



Bridges Career Academy

Intro to Natural Resources

Upsala High School

Introduction to careers in natural resources. Learn about water, soil, wildlife, and pollution from a natural resources and conservation perspective. Learn forestry survey techniques, identify, and evaluate large and small animal habitats. Learn the physiology of game animals in areas of digestion and reproduction in clusters of animals such as game birds, fish and mammals.

Academic Courses

- Natural Resources/ Wildlife Management I & II
- Aquaponics
- Hydroponics
- Plant Science

Career Experiences

- Listen to industry speakers
- Attend the Bridges Career Exploration Day or other regional career fairs
- Participate with professionals

Completion Standards

COMPLETE

4 of 5 courses

GRADES **B** ↑

Earn a **certificate** and **green cord** at graduation



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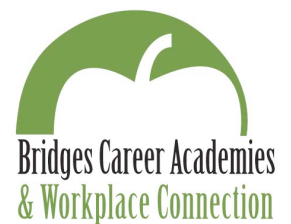
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Job Skills

In addition to having technical skills, employers expect workers in this industry to have these skills:

- Written and oral communication skills
- Ability to manage materials and supplies
- Problem solving skills
- Decision making skills



Intro to Natural Resources Career Academy

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The Natural Resources Academy provides students with an introduction to the careers in the areas of natural resources. Students will learn about water, soil, wildlife, and pollution from a natural resources and conservation perspective. Learning forestry survey techniques, identifying, and evaluating large and small animal habitats are just a few of the highlights for this academy. Students will learn the physiology of game animals in areas of digestion and reproduction in clusters of animals such as game birds, fish and mammals.

ACADEMY COURSES

Natural Resources/Wildlife Management I — .5 High School and/or 3 College Credits

Students will examine areas of forestry, including tree identification, timber cruising and forestry management. Students will also gain a foundation in the management of large and small wildlife in the forests of Minnesota.

Natural Resources/Wildlife Management II —.5 High School and/or 3 College Credits

This course gives students an opportunity to further explore areas the forest and its inhabitants. The course will include history of various species, their characteristic and life cycles, habitat needs and wildlife conservation. Animal clusters will include game birds, fish and mammals.

Aquaponics — .5 High School and/or 3 College Credits

In this course students will grow plants and fish in the same systems without the use of soils. Basics of plant science will be reviewed and the biology of fish will be explored. Anatomy, physiology, morphology and growth concerns of fish will be analyzed. Students will design aquaponic systems in the greenhouse.

Hydroponics — .5 High School and/or 3 College Credits

Students will learn the basics of plant science to research design and develop their own hydroponic systems in the greenhouse. This course explores the notion of growing without soil. Scientific concepts such as plant identification, genetics, disease, pests and management practices with are discussed.

Plant Science — .5 High School and/or 3 College Credits

The course studies the growth, physiology and production of plants. Scientific management of the greenhouse such as temperature and humidity as well as pest management will be discussed. Students will conduct plant experiments, compile data and report their findings. Emphasis will be on agricultural and horticultural crops.

COMPLETION STANDARD

Students wishing to receive a certification must complete four of the five courses; earn a minimum of a 'B' grade average.

CAREER EXPERIENCES

Students will explore and research careers with industry speakers, participate in Bridges Career Exploration and other career fairs. In addition, students will conduct stream studies, discuss special regulations of area lakes, conduct practical experiences and build systems in the greenhouse.

JOB SKILLS

In addition to having technical skills, employers expect their workers to have other skills such as:

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- Problem solving skills
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