



CAREERS EXPLORATION

BIG IDEAS

- A variety of agencies, companies, and individuals manage forests. Forest resource professionals in each of these areas have training and responsibilities to meet individual, societal, and environmental needs through forest management and/or education. (Subconcept 39)
- 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:

- Describe the primary roles of professionals in natural resource career fields.
- Identify experiences and skills needed to be successful in different natural resource career fields.
- Explain how they can prepare for a career in a competitive job market.

SUBJECT AREAS

Science (Science Applications)

PROCESS SKILLS

Resume building

LESSON/ACTIVITY TIME

- Total Lesson Time: 60 minutes
- Time Breakdown:
 - Introduction15 minutes
 - Activity 120 minutes
 - Activity 220 minutes
 - Conclusion5 minutes

TEACHING SITE

Classroom

NUTSHELL

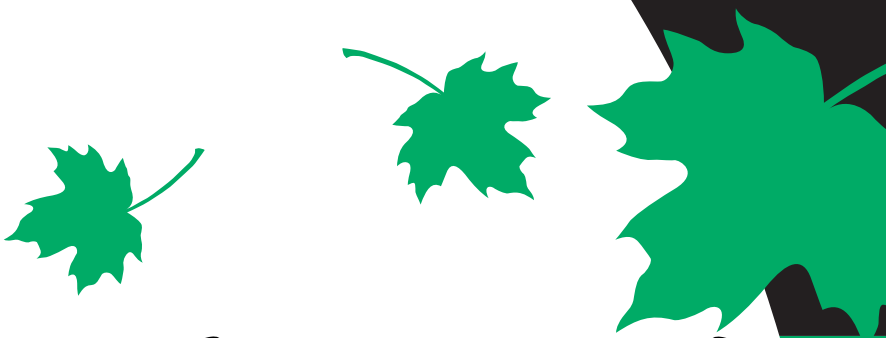
In this lesson, students review profiles of Wisconsin college students who are working toward degrees in natural resource fields. Students study the profiles and select education, work experiences, skills, and other qualifications to create a resume. Students then choose one of five career fields – forestry, parks and recreation, soil and water conservation, wildlife, or wood science – and match their resume to the qualifications required to fill a vacancy announcement. In summary, students discuss how to prepare for a career in a competitive job market.

BACKGROUND INFORMATION

There are many different careers in natural resource-related fields, but only a few are highlighted in this lesson.

In general, a career in **soil science** is one that employs people in helping to manage soil resources. This is a field with a variety of job possibilities in both the public and private sectors. People with soil science degrees (majors or minors at the undergraduate level) may be employed in such areas as agriculture, solid waste management, recycling, pollution prevention, hazardous waste management, forestry, municipal wastewater treatment plants, construction, etc.

There are many opportunities in **water science** career fields. Water-related careers include areas of specialty such as limnology (study of lakes, ponds, streams), fisheries, watershed management, drinking water supply and treatment, aquatic toxicology, water chemistry, hydrology, wastewater treatment, groundwater protection, oceanography, and wetland restoration. A master's degree may be required in order to be competitive for certain water science positions because of the complex nature of the resource. There are many job opportunities in both the public and private sectors, with the fastest growing demand being in the private sector.



People working in the **parks and recreation** field are often those involved in enhancing the experience of visitors who come to natural areas to relax and enjoy their surroundings. The parks and recreation field is one in which most of the employment opportunities are found in the public sector. Some general areas of work within the parks and recreation field include forest resource management, outdoor education/recreation, environmental interpretation/education, tourism, administration, site operations/maintenance, and community development. A bachelor's degree is usually required for careers in this field, with a master's degree preferred for administrative positions and higher level opportunities for long-term careers.

There are many different opportunities in the **wildlife** field. Some wildlife-related careers include wildlife biology, research, animal rehabilitation, urban wildlife, fisheries, habitat restoration, environmental law enforcement, endangered species management, wildlife education, range management, ichthyology, aquaculture, marine biology, and wildlife refuge management. Because of the appeal of this career field, a master's degree is usually required in order to support long-lasting careers in this profession. Most of the job opportunities in the field of wildlife are in the public sector.

There are a wide variety of career opportunities in **forestry**, with increasing need for people in fire prevention/suppression and urban forestry. Other areas of specialty in forestry include forest/wood products, forest ecology, research, arboriculture, urban planning, entomology and forest pathology, forest economics, forest hydrology, forest recreation, and forestry education. Foresters are involved in helping to manage hundreds of thousands of acres of public, private, tribal, and industrial forestlands in Wisconsin.

The forest products industry has a growing need for young, science-minded business people with education and experience in **paper and wood**



MATERIALS LIST






FOR EACH STUDENT

- Copy of Student Page  **3**, *Resume Template*

FOR EACH GROUP OF 3 TO 4 STUDENTS

- Copy of Student Page  **1**, *Careers*
- Copy of Student Pages  **2A-K**, *Student Profiles*

FOR THE CLASS

- Copies of Student Page  **4A**, *Forestry Position*,  **4B**, *Parks and Recreation Position*,  **4C**, *Soil and Water Conservation Position*,  **4D**, *Wildlife Position*, and  **4E**, *Wood Science Position* (each student will receive one of their choosing)

science. Specialties in this career profession include wood products, paper science and technology, wood science and technology, engineering, and marketing. In each of these specialties, professionals work to improve the efficiency of paper and wood products facilities and the utility of paper and wood products to consumers.

Today's natural resource management professionals must have a broad understanding of how to integrate their activities with those of other professionals who are managing the same resource for different objectives. For example, a forester should have a general understanding of the objectives of soils, waters, wildlife, and wood products so that there can be an integrated approach to managing the forest resources. For this reason, communication skills, the ability to work cooperatively on a team, and an understanding of and respect for diverse perspectives are key qualifications. In general, people who desire to succeed in natural resource careers must have a solid foundation in the sciences, well-developed people skills, and an understanding of general business principles.



PROCEDURE


INTRODUCTION

1. Begin by asking students if they know what career or job they would like to have after they graduate from high school. Tell the class that they will be learning some basics about how the job application process works, and what they might be able to do to improve their chances of landing the job they want.

2. Divide the class into groups of three or four students. Have the groups divide a piece of paper into five sections. In each one of the sections, have a student write the headings:

- Soil and Water Conservation
- Forestry
- Parks and Recreation
- Wildlife
- Paper and Wood Science

Have the groups define each of the career fields and brainstorm a list of jobs/careers in each of them. (*See Background Information for answers.*) Once the groups have finished, have them share their ideas with the rest of the class.

3. Hand each student group a copy of Student Page  **1**, *Careers*. Have a student in each group read the job descriptions to their group. Ask the group to highlight several jobs that sound interesting.

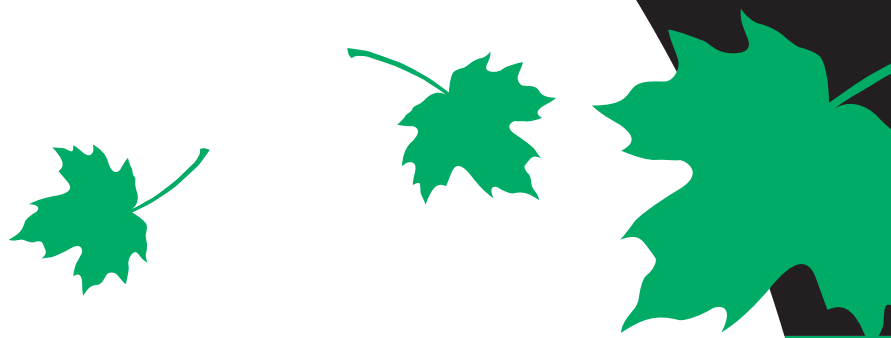
4. Ask students what it takes to get a job. (*Skills, experiences, education.*) Next, have them brainstorm the qualifications that they might need to be a successful classroom teacher. Give students examples relevant to your classroom. Have each group brainstorm the qualifications that they believe someone would need to be successful in each of the highlighted careers.

Ask students to identify qualifications in the following three categories:

- Knowledge/Education
- Experience
- Skills

5. Once the groups have finished their list of qualifications, have them share the jobs that they highlighted and the associated qualifications with the rest of the class. Point out the similarities and differences among groups.

Explain to students that there are some common qualifications needed for almost every natural resource career field (e.g., *good communications skills, ability to work as part of a team, fundamental knowledge of science, basic computer skills*). Also, point out qualifications that are unique to specific careers (e.g., *the use and maintenance of certain laboratory equipment is a skill specific to lab technicians and researchers*).



ACTIVITY 1 – Building a Resume

1. Explain to students that they are now going to build a resume to prepare for a future career. They are going to accomplish this by looking at the goals, education, experience, and skills of a variety of Wisconsin college students who are working toward careers in natural resource fields.

Hand each group a copy of Student Pages **2A-K**, *Student Profiles*. Explain to the groups that each of the students in the profiles was interviewed while they were attending college and all of the information on the profile is real. Have students read the profiles.

2. Distribute a copy of Student Page **3**, *Resume Template* to each student. Review the basic parts of a resume and ask the class to explain what a resume is used for. (*A resume is a summary of a person's education, experience, and skills that helps employers find and hire qualified employees.*)

Tell students that to prepare themselves for a future career, they can fill in their resume with any of the education, experience, skills, and other qualifications found in the student profiles. Ask students to choose qualifications that interest them. They can choose one educational degree, three experiences, and three skills.

NOTE: Before students begin developing their resume, you may wish to give a brief explanation of the following terms: bachelor's degree, master's degree, college major, and emphasis of study.

ACTIVITY 2 – Qualifying for a Job

1. After completing their resume, have each student choose one of the following five fields in which to start their career:
 - Forestry
 - Parks and Recreation
 - Soil and Water Conservation
 - Wildlife
 - Paper and Wood Science
2. Once each student has chosen a field, hand them the corresponding vacancy announcement and candidate scorecard from Student Page **4A**, *Forestry Position*, OR **4B**, *Parks and Recreation Position*, OR **4C**, *Soil and Water Conservation Position*, OR **4D**, *Wildlife Position*, OR **4E**, *Wood Science Position*. Have the students read the vacancy announcement and then use the qualifications scorecard to score their resume.
3. Once students have rated their resumes, have them go around the room and find other students with the same career field to see how their resumes scored. Explain to students that often, what we want to do and what we need to do to get a job are two different things. Ask students to find examples of certain things they wanted on their resume that did not help them get the job.
4. To better qualify for the vacancy announcement, have students review the student profiles to find qualifications that will better match them to the position. Students should record these additional qualifications in the "other qualifications" section of the resume template and then complete the modified resume section on the scorecard.



CONCLUSION

Lead a discussion with students about what they think is meant by the phrase “competitive job market.” You may wish to have them first define job market and then describe what makes the market competitive.

The descriptions should be similar to the following:

- **Job market:** A general term for the interaction between employers and job seekers. Employers post vacancy announcements to find qualified employees at schools, universities, job fairs, unemployment offices, in newspapers, and on the internet. Job seekers build education, skills, and work experiences, then create resumes and prepare for interviews with companies that offer jobs.
- **Competitive job market:** Employers compete with each other to attract qualified workers by offering higher pay, benefits, and a good work environment. Job seekers compete to qualify for jobs by earning degrees, getting work experiences, and building skills.

Once the class has defined the competitive job market, lead a class discussion about how they can prepare themselves to get a job in a competitive job market. *(Take advantage of opportunities in high school to increase knowledge and build skills to get work experience after graduation. Get an advanced degree [associate, technical, bachelor’s, and/or master’s] in a career field that is growing and enjoyable to them. Use free time to gain work and volunteer experiences. Build skills like computer use, equipment use, and written and oral communication.)*

SUMMATIVE ASSESSMENT

Have students research natural resource career fields and vacancy announcements on the internet. Have them select three different jobs that sound interesting to them and explain the different things that they would need to do to qualify for each job.

REFERENCES

Careers in Focus 2nd Ed. (1999). Chicago: Ferguson Publishing Company.

Environmental Careers Organization. (1999). The Complete Guide to Environmental Careers in the 21st Century. Washington D.C.: Island Press.

Fasulo, M. & Walker, P. (2000). Careers in the Environment 2nd Ed. Chicago: VGM Career Horizons.

Strathe, S. et al. (2000). Wisconsin Forestree – Bridging the Gap Between Environment and Economy. Central Wisconsin Environmental Station.

Wille, C. M. (1998). Opportunities in Forestry Careers. Chicago: VGM Career Horizons.



RECOMMENDED RESOURCES

●●● BOOKS ●●●


Careers in the Environment, 2nd Ed. by M. Fasulo and P. Walker. (Chicago: VGM Career Horizons. 2000.) This book contains good descriptions of a variety of environmental, natural resource, and outdoor careers. It is a good resource for students to further investigate careers that they are interested in.

Opportunities in Forestry Careers by C. M. Wille. (Chicago: VGM Career Horizons. 1998.) If you or your students are looking for detailed information on careers in the forestry field, this book provides a comprehensive and locally relevant look at forestry careers now and in the future.

●●● VIDEOS ●●●

The Right Choice: Careers in the Forest Products Industry by the Temperate Forest Foundation. Follow the process of planting a tree, cutting and selling it, and creating products while learning about all the careers involved along the way. To obtain a copy, contact the Temperate Forest Foundation at (503) 579-6762 or **www.forestinfo.org**

Foresters: Growing Forests for Our Future by the Society of American Foresters. Real life stories from people working in forest-related careers illustrate how their work sustains an array of forest values. To obtain a copy, contact the Society of American Foresters at (301) 897-8720 or **www.safnet.org**



CAREERS

SOIL AND WATER CONSERVATION

Groundwater Specialists work to ensure that groundwater is both available and suitable for drinking and other human and ecological needs; include geologists, geographers, planners, and researchers.

Watershed Managers work to conserve lake, river, and stream water resources for current and future human and ecological needs; include city and community planners, rural land managers, hydrologists, and fisheries biologists.

Hazardous Waste Management Specialists identify hazardous wastes, ensure their safe handling and disposal, and reduce waste production.

Soil Conservationists develop plans to help land users such as farmers, developers, and homeowners, meet their land use objectives while conserving soil resources.

Agriculture Specialists work to provide agricultural products; include crop and soil scientists, engineers, botanists, entomologists, and animal scientists.

PARKS AND RECREATION

Resource Recreation Managers manage outdoor areas for activities such as backpacking, camping, fishing, hunting, snowmobiling, and birdwatching.

Environmental Educators/Interpreters work to educate the public about environmental, cultural, or historical resources.

Community Development Specialists work with governments, businesses, and citizens to create development plans that provide social, economic, and environmental benefits to communities.

Eco-Tourism Specialists work to promote responsible travel to natural areas.

FORESTRY

Forest Ecologists study the interrelationship between the living and nonliving components of forest ecosystems to better understand how they can be sustained.

Forest Managers work with government agencies, community leaders, businesses, and landowners to provide the economic, social, and environmental benefits of forests to current and future generations.

Procurement Foresters work with private and public forest landowners to measure, harvest, and sell trees.

Urban Foresters work with the political, physical, and social aspects of cities to plan, plant, and manage trees in cities and towns.

International Foresters work with local and foreign governments, organizations, and businesses to manage forested areas and manage the trade of forest products.

Wildland Fire Specialists work with landowners, communities, and other natural resource professionals to prevent and control wildfires as well as use fire as a management tool.

WILDLIFE

Wildlife Managers work with landowners, businesses, organizations, and governments to manage outdoor areas for animal habitat.

Range Managers work with governments, landowners, industries, and farmers to manage undeveloped areas for wildlife habitat, cattle grazing, and other human uses.

Wildlife Researchers study animal species to better understand their evolutionary history, range and distribution, habitat needs, and population health.

Law Enforcement Officials enforce laws governing the human use of wild animal, fish, and plant species.

PAPER AND WOOD SCIENCE

Wood Scientists study the physical, biological, and chemical characteristics of wood to improve the manufacture of wood products.

Wood Products Researchers study wood characteristics, manufacturing processes, and societal needs to develop new wood products and production methods.

Pulp and Paper Scientists study the physical, biological, and chemical characteristics of wood, paper pulp, and paper to improve the paper manufacturing process.

Facilities Managers and Engineers oversee and manage manufacturing processes in sawmills, veneer mills, secondary wood products facilities, and paper mills.

• STUDENT PROFILE •

NAME

Rebekah Berger

COLLEGE MAJOR

Wildlife and Biology

COLLEGE MINOR

Captive Wildlife

PLAN(S) AFTER GRADUATION

Veterinary School to become a certified wildlife veterinarian or Graduate School to research wildlife behavior

CAREER GOAL(S)

Work with captive wildlife and integrate knowledge of animals in the wild to benefit captive wildlife

EDUCATION

- Saint Mary High School
- Bachelor of Science in Wildlife and Biology

EXPERIENCE

- **JOB(S):** Fox Cities YMCA - conducting ecological surveys to lay the groundwork for a future nature reserve
- **CLUB(S):** Wildlife Society - vice-president
- **PROJECT(S):** Flying Squirrel Project - co-leader, studied the competition between Northern Flying Squirrels and Southern Flying Squirrels and home range delineation; Small Mammal Project; Raptor Surveys
- **VOLUNTEER WORK:** Mead Wildlife Area - deer aging; Sandhill Wildlife Area - deer aging and wolf tracking; Archibald Lake Association - waterfowl surveys, water quality surveys; Gordon Bubolz Nature Preserve - bluebird surveys

SKILLS

- Critical thinking and problem solving
- Native flora and fauna identification
- Communication skills
- Geographic Information Systems (GIS)
- Knowledge of statistical programs
- Radio-telemetry
- Mammal trapping techniques
- Bird surveying techniques



• STUDENT PROFILE •

NAME

Greyling Brandt

COLLEGE MAJOR

Forest Management and Forest Recreation

COLLEGE MINOR

None

PLAN(S) AFTER GRADUATION

Work as a recreation land use planner with the U.S. Forest Service

CAREER GOAL(S)

Become a district range manager with the U.S. Forest Service

EDUCATION

- Rock Falls High School
- Bachelor of Science in Forest Management and Forest Recreation

EXPERIENCE

- **JOB(S):** Wisconsin Conservation Corps - trout stream restoration and timber stand improvement; Wisconsin Department of Natural Resources fire prevention team - heavy engine unit; Wisconsin Department of Natural Resources - hazard tree removal and trail rehabilitation
- **INTERNSHIP(S):** Superior National Forest - Student Career Experience Program

SKILLS

- Geographic Information Systems (GIS)
- Global Positioning Systems (GPS)
- Database management
- Chain saw safety and maintenance
- Knowledge of Wisconsin environmental regulations
- Budgeting and management
- Interpretive science
- Writing and verbal communication



• STUDENT PROFILE •

NAME

Kelli English

COLLEGE MAJOR

Environmental Education
and Interpretation

COLLEGE MINOR

None

PLAN(S) AFTER GRADUATION

Work as a Park Ranger for
Indiana Dunes National
Lakeshore



CAREER GOAL(S)

To supervise interpretive operations for a place such as a National Park Service unit or be director of education at a nature center

EDUCATION

- Whitney M. Young Magnet High School
- Bachelor of Science in Anthropology (Biological Anthropology)
- Master of Science in Natural Resources (Environmental Education and Interpretation)

EXPERIENCE

- **JOB(S)/INTERNSHIP(S):** Schmeeckle Reserve Visitor Center - graduate assistant; Indiana Dunes Environmental Learning Center - outreach education specialist; National Institutes of Health - research assistant; Cambridge Youth Enrichment Program - counselor
- **CLUB(S):** National Association for Interpretation; Fire Crew; National Parks Conservation Association
- **VOLUNTEER WORK:** Indiana Dunes National Lake Shore; Harvard Club of Chicago

SKILLS

- Public speaking and presenting
- Certified Wildland Firefighter
- Education Programming (Project WILD, Project Learning Tree, Hoosier Riverwatch, Leopold Education Project)
- Acting and interpretation
- First Aid, CPR, and First Responder
- Traveled throughout Southeast Asia, Europe, Mexico, Brazil, and the Caribbean
- Highly proficient in written and spoken Spanish
- Highly proficient in violin, vocal, and theatrical performance

• STUDENT PROFILE •

NAME

Stacy Lueck

COLLEGE MAJOR

Water Resources and Wetlands

COLLEGE MINOR

Soil Science

PLAN(S) AFTER GRADUATION

Graduate School in Environmental Civil Engineering

CAREER GOAL(S)

Work in wetland and water quality restoration

EDUCATION

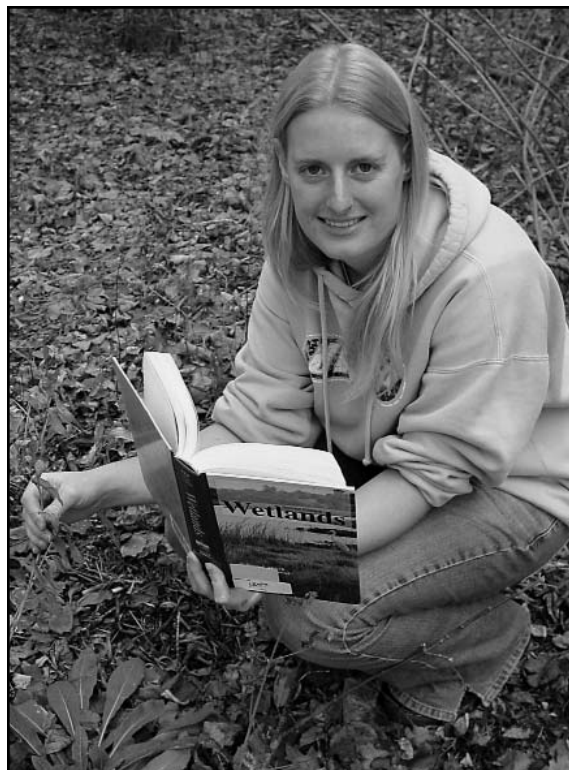
- Chippewa Falls High School
- Bachelor of Science in Water Resources

EXPERIENCE

- **JOB(S):** Department of Natural Resources lake restoration program, University of Wisconsin Extension - design and construction of lakeshore restoration projects, sampled lakes for water quality
- **INTERNSHIP(S):** Wisconsin Department of Transportation - reviewed permits, monitored and delineated wetlands, created mitigation plans
- **CLUB(S):** Isaac Walton League; American Water Resources Association

SKILLS

- Wetland delineation
- Plant identification
- Wildlife identification
- Project leadership
- Computer programs (Excel, Word, PowerPoint, and Access)
- Environmental regulations
- Water sampling
- Boat and ATV safety



• STUDENT PROFILE •

NAME

Ed Moye

COLLEGE MAJOR

Water Chemistry

COLLEGE MINOR

Chemistry and Math

PLAN(S) AFTER GRADUATION

Law School

CAREER GOAL(S)

Work with environmental regulations and policies, specifically focusing on water quality regulations and water allocation including working with the Clean Water Act and National Environmental Protection Act



EDUCATION

- Neenah High School
- Bachelor of Science in Water Chemistry

EXPERIENCE

- **JOB(S):** Research Assistant - greenhouse gas emissions from water; USGS - global warming studies contractor
- **CLUB(S):** American Water Resources Association (AWRA); Soil and Water Conservation Society (SWCS)
- **PROJECT(S):** Aquatic biodiversity survey of a river system in sub-Saharan (southern) Africa; Wisconsin Department of Transportation and Wisconsin Department of Natural Resources - studies concerning the eradication of purple loosestrife

SKILLS

- Various laboratory tests and procedures
- Writing grants and research proposals
- Geographic Information Systems (GIS)
- Global Positioning Systems (GPS)
- Public speaking skills

• STUDENT PROFILE •

NAME

Sarah Orlofske

COLLEGE MAJOR

Biology and Wildlife

COLLEGE MINOR

Chemistry

PLAN(S) AFTER GRADUATION

Graduate School

CAREER GOAL(S)

Become a college professor of herpetology or do research with amphibians

EDUCATION

- Homeschooled
- Bachelor of Science in Wildlife and Biology

EXPERIENCE

- **JOB(S):** Department of Natural Resources - researched threatened species; Wisconsin Humane Society - wildlife rehabilitation assistant
- **INTERNSHIP(S):** Racine Zoo - worked with captive wildlife; USGS - aquatic invertebrate research
- **CLUB(S):** Herpetology Society - numerous positions including president; Undergraduate Research Symposium Committee; Wildlife Society
- **PROJECT(S):** Amphibian-parasite research; Ecological research on new skink species in Portage County; Global amphibian decline related to ecotourism in Peru
- **VOLUNTEER WORK:** Tutor for biology and natural resource college classes

SKILLS

- Knowledge of research process
- Grant writing
- Research proposals
- Monitoring methods for reptiles and amphibians
- Knowledge of microscopes (electron, dissecting, and compound)
- Radiotelemetry
- Numerous computer programs



• STUDENT PROFILE •

NAME

Alexis Sandy

COLLEGE MAJOR

Soil and Land Management

COLLEGE MINOR

Water Resources

PLAN(S) AFTER GRADUATION

Attend Graduate School at Virginia Polytechnic Institute and State University in the Crop and Soil Environmental Science Department

CAREER GOAL(S)

Maintain employment with the Natural Resource Conservation Service (NRCS) and eventually move into private consulting in soils and forestry



EDUCATION

- Little Falls Community High School
- Bachelor of Science in Soil and Water Conservation

EXPERIENCE

- **INTERNSHIP(S):** NRCS - soil conservationist (summers and part-time during the past two academic years), developing conservation plans, worked with landowners to develop and implement conservation practices and management (nutrient management, waste storage, erosion control, water quality)
- **CLUB(S):** Student Chapter of Soil and Water Conservation Society (SWCS) - vice president
- **PROJECT(S):** Horicon Marsh Research Project - presented research and projects at national conventions
- **VOLUNTEER WORK:** Highway cleanup

SKILLS

- Knowledge of GIS and remote sensing
- Leadership skills from jobs and clubs
- Certified Grazing Planner
- Soil taxonomy
- Organic farming training

• STUDENT PROFILE •

NAME

Adam Schmidt

COLLEGE MAJOR

Paper Science

COLLEGE MINOR

Chemistry and Business Administration

PLAN(S) AFTER GRADUATION

Get a job in the paper industry, either in a paper mill or chemical sales

CAREER GOAL(S)

Obtain an MBA and become a vice president or president of a company in the paper industry

EDUCATION

- Mishicot High School
- Bachelor of Science in Paper Science

EXPERIENCE

- **JOB(S)/INTERNSHIP(S):** Menasha Co. (tissue mill) - process engineer, conducted various tests and used a standardizing process to make sure the operations were running smoothly; Chemical sales company in Hinckley, Maine - service position; University of Wisconsin-Stevens Point - worked with the university paper machine
- **CLUB(S):** Paper Science Student Organization
- **PROJECT(S):** Installed a new biocide to kill bacteria
- **VOLUNTEER WORK:** Teach basic papermaking process to third and fourth grade students

SKILLS

- Time management
- Ability to multitask
- Troubleshooting and critical thinking skills
- Knowledge of microscope use and workings
- Knowledge of general paper machine workings
- Tests for bacteria and fungi
- Chemical tests on properties of pulp/paper



• STUDENT PROFILE •

NAME

Takahiro Seki

COLLEGE MAJOR

Resource Management

COLLEGE MINOR

International Resource Management

PLAN(S) AFTER GRADUATION

Work for a few years to gain experience in watershed management and then attend Graduate School



CAREER GOAL(S)

Work toward the sustainable management of resources in developing countries

EDUCATION

- High School Diploma, Japan
- Bachelor of Science in Resource Management

EXPERIENCE

- **JOB(S):** University Center - building assistant
- **CLUB(S):** Wildlife Society; United Nations Student Organization; International Club

SKILLS

- Speak fluent Japanese
- Knowledge of GIS and remote sensing
- International experiences in Europe and New Zealand

• STUDENT PROFILE •

NAME

Chris Tyrrell

COLLEGE MAJOR

Forest Ecosystem Management and Restoration and Biology

COLLEGE MINOR

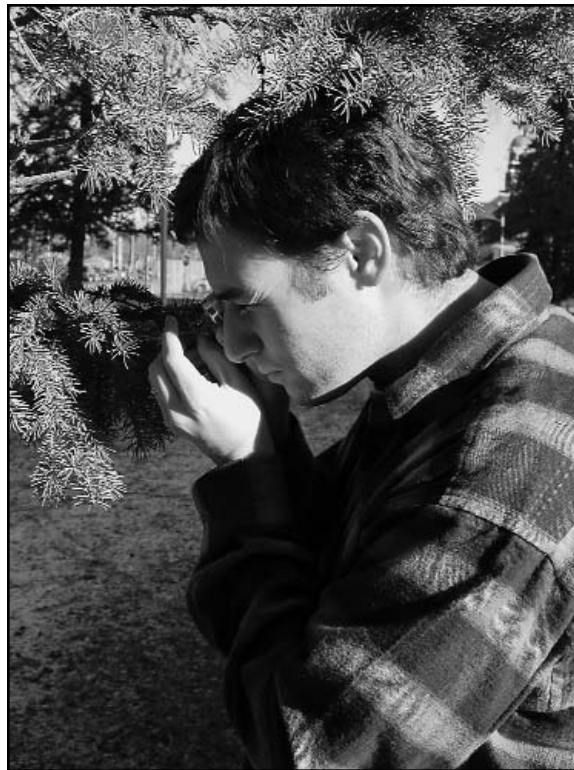
None

PLAN(S) AFTER GRADUATION

Graduate School to pursue a master's degree

CAREER GOAL(S)

GIS specialist with federal government or Conservation Biologist at the state level working with Natural Heritage Inventory Program



EDUCATION

- Charles B. Whitnall High School
- Bachelor of Science in Forestry and Biology

EXPERIENCE

- **JOB(S):** Nature Merit Badge Counselor; National Park Service - biological science technician; Contractor for botany and wildlife monitoring and inventory; Research assistant; University Herbarium Student Database Manager
- **INTERNSHIP(S):** Wehr Nature Center - land management assistant
- **CLUB(S):** Society of American Foresters - treasurer; Society of Ecological Restoration - president; Wildlife Society; Research Symposium Committee; Fire Crew
- **PROJECT(S):** Research and publication on oak savanna forest succession

SKILLS

- Computer skills
- Geographic Information System (GIS)
- Computer programming
- Knowledge of vegetation monitoring and inventory methods
- Creating/managing websites
- Knowledge of research process

• STUDENT PROFILE •

NAME

Kristin Wild

COLLEGE MAJOR

Soil Science

COLLEGE MINOR

None

PLAN(S) AFTER GRADUATION

Work as a soil scientist for the Natural Resource Conservation Service (NRCS) in North Dakota immediately after graduation; duties include soil mapping, data analysis and computer mapping

CAREER GOAL(S)

Become a project leader and oversee soil projects and scientists in the NRCS, be a mom, eventually go back to school to get a teaching degree to teach children about soil science



EDUCATION

- Oshkosh West High School
- Bachelor of Science in Soils

EXPERIENCE

- **JOB(S)/INTERNSHIP(S):** Teaching assistant for a college soils field class; NRCS North Dakota - soil conservationist; NRCS North Dakota - soil scientist
- **CLUB(S):** Student Chapter of Soil and Water Conservation Society (SWCS) - president, research project leader
- **PROJECT(S):** Horicon Marsh research; Soil judging
- **VOLUNTEER WORK:** Teaching soils to second grade students; High school career workshops; Teaching with Wisconsin Groundwater Guardian Program

SKILLS

- Interpersonal skills
- Communication
- Geographic Information Systems (GIS)
- Soil taxonomy

RESUME TEMPLATE

NAME

EDUCATION

1.

EXPERIENCE

1.

2.

3.

SKILLS

1.

2.

3.

OTHER QUALIFICATIONS

1.

2.

3.

FORESTRY POSITION

POSITION: Procurement Forester

HIRING ORGANIZATION: Green Tree Timber Company

DUTIES: Provide timber management assistance and buy trees from nonindustrial private forestland owners. The successful person in this position will promote sustainable forest management on private lands. They will represent Green Tree Timber Company in the professional, business, and social communities in which we operate and oversee environmental management systems and safety regulations. Principle responsibilities include wood procurement, public relations, and safety assurance.

KNOWLEDGE AND SKILLS:

	FIRST RESUME		MODIFIED RESUME			
EDUCATION						
Bachelor's degree in forestry or related field	+	OK	-	+	OK	-
EXPERIENCE						
Forest management	+	OK	-	+	OK	-
Timber production	+	OK	-	+	OK	-
Wood procurement (tree buying)	+	OK	-	+	OK	-
SKILLS						
Basic computer and database skills	+	OK	-	+	OK	-
Global Positioning System (GPS) skills	+	OK	-	+	OK	-
Use of computer forest modeling programs	+	OK	-	+	OK	-
OTHER QUALIFICATIONS						
Carry up to 40 lbs. through rough terrain	+	OK	-	+	OK	-
Good written and oral communication skills	+	OK	-	+	OK	-
TOTAL						

PARKS AND RECREATION POSITION

POSITION: Urban Planner/Park Designer

HIRING ORGANIZATION: City of Green Bay

DUTIES: Preparation of community development master plans, landscape design plans, parks and recreation plans, and similar projects in Green Bay. Primary responsibilities include coordination of regional planning workshops, assisting with biological and water resource assessments, and maintaining compliance with environmental regulations.

KNOWLEDGE AND SKILLS:

	FIRST RESUME			MODIFIED RESUME		
EDUCATION						
Bachelor's degree in parks and recreation, regional planning, or related	+	OK	-	+	OK	-
EXPERIENCE						
Project management	+	OK	-	+	OK	-
Work with environmental regulations	+	OK	-	+	OK	-
Landscape design	+	OK	-	+	OK	-
SKILLS						
Computer design programs	+	OK	-	+	OK	-
Writing and research	+	OK	-	+	OK	-
Facilitation/participation	+	OK	-	+	OK	-
OTHER QUALIFICATIONS						
Written and oral communication skills	+	OK	-	+	OK	-
Work with team	+	OK	-	+	OK	-
TOTAL						

SOIL AND WATER CONSERVATION POSITION

POSITION: Water Resources Specialist

HIRING ORGANIZATION: Wisconsin Department of Transportation

DUTIES: Position will assist in drainage design for highways, bridges, and culverts in southwestern Wisconsin. Responsibilities include floodplain analysis, hydrologic modeling of watersheds, roadway and sewer design, and design of flood control projects to minimize impact of construction activities on wetland and agricultural areas.

KNOWLEDGE AND SKILLS:

	FIRST RESUME			MODIFIED RESUME		
EDUCATION						
Bachelor's degree in water/soil resources, civil engineering, or related field	+	OK	-	+	OK	-
EXPERIENCE						
Research water system characteristics	+	OK	-	+	OK	-
Work with environmental regulations	+	OK	-	+	OK	-
Wetland ecology	+	OK	-	+	OK	-
SKILLS						
Land surveying	+	OK	-	+	OK	-
Surface water modeling	+	OK	-	+	OK	-
Plant identification	+	OK	-	+	OK	-
OTHER QUALIFICATIONS						
Work with team	+	OK	-	+	OK	-
Work outdoors in wet/cold conditions	+	OK	-	+	OK	-
TOTAL						

WILDLIFE POSITION

POSITION: Conservation Biologist – Karner Blue Butterfly

HIRING ORGANIZATION: Wisconsin Department of Natural Resources

DUTIES: Assist with the Habitat Conservation Plan for the Karner blue butterfly in Wisconsin. Develop monitoring methods and provide results in annual reports. Interpret habitat requirements and butterfly life cycle conditions and report Karner blue flight status. Develop conservation strategies and provide technical information to DNR staff on monitoring results and management protocols. Conduct public presentations for environmental groups, professional organizations, landowner associations, and legislators.

KNOWLEDGE AND SKILLS:

	FIRST RESUME			MODIFIED RESUME		
EDUCATION						
Bachelor's degree in conservation biology, wildlife, or related field	+	OK	-	+	OK	-
EXPERIENCE						
Population monitoring	+	OK	-	+	OK	-
Surveying native plant communities in barrens/savanna ecosystems	+	OK	-	+	OK	-
Management of barrens/savanna ecosystems	+	OK	-	+	OK	-
SKILLS						
Geographic Information Systems (GIS) skills	+	OK	-	+	OK	-
Database development and management	+	OK	-	+	OK	-
Public presentation skills	+	OK	-	+	OK	-
OTHER QUALIFICATIONS						
Team leadership/project management	+	OK	-	+	OK	-
Written and oral communication skills	+	OK	-	+	OK	-
TOTAL						

WOOD SCIENCE POSITION

POSITION: Assistant Technology Auditor

HIRING ORGANIZATION: Wood Systems of Wisconsin

DUTIES: Position will work in wood products facilities to assess levels of technology (machinery, computer hardware, software). Position will also develop needs assessments and plans to improve the efficiency of manufacturing processes. Primary responsibilities include diagramming and monitoring material flow, monitoring and reporting on computer hardware and software performance, and working with human resources and company management to create technology, staffing, and training strategies.

KNOWLEDGE AND SKILLS:

	FIRST RESUME		MODIFIED RESUME			
EDUCATION						
Bachelor's degree in wood science, engineering, or related field	+	OK	-	+	OK	-
EXPERIENCE						
Manage lumber and veneer production	+	OK	-	+	OK	-
Operation of lumber and veneer production machinery	+	OK	-	+	OK	-
Use of computer software used in lumber and veneer production	+	OK	-	+	OK	-
SKILLS						
Needs assessment development	+	OK	-	+	OK	-
Computer diagramming software proficient	+	OK	-	+	OK	-
Planning	+	OK	-	+	OK	-
OTHER QUALIFICATIONS						
Project management	+	OK	-	+	OK	-
Work with team	+	OK	-	+	OK	-
TOTAL						