



Cass County Conservation Board Kindergarten-5th Grade Program List Next Generation Science Standards

Welcome to the Cass County Conservation Kindergarten- 5th grade Curriculum revised to reflect the Next Generation Science Standards. Here you will find any in-school programs we offer and field trip options. Feel free to contact Lora Kanning at lkanning@casscoia.us or 712-769-2372/712-254-0105 (cell) with any questions. The Cass County Conservation Board is dedicated to wildlife habitat development, management and preservation. These goals are reached by purchasing land for wildlife, by improving habitat quality and by providing educational programs for the citizens of the county.

There is specific programs listed per grade and there is also a basic layout for all of the general classes CCCB offers across grades. We have put the programs in the best fit grade by the Iowa Science standard, feel free to still ask for the program even though it might not be listed in your grade level. If you don't see a class that meets your needs please contact a naturalist to see if we can customize a class for your classroom. The programs listed are sponsored by the Cass County Conservation Board and are designed to actively involve your students. Call Lora Kanning at 712-769-2372 or e-mail lkanning@casscoia.us to schedule a program (Some require further advance notice)!



Kindergarten

- **Beaver Adaptations (March ONLY):** Discover all about Nature's Engineers! This nocturnal animal is not only interesting but a picky eater! ESS2-2, 3-1, K-PS2-1
- **Ready to Recycle:** This program focuses on showing the class how simple it is to recycle and how they can become involved at home and in their school. By the end of this program they will know exactly what can and can't be recycled in Cass County and even how to spot recycled products while at the store! ESS3-3
- **Seasons Safari:** We will discover all that is changing around us! In fall- human, plant, and animal change are the main topics of the hike. Spring focuses on plants and animals. Your students will not look at your schoolyard the same. ESS2-2
- **Ants and Bats:** You will learn that other animals like ants and bats are pollinators too, just like bees. Optional craft can be provided. KESS3-3
- **The Thing about Bees:** Youth will learn that bees are important so even though we might be nervous about being stung by bees, we need to have bees around. KESS3-3
- **Gobble, Gobble (November Only):** Is this the only sound that turkey's make? Not by far! We will be demonstrating turkey calls. A TV/ DVD will be needed for a short introductory video. ESS2-2
- **Feathers for Lunch:** The book, Feathers for Lunch uses colors and feathers to match with the birds in the story. We will also use the colors, shapes and feathers in a matching/ puzzle game. ESS2-2



1st Grade

- **Adaptations of Our Feathered Friends(1st-3rd):** Why aren't all bird beaks shaped the same? The answer will be obvious, as the students become different birds and try to eat their favorite foods using another bird's beak. 1-LS1-1
- **Frog and Toad:** Expand on the life cycle of a frog by learning how to identify them! The focus will be learning about Cass County Frogs and Toads. This program can also integrate tadpole identification. 1-LS1-1
- **Owls (Jan/Feb ONLY):** Iowa's first bird species to nest, kicks off the new year right! 1-LS1-1
- **Monarch Magic:** Your students will get to know the Monarch Butterfly up close and personal during this program. Youth will learn how humans can help monarch butterflies by creating butterfly habitat. We will tag some Monarchs with special sticky tags (to aid in research), learn about their migration, and we'll watch a video to learn about the Monarch's life cycle and habitat requirements. 1-LS1-1 1-LS1-2
- **Monarch Migration (Outdoor - Sept ONLY):** We will begin by reviewing the monarch life cycle. The class will then get to become monarchs as they face migration hazards on their way to Mexico. A great review and fun game! (Space needed to play the game). 1-LS1-2
- **In a Nutshell:** We'll read the story In a Nutshell, discuss the job of a seed, and do seed sorting and seed math in groups! 1-LS3-1
- **Nature's Yucky:** The book, Nature's Yucky! uses kids' natural fascination with the stinky, the gross, and the icky to help them learn more about wild animals and why critters behave as they do. Props will be brought as an addition to this program. 1-LS1-2
- **What is a Box Turtle:** We'll learn all about land turtles by reading the book Box Turtle at Long Pond. The focus of this program is adaptations of Iowa's Turtles. Live turtle in session with school's permission. 1-LS1-1
- **Pollinator-free Sundae (K-3rd grade):** Youth will learn that without pollinators we could not enjoy many of our favorite foods. 1-ESS3-3 LS-4-4



2nd Grade

- **Seeds (Fall is best):** Fall is a great time to learn about seeds and nuts. We'll look at different types of seeds and nuts, and how they travel. Optional- play the game Maple Seed Mix-Up. (Space needed to play the game) 2-LS2-2 2-LS2-1
- **Plant Basics:** Learn plant basics, structure, and parts, learn what gives plants their green color and how they make their own food. We can then move on to discuss how plants disperse seeds to ensure their survival. 2-LS2-1
- **Roving Habitats:** Discover the North American ecosystems, plants, and animals. Students will work on building their given ecosystem. 2-LS2-1
- **Batty for Bats:** Your students will have fun learning facts about bats and will leave with a new appreciation for the often misunderstood bat. A TV/VCR will be needed for a short video. 2-LS4-1
- **Mammals are Us:** Using seven different props and student assistants, your classroom will quickly learn what makes a mammal unique from other critters...and they won't soon forget! 2-LS4-1
- **Monarch Migration (Sept ONLY):** We will begin by reviewing the monarch life cycle. The class will then get to become monarchs as they face migration hazards on their way to Mexico. A great review and fun game! (Space needed to play the game) 2-LS4-1
- **Model of Pollination:** Youth will learn the process of pollination and how native bees are involved as pollinators by creating and using models. 2LS2-2
- **Discover the Rainforest:** Discover the rainforest ecosystem and products. students will work together to build a rainforest food chain, and food webs discussed. Desks may need to be moved for this activity. 2-LS2-2
- **Native Bee Map Challenge:** Youth will learn about the diversity of native bees, where native bees can live, and different ways to increase habitat for native bees. 2-LS4-1
- **Trumpeter Swans:** Students will participate in a discussion of the life history of trumpeter swans and the history of their populations in North America, and Iowa in particular. January- optional field trip to Atlantic Schildberg Rec. Area to see the swans. 2-LS4-1



2nd Grade cont.

- **4 R's of Recycling:** In depth learning about recycling and challenge the classroom to a game of Trash or Treasure! 2-ESS2-1
Pollution and Solutions: I will bring my 3-D model of a watershed complete with houses, industries, golf courses, etc. as your students get a very basic introduction of water pollution, and most importantly, learn ways to prevent pollution. This is a great hands-on activity that will involve all of the children. 2-ESS2-1
- **Inflatable Greenhouse:** Students will learn what plants need to survive as they build their own greenhouses (made from inflatable, clear latex balloons). The greenhouses will be left in the classroom for your viewing. 2LS2-1

3rd Grade

- **Oh Deer:** When the environment changes in ways that affect a place's physical characteristics, temperature, or availability of resources, some organisms survive and reproduce, others move to new locations, yet others move into the transformed environment, and some die. 3-LS1-1
- **Grady's Garden:** Students will perform a melodrama called Grady's Garden. In Grady's Garden, "bad" insects and animals destroy garden plants, while "hero" insects and animals help the plants. Other roles in the play include flowers, Grady the Gardener and the producer. The whole class will feel important as they actively learn about the relationships between plants and animals. 3-LS1-1
- **Metamorphosis Surprise:** Did you know that a ladybug and dragonflies goes through metamorphosis? Ladybugs, dragonflies and other unexpected insects will be shown and discussed as students and teachers alike will be surprised to learn about metamorphosis of animals other than frogs and butterflies! 3-LS1-1
- **Adaptations of Our Feathered Friends:** Why aren't all bird beaks shaped the same? The answer will be obvious, as the students become different birds and try to eat their favorite foods using another bird's beak. 3-LS2-1
- **Animal Propulsion:** Discover different animal structures and how they move. Learn about the fastest animals. 3-LS2-1
- **Rock It:** Focus on rocks and fossils and where they come from. Program can be tailored to your topic focus. Optional field trip to the Rock Cuts, or bring the rock cut fossils to your classroom! 3-LS4-1



3rd Grade Cont.

- **Vertebrate Animals (snakes):** Are snakes vertebrates? Most students will be surprised to see the snake skeleton and that they actually do have a lot of bones! After discussing other creatures that have backbones the class will end up playing the Vertebrate Grab game to help review the lesson. 3-LS2-1
- **Classifying Animals:** Introduction to the animal classification system. Discussion includes mammals, birds, reptiles, amphibian, insects and fish. 3-LS2-3
- **The Long Haul:** After the students calculate how many gallons of water they use in a day we will discuss why so much more water is being used today than long ago. Then, they will get a chance to take a turn at hauling their own water. This activity will definitely make them stop and think! 3-ESS2-1
- **Everything Must Go Somewhere:** Life of a hamburger is the example used to explain everything must go somewhere! Consumerism, packaging, energy, and farming are just a couple topics we touch on. 4-ESS3-1
- **Groundwater Flow Model:** Using a flow model, we will dive into Iowa's underground structures including groundwater. This active lesson will help your students better understand water movement below the surface. Please schedule 2 week advance notice. 6-ESS2-1 7-ESS2-4
- **Monarch Magic:** Your students will get to know the Monarch Butterfly up close and personal during this program. Youth will learn how humans can help monarch butterflies by creating butterfly habitat. We will tag some Monarchs with special sticky tags (to aid in research), learn about their migration, and we'll watch a video to learn about the Monarch's life cycle and habitat requirements. 3-LS1-1
- **Hungry Caterpillar:** This lesson uses the Hungry Caterpillar activity from the Monarchs on the Move Curriculum to help youth think through why we need milkweed plants for monarch butterflies. They will get the experience of being both a caterpillar on a plant and a scientist collecting data. 3-LS1-1



3rd Grade Cont.

- **Pollinator Garden Buffet:** This lesson uses the Pollinator Garden Buffet activity to help youth learn about the needs of pollinators and how to design an ideal habitat. Youth will learn about how pollinators need flowers that bloom all season long as well as places to build their nest. 3-LS1-1
- **Leaf ID:** With real examples students will learn how to key out leaves to identify the tree species, including evergreen trees. 3-LS3-2
- **What is a Box Turtle:** We'll learn all about land turtles by reading the book Box Turtle at Long Pond. The focus of this program is adaptations of Iowa's Turtles. Live turtle in session with school's permission. 3-LS4-2, 3-LS4-3
- **Winter Adaptations:** We will read Who lives in the Snow. In depth discussion on animal survival including a fun way to remember the animal's strategies for surviving winter! 3-LS4-3
- **Cloudy Skies:** Discover types of clouds and how they can be used to predict the weather. Clouds part in the water cycle will be discussed. We also will create a cloud in a jar! 3-ESS2-1
- **Pollinator-free Sundae:** Youth will learn that without pollinator we could not enjoy many of our favorite foods. 3-LS4-4
- **Water Vapor and the Water Cycle:** During this activity students will become water molecules, and walk their way through the water cycle. After defining terms such as water vapor, condensation, etc. students will again travel through the water cycle, grabbing a partner when they represent a water droplet and will travel alone as water vapor. This active lesson will help your students better understand water vapor and precipitation (large space to play is needed.) 3-ESS2-1

4th Grade

- **Mending the Bald Eagle:** Can we see as good as an eagle? We'll find out! Plus learn about food chains, migration, and some eagle math. Optional DVD video, game, and field trip opportunity! 4-LS1-1, 4-LS1-2
- **How Bees See Flowers:** This lesson uses the How Bees See Flowers presentation from Minnesota Pollinator Education Toolkit activity to help youth learn about bee biology. Youth will learn how bees see differently and how flowers communicate with bees during pollination. 4-LS1-2



4th Grade Cont.

- **Is it a Bee?:** Youth will learn about the characteristics of bees and how to tell bees apart from other insects. 4-LS-1-1
- **Plant Basics:** Learn plant basics, structure, and parts, learn what gives plants their green color and how they make their own food. We can then move on to discuss how plants disperse seeds to ensure their survival. 4-LS1-1
- **Recycle Magic:** After learning facts about deforestation, and how paper is made, we will make our very own recycled paper! 2-ESS2-1
- **Pollinator Match:** In this lesson youth will learn about how pollinators find flowers and how plants attract pollinators to see that different organisms have different adaptations. 4-LS1-1
- **The Lunch Box:** Two 'picnic lunches' will be brought to your classroom and your students will be guided through a comparison of the amount of trash each one produces. The program encourages students to make wise choices when selecting foods for their lunches, a great program before the field trip season! 4-ESS3-1
- **Rock It:** Focus on rocks (3 types), minerals and/or fossils and where they come from. Program can be tailored to your topic focus. Optional field trip to the Rock Cuts, or bring the rock cut fossils to your classroom! 4-ESS1-1
- **This Land is our Land:** This lesson uses the This Land is Your Land activity from the Monarchs on the Move Curriculum to help youth explore the ways to increase habitat, especially milkweed, for monarch butterflies and other pollinators. They will learn about different ways to manage land in cities and in farms and will learn how to interpret satellite images. 4-LS1-1
- **Everything Must Go Somewhere:** Life of a hamburger is the example used to explain everything must go somewhere! Consumerism, packaging, energy, and farming are just a couple topics we touch on. 4-ESS3-1
- **Paper vs. Plastic Bags:** A great topic for your class to investigate, and then include my program. We will learn about some major differences and how to become better consumers by learning some symbols that are on products. 4-ESS3-1



5th Grade

- **Animals Need Food, Shelter, Water, and Space:** During this activity we will define a habitat, predator, prey, and the basic needs of animals. We will follow the discussion with an outdoor (or gym) activity that will allow your students to become animals in search of food and safety in the game of Oh Deer. Will all of the students survive? Why or why not? 5-LS1-1
- **Plant Basics:** Learn plant basics, structure, and parts, learn what gives plants their green color and how they make their own food. We can then move on to discuss how plants disperse seeds to ensure their survival. 5-LS1-1
- **Mending the Bald Eagle:** Can we see as good as an eagle? We'll find out! Plus learn about food chains, migration, and some eagle math. Optional DVD video, game, and field trip opportunity! 5-LS2-1
- **Web of Life:** After the story Pass the Energy, Please!, students will work together to build a food chain, and food webs are discussed. Desks may need to be moved for this activity. 5-LS2-1
- **Roving Habitats:** Discover the North American ecosystems and animals. Students will work on building their given ecosystem. 5-LS1-1
- **Prairie Game: (Conservation day)** Predator/Prey game with Prairie animals and teaching about bioaccumulation. 5-LS-2-1
- **The Solar System and Beyond:** My nine inflatable planets will allow your students to visualize the major size difference of the planets! We can move outside or large space to look at the distance between planets and discuss rotation and revolution. Students won't soon forget this hands-on lesson. 5-ESS1-1
- **Star ID:** Learn about constellations, focused on star size, and tailored to the month of your program. 5-ESS1-1
- **Space Adventuring:** Learn about discovering space, tailored to eclipses, seasons and lunar events. 5-ESS1-2
- **The Long Haul:** After the students calculate how many gallons of water they use in a day we will discuss why so much more water is being used today than long ago. Then, they will get a chance to take a turn at hauling their own water. This activity will definitely make them stop and think! 5-ESS3-1



5th Grade Cont.

- **Water Vapor and the Water Cycle:** During this activity students will become water molecules, and walk their way through the water cycle. After defining terms such as water vapor, condensation, etc. students will again travel through the water cycle, grabbing a partner when they represent a water droplet and will travel alone as water vapor. This active lesson will help your students better understand water vapor and precipitation (large space to play is needed.) 5-ESS2-1
- **Iowater:** I can do a classroom program showing and discussing the macro invertebrates that I have collected from Cass County streams. Your students will enjoy viewing them up close and can try to identify them as well. In conclusion, they will learn what these creatures can tell us about the water quality of the stream. OR 2) Your class can join me in a stream as we look at the stream habitat, look for water critters, complete simple chemical tests, etc. How much you want to do is up to you. (Four weeks advance notice please) 5-LS2-1
- **Eco Footprint:** Use the book, Material World, to show pictures of what a typical family owns in 3-4 countries including the United States. Have students generate questions about environmental impacts that different countries are having on the earth. Students complete the Ecological Footprint Calculator. The calculator worksheet includes questions on: transportation, water use, clothing, entertainment, food, and school. Each answer is assigned a point value and students calculate their total usage number. 5-ESS3-1