



Middle School Programs

Aldo Leopold Outdoor Classroom

Animal Sounds (Sounds like a...)

Bears- How Many Bears Can Live in This Forest

Birds of Prey

Deadly Waters

Energy Pipeline

History- Sioux County History

Invasive Species

Lewis and Clark Expeditions

Matter-Dancing Raisins

Monarch Watch

Move West

Owl Pellets

Poachers- Animals Beware, Poachers Out There!

Rocks

SOAR- Bald Eagle Diagnostician

Wildlife Population Study

*Check out “Recreational Opportunities” for more activities for this grade!

Program Description

Aldo Leopold Outdoor Classroom (4th, MS)

Aldo Leopold was considered the father of wildlife management during the late 1800’s and early 1900’s, before conservation was accepted as important. This lesson is based off of “A Sand County Almanac” which he wrote.

Standards: Core/NGSS 4-LS1-1 and MS-LS1-5*

Offered: Fall or Spring (outdoors is best)

Time: 20-30 min

Animal Sounds: Sounds Like a... (MS)

Decode animal sounds with us, practice making sounds and make your own animal call!

Standards: Core/NGSS MS-LS2-2* and MS-LS1-4*

Offered: Anytime

Time: 50-60 min

Bears: How many Bears can Live in the Forest? (4th-5th, MS)

Students will learn about habits and adaptations of black bears. They will discover limiting factors and discover how they affect a population.

Standards: Core/NGSS 5-PS3-1, MS-LS2-1—Math: add and divide (4.OA.A.2)

Offered: anytime

Time: 40 min

Birds of Prey (Pre-K, 2nd-4th and MS)

Learn about the adaptations and human impacts of birds of prey in our area. We will discuss owls, hawks, eagles and meet a live falcon.

Standards: Objective 25; Core/NGSS K-ESS3-3, 2-LS4-1, 3-LS4-2, 4-LS1-1 and MS-LS2-1*

Offered: Anytime

Time: 30-45 min

Deadly Waters (5th-MS)

Students will analyze the pollutants found in a pretend water sample and use a topographical map to make an educated guess as to where the sample was taken from. Nine different pollution categories will be identified and solution to the problems will be discussed.

Standards: Core/NGSS 5-ESS3-1, MS-ETS1-1 and *MS-ESS3-3

Offered: Anytime

Time: 45 minutes

Energy Pipeline (4th-5th, MS)

This activity gives kids a role moving energy through the trophic levels in an ecosystem. Shows how energy in animal's food (used for body repair, growth, motion and to maintain body warmth) was once energy from the sun.

Standards: Core/NGSS 4-PS3-2*, 4-PS3-4*, 4-LS1-1*, 5-PS3-1, 5-LS2-1* and MS-LS1-6*

Offered: Anytime

Time: 45 min

History- Sioux County History (3rd grade+, PP, SC)

Ever wonder what Sioux County was like before European settlement? Or what early life looked like for those who came to settle it? This program can cover pre-settlement as well as early settlement history depending on time. It gives the audience a glance back in time as while connecting how our past has shaped the county to this day.

Standards: Core-Social Studies: SS.3.23*, SS.4.8*, SS.4.21*, SS.5.22*, SS.6.22, SS.7.18*, SS.8.15*

Offered: Anytime

Time: 30-45+ min

Invasive Species (MS-HS)

Invasive species are all around us. Let's take the time to discuss what an invasive species is, how it gets here and how they affect ecosystems. We will cover invasive species in Iowa and students will participate in a game to learn how the invasive species effects the ecosystem it's in.

Standards: Core/NGSS MS-LS2-1, *MS-LS2-4, *HS-LS2-2, *HS-LS2-7 and *HS-LS4-5

Offered: Anytime

Time: 30-45 min

Lewis and Clark Expedition (3rd+)

This PowerPoint program takes your students on the expedition from St. Louis to the Pacific and back. Program involves volunteers from your class to play as characters in the expedition.

Standards: Program adjusted to fit/highlight grade's specific Social Studies Core Standards—See Grade's Social Studies Chart at end of document for specifics.

Offered: Anytime

Time: 45 min

Matter-Dancing Raisins (2nd, 4th, 5th and MS)

Through an experiment, learn the states of matter while focusing on gas, solid and liquid. Density is discussed and modelled. Compare to organisms in nature.

Standards: Core/NGSS 2-PS1-1, 4-LS1-1, 5-PS1-3 and MS-PS2-2*

Offered: Anytime

Time: 45 min

Monarch Watch (2nd-5th, MS)

Your students can join in a North America study aimed at providing information for scientists who want to save the monarch butterfly. We will discuss the biology of the monarch, migration, and tag and release them outdoors. Information will be recorded and we will let you know if your monarch is recovered in Mexico!

Standards: Core/NGSS 2-LS2-2*, 3-LS1-1*, 3-LS2-1, 3-LS4-3, 3-LS4-4, 4-LS1-1, 4-LS1-2, 5-ESS3-1 and MS-LS1-4

Offered: August-September only

Time: 30-60 min

Move West (3rd+)

Let us turn your class into pioneer families traveling West. We will discuss the history of the time, hardships they faced and the lifestyle this trip demanded. This activity involves small group decision making, cooperation and mathematic skills- add 2 digit numbers. By the end of our activity, we will be able to determine who made the complete journey West, who had to stop half way or who gave up and turned around.

Standards: Core SS.3.16, SS.3.21, SS.3.27 and 3.NBT.A.2 Program can be adjusted to fit/highlight other grade's specific Social Studies Core Standards—See Grade's Social Studies Chart at end of document for specifics.

Offered: Anytime

Time: 30-45 min

Owl Pellets (4th & MS)

This is a hands on dissecting lesson for your students! Owls cannot digest the bones, fur or feathers of their prey, so they cough up a pellet with these contents. Your students will identify the bones they find in the pellet and match them to a chart to decide if they have a rodent, mole, shrew or bird. They will also be able to determine how many animals their owl ate. How can we determine the availability of prey and prey types by looking at our charts? Schools can order the pellets at www.owlpellet.com and we will bring the taxidermies, trays and charts for the lesson.

Standards: Core/NGSS 4-LS1-1 and MS-LS2-1

Offered: Anytime

Time: 45 min

Animals Beware, Poachers Out There! (MS-HS)

Can your class stop the poachers before it is too late? Let us find out in this interactive game! We will discuss the effects of poaching and the reasons behind it and also discuss possible solutions to these problems.

Standards: Core/NGSS SS.7.19, *MS-ESS3-3, MS-ESS3-4, *HS-LS2-7 and *HS-LS4-6

Offered: Anytime

Time: 45 min at the minimum

Rocks (2nd-4th, MS)

Enter the world of rocks, learn how to group them into three groups, see a fossil and “make” rocks that you can eat!

Standards: Core/NGSS 2-PS1-1, 2-PS1-4*, 2-ESS1-1*, 3-LS4-1*, 4-ESS1-1* and MS-ESS1-4*

Offered: Anytime

Time: 30 min, 40-45 minutes options available too for more

SOAR- Bald Eagle Diagnostician (5th, MS)

Like people, eagles must often go through rehabilitation due to unforeseen circumstances. This investigation brings to light problems bald eagles face, how it affects the bird and what can be done to rehabilitate them. By the end, each group will have to diagnose their eagle patient and find out what happened to their particular case.

Standards: Core/NGSS 5-ESS3-1 and MS-ESS3-2*

Offered: Anytime

Time: 30-45 min

Wildlife Population Study (MS-HS)

Ever wonder how biologists come up with population numbers for a specific species? In this mock-study, your students will learn and apply the different study methods used by biologist and calculate the population size of a “newly discovered species”! Program includes discussion on genetic variation, natural selection and impacts of environmental change(s) on a given populations.

Standards: Core/NGSS MS-LS2-1, MS-LS2-2*, MS-LS2-4, MS-LS4-4, HS-LS2-2, HS4-4, HS-LS4-5*, 6.EE.A.2, 7.NS.A.3 and 7.EE.B.3

Offered: Fall/Spring

Time: 30-45 minutes

*Standards that have an asterisk next to them indicate SCCB’s program is related to the concept covered by the standard but may not include the exact format suggested by the standard. For example, if it says to conduct an investigation, we may just provide information/recourses on what you are going to investigate or may complete a mini investigation in our program but not a full fledge investigation. Teachers please use these opportunities to tie what we bring into your classroom to what you have been teaching. OR plan a field trip with us in which we can appropriate more time to the desired activity!

Core: Science/ Next Generation Science Standards and Life Skills (6th)	MS-PS1					MS-ESS2			MS-ESS3		MS-LS1					MS-ETS1				Life Skill	Other Area	7th Grade	8th Grade						
	MS-PS1-1	MS-PS1-2	MS-PS1-4	MS-PS1-5	MS-PS1-6	MS-ESS2-1	MS-ESS2-2	MS-ESS2-3	MS-ESS3-1	MS-ESS3-2	MS-LS1-1	MS-LS1-2	MS-LS1-3	MS-LS1-8	MS-LS3-2	MS-ETS1-1	MS-ETS1-2	MS-ETS1-3	MS-ETS1-4										
Aldo Leopold Outdoor Classroom																											X		
Animal Sounds (Sounds like a....)																												X	
Bears- How Many Bears Can Live in This Forest																												X	
Birds of Prey																												X	
Deadly Water																	X												X
Energy pipeline																												X	
History- Sioux County History																											X		
Invasive Species																												X	
Lewis and Clark Expeditions																											X		
Matter-Dancing Raisins																													X
Monarch Watch																											X		
Move West																											X		
Owl Pellets																											X		
Poachers- Animals Beware, Poachers Out There!																										X		X	
Rocks																											X		
SOAR- Bald Eagle Diagnostician									X*																				
Wildlife Population Study																										X	X		

K-12 Iowa Core in Social Studies 6th Grade: World Regions and Cultures	Behavioral Sciences		Economics	Geography				History				Financial Literacy				Other Study Area			7th Grade	8th Grade					
	SS.6.13	SS.6.14	SS.6.15	SS.6.16	SS.6.17	SS.6.18	SS.6.19	SS.6.20	SS.6.21	SS.6.22	SS.6.23	SS.6.24	SS.6.25	SS.6.26	SS.6.27	SS.6.28									
Aldo Leopold Outdoor Classroom																					X				
Animal Sounds (Sounds like a...)																					X				
Bears- How Many Bears Can Live in This Forest																					X				
Birds of Prey																					X				
Deadly Waters																					X				
Energy Pipeline																					X				
History- Sioux County History										X													X	X	
Invasive Species																					X				
Lewis and Clark Expeditions				X*	X*																	X	X		
Matter-Dancing Raisins																					X				
Monarch Watch																					X				
Move West						X*	X*					X*										X	X		
Owl Pellets																					X				
Poachers- Animals Beware, Poachers Out There!																					X	X			
Rocks																					X				
SOAR- Bald Eagle Diagnostician																					X				
Wildlife Population Study																					X				

Core: Science/ Next Generation Science Standards and Life Skills (7th)	MS-PS2		MS-PS3		MS-ESS1			MS-LS1		MS-LS2		MS-LS3	MS-ETS1-1			Life Skill	Other Area	6th Grade	8th Grade									
	MS-PS2-3	MS-PS2-4	MS-PS2-5	MS-PS3-2	MS-PS3-4	MS-PS3-5	MS-ESS1-1	MS-ESS1-2	MS-ESS1-3	MS-ESS1-4	MS-LS1-4	MS-LS1-5	MS-LS1-6	MS-LS1-7	MS-LS2-1	MS-LS2-2	MS-LS2-3	MS-LS2-4	MS-LS3-1	MS-ETS1-1	MS-ETS1-2	MS-ETS1-3	MS-ETS1-4					
Aldo Leopold Outdoor Classroom										X*																		
Animal Sounds (Sounds like a....)										X*						X*												
Bears- How Many Bears Can Live in This Forest															X													
Birds of Prey															X*													
Deadly Waters																											X	X
Energy pipeline												X*																
History- Sioux County History																										X		
Invasive Species															X			X										
Lewis and Clark Expeditions																										X		
Matter-Dancing Raisins																											X	
Monarch Watch										X																		
Move West																										X		
Owl Pellets															X													
Poachers- Animals Beware, Poachers Out There!																										X		X
Rocks									X*																			
SOAR- Bald Eagle Diagnostician																		X								X		
Wildlife Population Study														X	X*		X										X	

K-12 Iowa Core in Social Studies 7th Grade: Contemporary Global Studies	Behavioral Sciences		Civics/Government			Economics			Geography			History			Financial Literacy			Other Study Area		6th Grade	8th Grade							
	SS.7.13	SS.7.14	SS.7.15	SS.7.16	SS.7.17	SS.7.18	SS.7.19	SS.7.20	SS.7.21	SS.7.22	SS.7.23	SS.7.24	SS.7.25	SS.7.26	SS.7.27	SS.7.28	SS.7.29	SS.7.30	SS.7.31									
Aldo Leopold Outdoor Classroom																										X		
Animal Sounds (Sounds like a...)																										X		
Bears- How Many Bears Can Live in This Forest																										X		
Birds of Prey																										X		
Deadly Waters																										X		
Energy Pipeline																										X		
History- Sioux County History							X*																			X	X	
Invasive Species																										X		
Lewis and Clark Expeditions				X*																						X	X	
Matter-Dancing Raisins																										X		
Monarch Watch																										X		
Move West									X*		X*						X*									X	X	
Owl Pellets																										X		
Poachers- Animals Beware, Poachers Out There!							X																			X		
Rocks																										X		
SOAR- Bald Eagle Diagnostician																										X		
Wildlife Population Study																										X		

Core: Science/ Next Generation Science Standards and Life Skills (8th)	MS-PS1	MS-PS2	MS-PS3	MS-PS4	MS-LS2-1	MS-LS4				MS-ESS2	MS-ESS3	MS-ETS1-1	Life Skill	Other Area	6th Grade	7th Grade														
	MS-PS-1-3	MS-PS2-1	MS-PS2-2	MS-PS3-1	MS-PS3-3	MS-PS4-1	MS-PS4-2	MS-PS4-3	MS-PS4-4	MS-PS4-5	MS-LS4-1	MS-LS4-2					MS-LS4-3	MS-LS4-4	MS-LS4-5	MS-ESS2-4	MS-ESS2-5	MS-ESS2-6	MS-ESS3-3	MS-ESS3-4	MS-ESS3-5	MS-ETS1-1	MS-ETS1-2	MS-ETS1-3	MS-ETS1-4	
Aldo Leopold Outdoor Classroom																														X
Animal Sounds (Sounds like a....)																														X
Bears- How Many Bears Can Live in This Forest																														X
Birds of Prey																														X
Deadly Waters																				X*										X
Energy pipeline																														X
History- Sioux County History																											X			
Invasive Species																														X
Lewis and Clark Expeditions																											X			
Matter-Dancing Raisins			X*																											
Monarch Watch																														X
Move West																											X			
Owl Pellets																											X			
Poachers- Animals Beware, Poachers Out There!																				X	X						X			
Rocks																														X
SOAR- Bald Eagle Diagnostician																												X		
Wildlife Population Study																											X			

K-12 Iowa Core in Social Studies 8th Grade: United States History and Civic Ideals	Civics/Government		Economics			Geography			History				Financial Literacy			Other Study Area		6th Grade	7th Grade
	SS.8.13	SS.8.14	SS.8.15	SS.8.16	SS.8.17	SS.8.18	SS.8.19	SS.8.20	SS.8.21	SS.8.22	SS.8.23	SS.8.24	SS.8.25	SS.8.26	SS.8.27	SS.8.28	SS.8.29		
Aldo Leopold Outdoor Classroom																		X	
Animal Sounds (Sounds like a...)																		X	
Bears- How Many Bears Can Live in This Forest																		X	
Birds of Prey																		X	
Deadly Waters																		X	
Energy Pipeline																		X	
History- Sioux County History			X*																X
Invasive Species																		X	
Lewis and Clark Expeditions												X*						X	X
Matter-Dancing Raisins																		X	
Monarch Watch																		X	
Move West							X*											X	X
Owl Pellets																		X	
Poachers- Animals Beware, Poachers Out There!																		X	X
Rocks																		X	
SOAR- Bald Eagle Diagnostician																		X	
Wildlife Population Study																		X	