

# Jackson County Conservation



## Environmental Education Guide Grades 6-12

### Introduction

The Jackson County Conservation Board (JCCB) currently has 3 environmental education staff: Jessica Wagner, Jennifer Meyer and Tony Vorwald. Our EE staff is available to the citizens of Jackson County to educate and assist with natural resource related issues.

### Fees

Programs with JCCB are provided **free of charge** to the schools in Jackson County, except summer and after school programs.

### Educational Standards

Our staff have been trained in the Next Generation Science Standards that Iowa has adopted as part of Iowa Core. We can help match programs to fit your curriculum and standards.

### National & State EE Curriculum

Our education staff has been trained and often utilize information and activities from these guides:

- Project Wild, Aquatic Wild, Wet, Learning Tree
- NASP, National Archery in the Schools Program
- IOWATER
- Fish Iowa!
- Iowa DNR Boater & Hunter Education
- Iowa DNR Canoe Basics
- Iowa Nature Mapping
- Gray Wolves, Gray Matter
- Dig It! Soil Studies
- Waste Reduction: Addressing the Overlooked "R"
- Alliant Energy—Energy Wise
- Our Mississippi

### Environmental Education Equipment

Equipment is free to loan to schools and organized groups. *\*Denotes equipment that requires our staff to be present. Otherwise, having our staff present is optional.*

**\*Canoeing/Kayaking** – 4th grade & above. Paddling provides access to great wildlife viewing and an escape from machines. Paddlers learn what team work and self reliance mean all in one activity.

**Fishing** – 40 fishing poles, 15 ice fishing poles, and 10 fly fishing rods.

**Snowshoeing** – 25 sets of snowshoes available.

**Orienteering** (Map & Compass) - Using compasses, students learn about directions, map reading, and finding their way.

**GPS Orienteering** – Learn how to find your way using coordinates with a GPS. Learn about the sport of geocaching.

**\*Archery** – Archery history, technique, equipment, safety, mental concentration, physical fitness, core strengthening and self-improvement.

**\*Atlatls**—4th grade and above. Students will practice throwing spears with a 'spear thrower'.

**IOWATER**— Students will assess water quality of a body of water using chemical, biological, and habitat assessments.

**Tree Trunk**— a variety of activities and supplies for learning about trees. Compiled by ISU Extension.

**Enviroscape**— hands-on and interactive way of teaching about watersheds, storm water, non point source pollution and pollution prevention.

**Kill-A-Watt**— assess how much electricity items use everyday even when turned 'off'.

**To schedule a program, field trip, or for more information please contact:**

EE Coordinator **Jessica Wagner** [jess@jacksonccb.com](mailto:jess@jacksonccb.com)  
Naturalist **Jennifer Meyer** [jen@jacksonccb.com](mailto:jen@jacksonccb.com)  
Naturalist **Tony Vorwald** [tony@jacksonccb.com](mailto:tony@jacksonccb.com)



**[JacksonCCB.com](http://JacksonCCB.com)**



**Phone: (563) 652-3783**

*Jackson County Conservation, Hurstville Interpretive Center, 18670 63rd Street Maquoketa, IA 52060*

# Outdoor Field Studies

## Overview of Outdoor Activities

Outdoor programs are truly the best way to learn and experience what our environment has to offer. Through interactive hands-on programs, students are better able to apply knowledge and reinforce learned skills for better success on the ITBS and NWEA MAP tests.

*We have all the materials for the activities listed in this guide and we can assist you and your students!*

We can stick close to your school by utilizing the schoolyard or local parks. If transportation is available, there are a number of great destinations in Jackson County. Friends of Jackson County Conservation does offer bus scholarships for Jackson County schools for outdoor related field trips.

Popular locations in Jackson County include: Hurstville Interpretive Center, Hurstville Lime Kilns, Maquoketa Caves State Park, Bellevue State Park, Green Island, Eden Valley Refuge, and Millrock Schoolhouse.

*Please contact us for more information or to set up a field study with your students.*

## Service learning projects

Service-Learning is a great teaching and learning strategy for students, as it integrates meaningful community service with instruction and reflection to enrich the learning experience, strengthen communities and teach civic responsibility. Jackson County Conservation relies on volunteers to help with various outdoor related projects. Your students can help with litter and water cleanups, help improve trails at parks, plant native wildflowers and grasses, build bird houses, plant trees and many more service

projects. Please contact us if you are interested in having your students participate in a service learning activity.

If you have students that would like to volunteer or need service hours for extracurricular activities, please let them know about us!



## Fish Iowa!

A comprehensive module to teach basic spincasting, *Fish Iowa!* incorporates physical education, health, biology, geography, and family and consumer sciences into a program that focuses on fishing. It is designed for use in formal settings for students of all abilities in 6th-12th grades.

The Fish Iowa! program can last throughout the school year with several visits to the classroom discussing with students fish species, habitat needs, fishing laws and regulations, etc., finishing up with a fishing trip in the spring. Or the Fish Iowa! program can be done in one-day allowing the students to learn to fish and gain a skill of a lifelong hobby. Whatever fits your schedule.

## Storm Sewer Stenciling

Storm sewer stenciling is an easy and highly visible public awareness activity to inform Iowans of the connection between the land and water. Nearly all storm sewers discharge untreated storm water and anything carried by runoff directly into Iowa streams and lakes. By stenciling a standard phrase such as "Do Not Dump, Drains To Stream," the direct connection between our actions and water quality can be made.

We have kits available for Jackson County schools.



## IOWATER

Iowa's volunteer water quality monitoring program, empowers students to take a proactive approach to water quality. By monitoring the water resources in their backyard, they can help evaluate, assess, and help to improve those of lower quality.

Jackson County Conservation EE Staff will take you and your students to a stream near the school for the monitoring. We'll identify the macro invertebrates we find in the streams and chemically test the water for nitrate, pH, phosphate and dissolved oxygen, to evaluate the stream's health. We provide all the necessary equipment to monitor the water.

*IOWATER is best done in the fall or spring.*

# At Your School

## Overview of Classroom Programs

Our EE staff is available to visit your classroom for environmental related programs. The programs listed in this guide are programs that we have all ready to go. An environmental activity or presentation can be created to fit the needs of your curriculum and to achieve state academic standards. It is requested that ample time be given to create and develop such presentations. Our programs can be adapted for all ages, grades and skill levels.

## Classroom Presentations

**Alien Invaders** – Students will learn how invasive species can decrease biodiversity and learn how to identify some of the least wanted invasive species in Iowa.

**Chain Reactions**– Students will recognize ways that threats to some species can be amplified by the interaction of unregulated wildlife trade with other ecological problems. Real confiscated artifacts will be used during the program.

*\*Short pretest given by teacher ahead of time.*

**Careers in Conservation**— We speak to the students about the variety of jobs with natural resources and how to pursue a career in conservation. *HS*

**Deadly Links**– Students become hawks, shrews, and grasshoppers in a physically active game to learn how poisons enter the food chain. Students will determine consequences of this and describe regulations to attempt this from happening.

**Little Red Takes Many Paths** - We will discuss how attitudes towards wolves have changed as scientists have learned more about their true role in nature. Real wolf items will be used.

**Skulls**- Students will examine animal skulls and compare the dental structure of carnivores, herbivores, and omnivores.

**Watershed**—Using the enviroscape and maps of our areas streams and rivers, students will learn about watersheds, storm water, non point source pollution and pollution prevention.



## Special Projects & Events

We'd love to help with any project or event that involves the environment and our natural resources. Recycling events, Earth Day projects, planting a butterfly garden, citizen science participation (bird counts, monarch tagging), etc.. Please contact us with any questions, for more ideas or assistance.

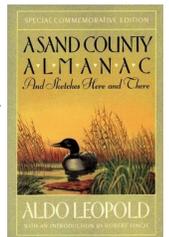
## Stream Table

We have a stream table we can bring to the classroom or loan to a school to utilize. Stream tables are a great way to demonstrate how streams and rivers function and human impacts on a river. Erosion, drainage, delta formation and stream processes are all discovered by hands-on exploration.



## Aldo Leopold Curriculum

An environmental education curriculum based on the essays in *A Sand County Almanac* written by Aldo Leopold. Students will learn new vocabulary, have practice with reading comprehension, and partake in a discussion about conservation related topics. In addition to the classroom portion, we can take your students outside for hands-on activities to teach observation skills, plant and animal identification, natural history, land stewardship, and outdoors skills to go with the essays.



## Bag It: is your life too plastic

This documentary explores the issues of plastic waste, use of natural resources, litter impacts wildlife, and human health issues. The film is 60 minutes. A screening of the film is a terrific way to get kids thinking about waste reduction. Follow up lessons are geared for grades 4-12 and correlate with the different chapters of the film: Single-Use Disposables; Waste and Recycling; Oceans; Human Health; and Activism.