training

**Skills:** Computers, knowledge of plants/trees, knowledge of regulations, mapping, public relations

**Experience:** Fisheries Technician, Information Technology Assistant, Forest Technician, GIS Technician, Forest Management Assistant

## 2. DIRECTOR, COFRIN CENTER FOR BIODIVERSITY

**Education:** Degree in biology, PhD in zoology, classes in math

**Skills:** Director, good communicator, educator, researcher, knowledge of plants and animals

**Experience:** Zoologist, director of natural areas inventory

## 3. FORESTER

**Education:** Degree in forestry, technical training

**Skills:** Good communication, knowledge of plants/trees, knowledge of regulations, educator

**Experience:** Forestry field experience

## 4. PUBLIC AFFAIRS SPECIALIST

**Education:** Degree in management with minors in sociology and communication, classes in public relations, English, journalism, and natural resources

**Skills:** Good communicator, writing, public affairs, teamwork

**Experience:** Forest Service departments, military recruiting office

## 5. PARKS OPERATIONS MANAGER

**Education:** Degree in Forest Science emphasizing Recreation Resource Management, law enforcement officer training, firefighting training, natural resources classes

**Skills:** Supervisory, budget management, project planning, special events planning, staff management, enforcement

**Experience:** State Park work, U.S. Fish and Wildlife Service

## 6. PRODUCT DEVELOPER

**Education:** Degree in Forestry Administration, Business Administration, minor in sales and marketing, classes in science, math, business, and accounting

**Skills:** Customer service, product development, educator

**Experience:** Forestry field work, supervisor, logyard knowledge

## 7. PLANT PATHOLOGIST

**Education:** Degree in Agronomy, PhD in Plant Pathology, classes in science, chemistry, biology, statistics, and genetics

**Skills:** Supervisory, budget management, grant writing

**Experience:** Research, laboratory

## 8. PROJECT DIRECTOR

**Education:** Degrees in wildlife and biology

**Skills:** Working outdoors, knowledge of plants, educator, good communicator, fundraising, works well with others

**Experience:** Research, working with people

# WHO AM I?

## WHO AM I?

- My job includes controlling invasive species like purple loosestrife.
- I like that my job is different each day and never routine. Sometimes I'm in the office and sometimes I'm outdoors.
- You can get experience for a job like mine by volunteering for a nonprofit organization.
- The organization I work for benefits people and natural communities and species.

**BECKY SAPPER:** Project Director, Chequamegon Bay Watershed – Nature Conservancy

## WHO AM I?

- I keep current on issues relevant to my job by reading news articles, listening to the public, and reading materials from the national office.
- Part of my job includes providing advice to the management staff.
- Sometimes I have special assignments that take me on location to National Forests.
- I've had training in corporate communication, web site effectiveness, and writing.

**LINDALOU STOCKINGER:** Public Affairs Specialist – U.S. Forest Service

## WHO AM I?

- My company creates the raw material that is turned into products you use everyday.
- Before my current position, I worked for the part of the company that bought the logs we use in the mill.
- Sometimes I have meetings that allow me to travel to other factories.
- I belong to the Hardwood Plywood and Veneer Association

**DAVE KAZMIERCZAK:** Product Developer – Marion Plywood

# WHO AM I?

## WHO AM I?

- One of my previous jobs was as a zoologist.
- My job involves studying mammals and birds in their natural habitat.
- I have published some of my research findings in scientific journals.
- My job is interesting because it has many parts, including being a university professor.

**ROBERT HOWE:** Director – Cofrin Center for Biodiversity

## WHO AM I?

- In high school I was part of the Wisconsin Youth Conservation Corps. I got to work with professionals in forestry and park recreation.
- I was once a park ranger at Whitefish Dunes State Park
- Working with volunteers fills me with energy and reminds me why I went into this field.
- I am a member of the Wisconsin Park and Recreation Association.

**DARREN MARSH:** Parks Operations Manager – Dane County Parks

## WHO AM I?

- Sometimes people come to my office with boxes of mushrooms to learn about what they found in the woods.
- The results of my research will help the forest products you use last longer.
- Part of my job involves analyzing DNA sequences.
- This year I'm traveling to China to study plant diseases on Bonsai trees.

**JESSIE MICALES:** Plant Pathologist – Forest Products Laboratory

# WHO AM I?

## WHO AM I?

- I am a steward of forests for the residents in my county.
- I have to be able to identify trees and put them on a map.
- My education and training includes both forestry and computers.
- I make maps using Global Information Technologies.

**JON HARRIS:** GIS Specialist/Forester – Douglas County Forestry Department

## WHO AM I?

- I enjoy my job because I do not have to sit at a desk everyday.
- Good communication skills are a must in my profession.
- Sometimes I work with private landowners.
- Part of my job involves taking care of county forests for the public to enjoy.

**STEVE GRANT:** Forester – Wisconsin Department of Natural Resources

# WHAT DOES IT TAKE?

Find the career profile name on each file folder. Match the name to the one listed on this page. List the education, skills, and experiences needed for each job. Decide if the job is appealing to you, circle “IS” or “IS NOT,” and explain why.

## TO BE A...

1. GIS Specialist/Forester

Education: \_\_\_\_\_  
\_\_\_\_\_

Skills: \_\_\_\_\_  
\_\_\_\_\_

Experiences: \_\_\_\_\_  
\_\_\_\_\_

This job IS or IS NOT appealing to me because \_\_\_\_\_  
(circle one)  
\_\_\_\_\_  
\_\_\_\_\_

## TO BE A...

2. Director, Cofrin Center for Biodiversity

Education: \_\_\_\_\_  
\_\_\_\_\_

Skills: \_\_\_\_\_  
\_\_\_\_\_

Experiences: \_\_\_\_\_  
\_\_\_\_\_

This job IS or IS NOT appealing to me because \_\_\_\_\_  
(circle one)  
\_\_\_\_\_  
\_\_\_\_\_

# WHAT DOES IT TAKE?

## TO BE A...

3. Forester

Education: \_\_\_\_\_  
\_\_\_\_\_

Skills: \_\_\_\_\_  
\_\_\_\_\_

Experiences: \_\_\_\_\_  
\_\_\_\_\_

This job IS or IS NOT appealing to me because \_\_\_\_\_  
(circle one)  
\_\_\_\_\_  
\_\_\_\_\_

## TO BE A...

4. Public Affairs Specialist

Education: \_\_\_\_\_  
\_\_\_\_\_

Skills: \_\_\_\_\_  
\_\_\_\_\_

Experiences: \_\_\_\_\_  
\_\_\_\_\_

This job IS or IS NOT appealing to me because \_\_\_\_\_  
(circle one)  
\_\_\_\_\_  
\_\_\_\_\_

# WHAT DOES IT TAKE?

## TO BE A...

5. Parks Operations Manager

Education: \_\_\_\_\_  
\_\_\_\_\_

Skills: \_\_\_\_\_  
\_\_\_\_\_

Experiences: \_\_\_\_\_  
\_\_\_\_\_

This job IS or IS NOT appealing to me because \_\_\_\_\_  
(circle one)  
\_\_\_\_\_  
\_\_\_\_\_

## TO BE A...

6. Product Developer

Education: \_\_\_\_\_  
\_\_\_\_\_

Skills: \_\_\_\_\_  
\_\_\_\_\_

Experiences: \_\_\_\_\_  
\_\_\_\_\_

This job IS or IS NOT appealing to me because \_\_\_\_\_  
(circle one)  
\_\_\_\_\_  
\_\_\_\_\_

# WHAT DOES IT TAKE?

## TO BE A...

7. Plant Pathologist

Education: \_\_\_\_\_  
\_\_\_\_\_

Skills: \_\_\_\_\_  
\_\_\_\_\_

Experiences: \_\_\_\_\_  
\_\_\_\_\_

This job IS or IS NOT appealing to me because \_\_\_\_\_  
(circle one)  
\_\_\_\_\_  
\_\_\_\_\_

## TO BE A...

8. Project Director

Education: \_\_\_\_\_  
\_\_\_\_\_

Skills: \_\_\_\_\_  
\_\_\_\_\_

Experiences: \_\_\_\_\_  
\_\_\_\_\_

This job IS or IS NOT appealing to me because \_\_\_\_\_  
(circle one)  
\_\_\_\_\_  
\_\_\_\_\_