Yellowstone Prairie Ecosystem:
Applicable State Content Standards
(2016 Montana State Content Standards)

A note on standards: This is a list of the standards that can be met by each lesson plan. For older grades, the utilisation of the extensions offered in lessons may be necessary in order to meet the standards exactly. Educators should feel free to enhance and adapt the lessons in order to meet the needs of their classroom.

Lesson: What is an Ecosystem?	Content Standards **K:** • use observations to describe patterns of what plants and animals, including humans, need to survive • use a model to represent the relationship between the needs of different plants or animals, including humans, and the places they live **Grade 2:** • make observations of plants and animals to compare and contrast the diversity of life in different habitats **Grade 3:** • construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all • construct a cause and effect argument communicating some animals, including humans, form groups and communities that help members survive • use evidence to support the explanation that traits can be influenced by the environment **Grade 5:** • support an argument that plants get the materials they need for growth chiefly from air and water • develop and critique a model to describe the movement of matter among plants, animals, decomposers, and the environment **Grades 6-8:** • construct a scientific explanation based on evidence for the role of photosynthesis in the cycling of matter and flow of energy into and out of organisms

	- develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem - construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems - construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth and development of organisms
Lesson: Skulls, Tracks and Furs	**K:** - use observations to describe patterns of what plants and animals, including humans, need to survive - use a model to represent the relationship between the needs of different plants or animals, including humans, and the places they live **Grade 1:** - use information from print and other media to identify patterns in behavior of parents and offspring that help offspring survive - make an evidence-based explanation of how young plants and animals are like, but not exactly like, their parents **Grade 2:** - make observations of plants and animals to compare and contrast the diversity of life in different habitats **Grade 3:** - construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all - use evidence to support the explanation that traits can be influenced by the environment **Grade 4:** - construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction **Grades 6-8:** - construct a scientific explanation based on evidence

	for how environmental and genetic factors influence the growth and development of organisms
	
	Grades 9-12:
	● construct an explanation based on evidence that the process of evolution by natural selection primarily results from four factors:
	    ○ the potential for a species to increase in number
	    ○ the heritable genetic variation of individuals in a species due to mutation and sexual reproduction
	    ○ competition for limited resources
	    ○ the proliferation of those organisms that are better able to survive and reproduce in the environment
	● construct an explanation based on evidence for how natural selection leads to adaptation of populations over time

Lesson:
Prairie Stories
	Language Arts Key Concepts (adaptable by grade)
	● Asking questions about a text
	● Retelling stories with detail, especially American Indian stories
	● Craft and structure of a story
	● Group reading
	● Creating a story structure
	● Listening comprehension
	● Determining message within a story
	● Describing characters
	● Identifying metaphor and symbolism
	
	IEFA Essential Understandings
	● Essential Understanding 1
	    ○ There is great diversity among the twelve tribal nations of Montana in their languages, cultures, histories and governments. Each Nation has a distinct and unique cultural heritage that contributes to modern Montana.
	● Essential Understanding 2
	    ○ There is great diversity among individual American Indians as identity is developed, defined and redefined by entities,

	organizations and people. A continuum of Indian identity, unique to each individual, ranges from assimilated to traditional. There is no generic American Indian. ● Essential Understanding 3 (Part 2) ○ Additionally, each tribe has its own oral histories, which are as valid as written histories. These histories pre-date the "discovery" of North America.

Lesson:
Learning about Camouflage
	K:
	● use observations to describe patterns of what plants and animals, including humans, need to survive
	● use a model to represent the relationship between the needs of different plants or animals, including humans, and the places they live
	
	Grade 3:
	● use evidence to support the explanation that traits can be influenced by the environment
	
	Grade 4:
	● construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction
	
	Grades 6-8:
	● construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth and development of organisms
	
	Grades 9-12:
	● construct an explanation based on evidence that the process of evolution by natural selection primarily results from four factors:
	   ○ the potential for a species to increase in number
	   ○ the heritable genetic variation of individuals in a species due to mutation and sexual reproduction
	   ○ competition for limited resources
	   ○ the proliferation of those organisms that are better able to survive and reproduce in the

	environment ● construct an explanation based on evidence for how natural selection leads to adaptation of populations over time
Lesson: A Bear's Menu	**K:** ● use observations to describe patterns of what plants and animals, including humans, need to survive **Grade 2:** ● make observations of plants and animals to compare and contrast the diversity of life in different habitats **Grade 4:** ● construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction