

**Science
Unit 1: Animals**

Essential Understandings	<ul style="list-style-type: none"> ▪ Animals can be classified by their characteristics. ▪ Animals depend upon one another and their environment. ▪ Living things change over time.
Essential Questions	<ul style="list-style-type: none"> ▪ How are animals similar and different? ▪ How are animals classified? ▪ How do animals adapt to their environment? ▪ How do animals depend on their environment for survival? ▪ How do living things change over time?
Essential Knowledge	<ul style="list-style-type: none"> ▪ Animal groups are classified according to characteristics: <ul style="list-style-type: none"> ○ <u>Amphibians</u>: cold blooded, moist skin, breathe with gills and then develop lungs, metamorphosis, hatch from eggs ○ <u>Arthropods</u>: exoskeleton, a segmented body, jointed legs, no backbone, cold blooded ○ <u>Birds</u>: backbone, warm blooded, wings, breathe with lungs, hatch from eggs, beak, two legs, feathers ○ <u>Fish</u>: backbones, breathe with gills, have fins, covered with scales, hatch from eggs, cold blooded ○ <u>Mammals</u>: warm blooded, covered with fur/hair, born live, breathe with lungs, have backbones, nurse their young ○ <u>Reptiles</u>: scales, cold blooded, breathe with lungs, back bone, hatch from eggs ▪ Each animal group has a distinct life cycle: <ul style="list-style-type: none"> ○ <u>Amphibians</u>: egg, tadpole, adult ○ <u>Arthropods</u>: varies <ul style="list-style-type: none"> ▪ egg, larvae, pupae, adult (butterfly, ant, moth) ▪ egg, egg sac, spiderling, adult ○ <u>Birds</u>: egg, baby, adult ○ <u>Fish</u>: egg, fry, adult ○ <u>Mammals</u>: baby, young, adult ○ <u>Reptiles</u>: egg, baby, adult ▪ Animals depend on the environment and each other for survival. ▪ Changes in habitat affect animals. ▪ Some animals migrate.
Vocabulary	<ul style="list-style-type: none"> ▪ <u>Terms</u>: <ul style="list-style-type: none"> ○ characteristics, features, classification, environment, habitat, organism, similar, different, survival, extinct, adaptations, endangered, amphibian, bird, fish, arthropod, mammal, reptile, metamorphosis, exoskeleton, fossil, larvae, pupae , nesting, migration

**Science
Unit 1: Animals**

<p align="center">Essential Skills</p>	<ul style="list-style-type: none"> ▪ Describe the characteristics of an animal group. ▪ Compare animals and animal groups that live in different environments of the world. ▪ Describe the stages in a life cycle. ▪ Identify ways in which animals depend upon the environment and each other for food, shelter, and nesting. ▪ Label the features of an animal. ▪ Explain why animals migrate.
<p align="center">Related Maine Learning Results</p>	<p><u>Science</u></p> <p>A. Unifying Themes</p> <p>A2.Models Students identify models and objects they represent to learn about their features.</p> <ol style="list-style-type: none"> a. Describe ways in which toys and pictures are like the real things they model. b. Use a model as a tool to describe motion of objects or the features of plants and animals. <p>A3.Constancy and Change Students observe that in the physical setting, the living environment, and the technological world some things change over time and some things stay the same.</p> <ol style="list-style-type: none"> a. Describe the size, weight, color, or movement of things over varying lengths of time and note qualities that change or remain the same. <p>E. The Living Environment</p> <p>E1.Biodiversity Students describe similarities and differences in the observable behaviors, features, and needs of plants and animals.</p> <ol style="list-style-type: none"> a. Describe similarities and differences in the way plants and animals look and the things they do. b. Describe some features of plants and animals that help them live in different environments. c. Describe how organisms change during their lifetime. <p>E2.Ecosystems Students understand how plants and animals depend on each other and the environment in which they live.</p> <ol style="list-style-type: none"> a. Explain that animals use plants and other animals for food, shelter and nesting. b. Compare different animals and plants that live in different environments of the world.

**Science
Unit 1: Animals**

<p align="center">Related Maine Learning Results</p>	<p>E3.Cells Students describe parts and wholes of living things, their basic needs, and the structures and processes that help them stay alive.</p> <ol style="list-style-type: none"> a. List living things and their parts that are so small we can only see them using magnifiers. b. List the basic things that most organisms need to survive. c. Identify structures that help organisms do things to stay alive. <p>E4.Heredity and Reproduction Students describe the cycle of birth, development, and death in different organisms and the ways in which organisms resemble their parents.</p> <ol style="list-style-type: none"> b. Describe the life cycle of a plant or animal (including being born, growing, reproducing, and dying). <p>E5.Evolution Students describe similarities and differences between present day and past organisms that helped the organisms that helped the organisms live in their environment.</p> <ol style="list-style-type: none"> a. Describe some organisms' features that allow the organisms to live in places others cannot. b. Explain how some kinds of organisms that once lived on Earth have completely disappeared, although they were similar to some that are alive today.
<p align="center">Sample Lessons And Activities</p>	<ul style="list-style-type: none"> ▪ Design a variety of ways to sort and classify animals based on characteristics. ▪ Compare animals within the same species. ▪ Use a Venn diagram to compare and contrast animals and animal groups. ▪ Make a diagram showing the life cycle of a specific animal. ▪ Use pictures and/or models to sort and classify animals into their groups. ▪ Complete "Create a Creature" activity. (Scientific Investigation)
<p align="center">Sample Classroom Assessment Methods</p>	<ul style="list-style-type: none"> ▪ Sort animal pictures into the appropriate animal group. ▪ Draw and label the stages of an animal's life cycle.

Science
Unit 1: Animals

**Sample
Resources**

- Publications:
 - Amphibians:
 - Can You Find Me? A Book About Camouflage - Jennifer Dewey
 - Frogs - Robin Dexter
 - Good Morning, Pond - Alyssa Satin Capucilli
 - The Salamander Room - Anne Mazer
 - Very First Things to Know About Frogs - Patricia Grossman
 - Arthropods:
 - Becoming Butterflies - Anne Rockwell
 - Bugs - Anne Rockwell
 - From Caterpillar to Butterfly – D. Heiligman
 - Insects Are My Life - Megan McDonald
 - The Life Cycle of A Butterfly – Bobbie Kalman
 - Monarch and the Milkweed – Helen Frost
 - The Very Quiet Cricket - Eric Carle
 - Waiting For Wings - Lois Ehlert
 - Birds:
 - All About Owls - Jim Arnosky
 - Baby Birds - Joyce Dunbar
 - Birds - Laurence Santrey
 - Feathers For Lunch - Lois Ehlert
 - Good-Night Owl! - Pat Hutchins
 - Owly - Mike Thaler
 - Mammals:
 - About Mammals - Cathryn Sill
 - Animal Tracks - Arthur Dorros
 - The Big Bears - Melvin Berger
 - Mammals - National. Geographic
 - A True Book: Moose - David Peterson
 - What is a Bear? - Bobbie Kalman
 - Where Once There Was A Wood - Denise Fleming
 - Reptiles:
 - All About Rattlesnakes - Jim Arnosky
 - The Day Jimmy's Boa Ate The Wash -Trinka Nobles
 - I Can Read About Reptiles - David Cutts
 - Snakes - Patricia Demuth
- Other:
 - Everybody's Somebody's Lunch – Cherie Mason
 - In the Woods Who's Been Here? – Lindsay Barrett George
 - Stopwatch Senses
 - What is a Life Cycle? – Bobbie Kalman