



Project G.L.A.D. Washoe County School District

Animal Families: Animal Ark, A Sanctuary for Life (Level 2)

IDEA PAGES

I. UNIT THEME

- Animals and plants have offspring that are similar to their parents.
- Living things have identifiable characteristics.
- Living things live in different places.
- There are many kinds of living things on Earth.

II. FOCUS AND MOTIVATION

- Cognitive Content Dictionary
- Super Scientist Awards
- Observation Charts
- Inquiry Charts: What do we know?, What do we want to know?
- Pictorial Charts, Smart Cards
- Big Book
- Poems and Chants
- Read Alouds

III. CLOSURE

- Process ALL charts: Inquiry, Observation, Pictorial
- Process Grid
- Animal Report
- Frontloading Checklist on the way to Animal Ark
- Reflection Rubric on way home from Animal Ark

IV. CONCEPTS: SECOND GRADE LIFE SCIENCE CONTENT STANDARDS

- **Heredity**: heredity is the genetic passing of a set of instructions from generation to generation. These instructions are encoded as DNA and may manifest themselves as characteristics. Some characteristics are inherited, and some result from interactions with the environment.
 - L.2.A Students understand that offspring resemble their parents.
 - L.2.A.1 Students know animals and plants have offspring that are similar to their parents. E/S
 - L.2.A.2 Students know differences exist among individuals of the same kind of plant or animal. E/S
- **Structure of Life**: All living things are composed of cells. Cells range from very simple to very complex and have structures which perform functions for the organism. Cells and structures can be damaged or fail because of intrinsic failures and disease.
 - L.2.B Students understand that living things have identifiable characteristics.



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- L.2.B.1 Students know humans and other animals use their senses to know their world. E/S
- **Organisms and Their Environment:** A variety of ecosystems and communities exist on Earth. Ecosystems are dynamic interactions of organisms and their environment. Ecosystems have distinct characteristics and components that allow certain organisms to thrive. Change in one or more components can affect the entire ecosystem.
 - L.2.C Students understand that living things live in different places.
 - L.2.C.1 Students know plants and animals need certain resources for energy and growth. E/S
 - L.2.C.2 Students know a habitat includes food, water, shelter and space. E/S
 - L.2.C.3 Students know living things are found almost everywhere in the world. E/S
- **Diversity of Life:** Evidence suggests that living things can change over periods of time. These changes can be attributed to genetic and/or environmental influences. This process of change over time is called biological evolution. The diversity of life on Earth is classified using observable characteristics. Scientific classification uses a hierarchy of groups and subgroups based on similarities that reflect evolutionary relationships.
 - L.2.D Students understand that there are many kinds of living things on Earth.
 - L.2.D.1 Students know plants and animals can be sorted by observable characteristics and behaviors. E/S
 - L.2.D.2 Students know some plants and animals re extinct. E/S

V. ENGLISH LANGUAGE ARTS: CONTENT STANDARDS

- **Content Standard 1.0:** Students know and use word analysis skills and strategies to comprehend new words encountered in text and to develop vocabulary.
- **Content Standard 2.0:** Students use reading process skills and strategies to build comprehension.
- **Content Standard 3.0:** Students read literary text to comprehend, interpret, and evaluate authors, cultures, and times.
- **Content Standard 4.0:** Students read expository and persuasive texts to comprehend, interpret, and evaluate for specific purposes.
- **Content Standard 5.0:** Students write a variety of texts using the writing process.
- **Content Standard 6.0:** Students write a variety of texts that inform, persuade, describe, evaluate, entertain, or tell a story and that are appropriate to audience and purpose.
- **Content Standard 7.0:** Students listen to and evaluate oral communications for content, style, speaker's purpose, and audience appropriateness.
- **Content Standard 8.0:** Students speak using organization, style, tone, voice, and media aids appropriate to audience and purpose. Students participate in discussions to offer information, clarify ideas, and support a position.

VI. SECOND GRADE: OVERVIEW OF ELA SKILLS

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- Second grade students decode unfamiliar words using structural analysis. While listening to, reading, and discussing a variety of **grade-appropriate** text, students expand their use of reading strategies. They read fluently and comprehend text. Students compose a variety of text and edit their written work. They continue to develop writing skills and may publish their work. Students begin to formulate and answer research questions and record information. They participate in and sometimes lead group discussions with an emphasis on developing listening and speaking skills.

VII. VOCABULARY

Abandoned	Coyote	Herbivore	Raptors
Activist	Desert	Hibernate	Regurgitated
Adaptation	Desert tortoise	Kestrel	Rehabilitation
Animal families	Diurnal	Leopard	Reptile
Badger	Ecosystem	Living	Reptiles
Barn owl	Enclosure	Mammal	Rescued
Biologist	Endangered	Maturity	Sanctuary
Black bear	Environment	Mountain lion	Socialization
Bobcat	Extinct	Naturalist	Species
Camouflage	Felines/Felids	Nocturnal	Survival
Canada lynx	Feral	Orphaned	The wild
Canines/Canids	Forest	Packs	Tiger
Captivation	Fox	Peregrine falcon	White tiger
Carnivore	Genera	Predator	Wolf
Cheetah	Grassland	Prey	
Community	Great horned owl	Pups	
Conservation	Habitat	Raccoon	

VIII. MATH/SCIENCE/SOCIAL STUDIES SKILLS/UNDERSTANDINGS

- MATH:
 - Measuring
 - Predicting
 - Collecting/Analyzing Data
- SCIENCE:
 - Scientific Process Skills
 - Analyzing
 - Classifying
 - Organizing
 - Inferring
 - Comparing
- SOCIAL STUDIES:
 - Use of maps, tables, graphs, photographs to organize information



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- Expressing ideas orally and through writing
- Comparing/Contrasting
- Inferring and Predicting

IX. RESOURCES AND MATERIALS – NONFICTION

- What Are Food Chains and Webs? – Bobbie Kalman
- Deserts – Gail Gibbons
- National Geographic Kids
- National Geographic
- Animal Homes – Betsey Chessen and Pamela Chanko
- What Are Biomes?

X. RESOURCES AND MATERIALS – FICTION

- Coyote Dreams – Susan Nunes

XI. ANIMAL ARK UNIT WEBSITES

- nationalgeographic.com
- animalark.org

XII. COMMUNITY RESOURCES

- Animal Ark
- Wilbur D. May Museum



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PLANNING PAGES

I. FOCUS/MOTIVATION

- Cognitive Content Dictionary with signal word
- Scientist awards
- Observation charts
- Inquiry charts
- Read aloud – Big Book

II. INPUT

- Pictorial – World Map & Six Kingdoms of Living Things
- Pictorial Input
- Narrative Input – Coyote Dreams
- Comparative Input – Arctic Fox vs. Black Bear
- Poetry
- Read Aloud

III. GUIDED ORAL PRACTICE

- T-graph and team points
- Chants
- Picture File activities
- Picture File cards
- Personal Interaction
- Graphic Organizers
- Poetry
- Farmer in the Dell
- Expert Groups
- Process Grid
- Animal Reports

IV. READING/WRITING

- Whole Group:
 - Pictorial Interaction with Smart Cards
 - Cooperative Strip Paragraph
 - Chants
 - Big Book
- Small Groups:
 - Expert Groups
 - Process Grids
 - Team Tasks



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- Individual Work:
 - Writer's Workshop
 - Animal Reports

- Extended Activities:
 - Home/School Connections
 - Pre-Visit "frontloading" Packet
 - Post-Visit "reflection" Packet

V. CLOSURE

- Process all charts and information
- Evaluate week
- Big Book
- Animal Report Author's Chair Presentation



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SAMPLE DAILY LESSON PLAN

DAY 1:

Focus/Motivation

- Cognitive Content Dictionary with Signal Word: animal family
- Super Scientist Awards: Canids
- Observation Charts: Canids, Felids, Reptiles, Raptors, Others
- Inquiry Charts: What do we know about animal families? What do we wonder about?
- Big Book: The Important Thing About Animal Families

Input

- Graphic Organizer: World Map (10/2)
- Graphic Organizer: Six Kingdoms of Living Things
 - 10/2: Discuss two things you learned
 - Learning Log: big book/you
 - Poetry: Animal Families

Guided Oral Practice

- T-Graph Cooperation
- Picture File Activities: sort animals into their family groups
- Exploration Reports: animal families
- Personal Interaction: Which animal family do you like best? Least? Why?
- Poetry: I'm A Fox

Input

- Pictorial Input Chart: Fox (10/2)
- Learning Log: pictorial/you

Reading/Writing/Language Arts

- Interactive Journal
- Writer's Workshop: My favorite animal family and why
 - mini-lesson
 - write
 - author's chair

Closure

- Read Aloud:
- Process inquiry charts, poetry and input charts
- Home/School Connection #1



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DAY 2:

Focus/Motivation

- Process Home/School Connection #1
- Cognitive Content Dictionary with Signal Word: felines
- Super Scientist Awards: Felines
- Review Graphic Organizers with word cards
- Poetry and chants: review content words
- Read Aloud

Input

- Narrative Input – Owl Moon
 - 10/2 discussion
 - Would you have been scared? Why or why not?
- Comparative Input: Owl and a Black Bear
- Process chart with word cards

Guided Oral Practice

- Poetry/Chants: Cheetah Bugaloo
- Personal Interaction: Which is more interesting? Black bear or Owl and why?

Reading/Writing/Language Arts

- Review T-Graph
- Expert Groups
- Team Tasks
 - Team color key
 - World Map
 - Six Kingdoms
 - Pictorials
 - Exploration Report
- Writer's Workshop
 - Mini-lesson
 - Write
 - Author's Chair

Closure

- Interactive Journals
- Process Charts
- Home/School Connection #2

DAY 3:

Focus/Motivation



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- Cognitive Content Dictionary with Signal Word: reptile
- Process Home/School Connection #2
- Review Narrative with word cards and conversation bubbles
- Process Comparative Input Chart
- Super Scientist Awards: Reptiles
- Big Book: I Just Thought You might Like To Know About Animal Families

Input

- Story Map Narrative: Owl Moon

Guided Oral Practice

- Chants
- Farmer in the Dell: sentence patterning

Reading/Writing/Language Arts

- Expert Groups
- Team Tasks
 - Story Map
 - Read Around The Room
 - Add to the Walls
 - Comparative Input Chart

Closure

- Read Aloud:
- Process inquiry charts, poetry and input charts
- Home/School Connection #3

DAY 4:

Focus/Motivation

- Cognitive Content Dictionary with Signal Word: raptors
- Process Home/School Connection #3
- Super Scientist Awards: Raptors

Guided Oral Practice

- Chants

Reading/Writing/Language Arts

- Flexible Groups Reading
 - Clunkers and Links
- Team Tasks
- Team Evaluation



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Closure

- Read Aloud:
- Process inquiry charts, poetry and input charts
- Home/School Connection #4
- Journals

DAY 5:

Focus/Motivation

- Cognitive Content Dictionary with Signal Word: conservation
- Process Home/School Connection #4
- Read Aloud

Guided Oral Practice

- Chants/Poetry

Reading/Writing/Language Arts

- Flexible Reading Groups
- Team Tasks
 - Team Presentations

Closure

- Process inquiry charts, poetry and input charts
- Hand out "Frontloading" and "Reflection packets for field trip



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ANIMAL FAMILIES

Animal Families here, Animal Families there,
Animal Families, Animal Families everywhere.

Canids foraging,
Felines scratching,
Reptiles molting,
And Raptors swooping.

Animal Families from the desert,
Animal Families from the grasslands,
Animal Families from the Arctic,
And, Animal Families at Animal Ark!



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I'M A FOX

I'm an Arctic Fox, small and white,
Walking in the snow, I'm out of sight,
But in the Spring I turn brown
That happens so I'll match the ground!

I'm a f-o-o-o-x. I'm a f-o-o-o-x.

I'm a red fox, big and strong,
My tail is fluffy and very long,
I like to live with my own family,
We have our very own territory!

I'm a f-o-o-o-x. I'm a f-o-o-o-x.

I'm a Gray Fox, with a black-tipped tail,
I'm smaller than my brother, because he's a male.
I have hooked claws to help me climb,
High into trees, in no time!

I'm a f-o-o-o-x. I'm a f-o-o-o-x.



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CHEETAH BUGALOO

I'm a cheetah and I'm here to say
I live in open spaces and that's okay!
The prairie, thick brush, mountainous terrain,
Grasslands, savannas, areas of dense vegetation.

Zebras, elephants, wildebeests too,
Doing the Cheetah Bugaloo!

Cheetahs are the fastest animals on land,
We can go 75 m.p.h.-isn't that grand?
My claws don't retract, not one little bit,
So instead, when I see prey, I pounce on it!

Zebras, elephants, wildebeests too,
Doing the Cheetah Bugaloo!



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Big Book Text

Cover:

The Important Thing About Animal Families

By Shannon Longfield

Title Page:

The Important Thing About Animal Families

By Shannon Longfield

April 2011

Page 1:

The important thing about animal families is that they are found all over the world.

Animal families can be found on every continent in the world.

There are animal families in North America.

There are animal families in South America.

There are animal families in Africa.

There are animal families in Europe.

There are animal families in Asia.

There are animal families in Australia.

There are animal families in Antarctica.

But, the important thing about animal families is that they are found all over the world.



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Page 2:

The important thing about animal families is that they describe groups of animals that have similarities.

Animal families were developed by a Swedish scientist named Carolus.

Animal families are made up of a generic grouping called a genus.

Animal families are also made up of a specific grouping called species.

But, the important thing about animal families is that they describe groups of animals that have similarities.

Page 3:

The important thing about animal families is that they describe characteristics of a group of animals.

The Family Canidae describes all types of dogs, foxes, wolves, coyotes, and jackals.

The Family Felidae describes cheetahs, lions, bobcats, lynx, tigers, and leopards.

The Family Reptilia describes turtles, tortoises, lizards, snakes, and crocodilians.

The Family Falconidae describes falcons and caracaras.

The Family Strigidae describes both large and small owl species.

The Family Ursidae describes polar bears, brown bears, black bears, etc.

But, the important thing about animal families is that they describe characteristics of a group of animals.

Page 4:

The important thing about the Family Canidae is that it describes dogs.

There are 35 species of canids, including the fox, wolf, coyote and jackal.

They are medium-sized carnivores that run fast and live in open terrains.



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They are extremely adaptable and some hunt alone while others stay in packs.

They have large canine teeth and cheek teeth for crushing.

But, the important thing about the Family Canidae is that it describes dogs.

Page 5:

The important thing about the Family Felidae is that it describes cats.

The 37 species of felids are all carnivores.

They are very efficient predators with short jaws and sharp teeth.

They live in every type of habitat.

Their skeleton is especially designed for leaping.

But, the important thing about the Family Felidae is that it describes cats.

Page 6:

The important thing about the Reptile Family is that it describes cold-blooded animals.

There are turtles, tortoises, crocodilians, snakes, and lizards.

Most of them are carnivores except the Desert Tortoise.

Most are oviparous, meaning egg-laying.

The Desert Tortoise, like the ones at Animal Ark, is threatened by habitat conversion.

But, the important thing about the Reptile Family is that it describes cold-blooded animals.

Page 7:

The important thing about the Family Falconidae is that it describes falcons.

It also describes caracaras.



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They are grey or brown long-winged birds that have long tails

They are fast fliers that catch their prey with their feet.

They live in forests and open country nesting on the ground, ledges, or in trees.

Page 8:

The important thing about the Family Strigidae is that it describes owls.

They have brown, grey, and black marked plumage.

They have facial discs and many have “ear” tufts.

They live in the forest, grasslands, and desert habitats and nest on ledges, in trees, or in burrows.

They feed on fish, mammals, birds, and insects.

But, the important thing about the Family Strigidae is that it describes owls.

Page 9:

The important thing about the Family Ursidae is that it describes bears.

Bears are large, heavy-bodied carnivores with thick, powerful limbs.

They walk on the soles of their feet like humans.

All bears have large heads with small eyes and rounded ears.

Except for the polar bear, they are predominantly plant eaters.

But, the important thing about the Family Ursidae is that it describes bears.

Page 10:

The important thing about animal families is that they are found all over the world.

There are bears in North America.



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There are foxes in Europe.

There are reptiles in Australia.

There are birds in Antarctica.

But, the important thing about animal families is that they are found all over the world.

Expert Group: Desert Tortoise

Tortoises are vertebrates. That means they have backbones. Tortoises are part of the reptile family. They are cold-blooded, which means that their body temperature is the same as their surroundings. Tortoises have scaly skin and a shell to protect them.

Tortoises are herbivores, which means they eat plants. They use their beaks to eat grasses, wildflowers, and desert plants. Tortoises can live up to a year without water. Many people think that tortoises don't make any sound, but they communicate with hisses and grunts.



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Tortoises live in North America, Africa, and Asia. The desert tortoise lives in dry, sandy deserts. They burrow under the sand to protect themselves from the heat in the day and the cold at night. Tortoises lay eggs that they bury in the sand.

Expert Group: Kit Fox

The Kit fox is the smallest species of fox in North America. It is a mammal, which means it is warm-blooded. No matter where it is, its body temperature stays at 98.6 degrees – just like humans. Kit foxes have large ears that help them lower their body temperature and give them excellent hearing. They have grayish fur with a black-tipped tail.

The Kit fox is mostly nocturnal. It starts hunting shortly after sunset, mostly eating kangaroo rats, cottontail rabbits, jackrabbits, voles, hares, prairie dogs, insects, lizards, snakes, and ground-dwelling birds. Kit foxes are mainly carnivorous, but will eat fruits and vegetables if there is not enough prey available.



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Kit foxes live in arid climates, like desert scrub, chaparral, and grasslands. Kit foxes like to live in sagebrush. No wonder there is one living at Animal Ark. Nevada is full of sagebrush! Kit foxes are found at higher elevations from 1,300 to 6,200 feet. Again, Nevada is the perfect place for Kit foxes.

Expert Group: Canada Lynx

The Canada Lynx is a North American mammal of the cat family. Lynx have a dense silvery-brown coat, ruffed face, and tufted ears. It is larger than the bobcat and is twice as big as domestic cats.

The Canada Lynx mainly feeds on snowshoe hares. The population of the Lynx is dependent on that of the snowshoe hare since they make up 60%- 97% of their diet. In summer, Lynx will also hunt rodents, birds, and even deer. They hunt every one to two days and consume about 2 pounds of food each time.



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The Canada Lynx lives in northern forests across Canada and Alaska. There are also populations in Montana, Idaho, Washington, and Oregon.

Expert Group: Barn Owl

The Barn Owl is the most common owl and is one of the most widespread birds of all. The Barn Owl is a pale, long-legged, long-winged owl with a short, squarish tail. They are about 9"-18" long with a wingspan of 30"-43". They have a heart-shaped face with black eyes that distinguish them from other owls.

Barn owls hunt by flying low and slowly over open ground and hovering over spots to find prey. They also use fence posts to ambush prey. They feed primarily on small vertebrates, like rodents. They regurgitate the bones and fur after digesting the meat. These are called owl pellets and can be dissected to find rodent bones. Barn owls have a pointed and curved beak to grasp rodents and tear them apart.



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Barn owls live in open country such as farmland or grassland. They can be found almost anywhere in the world except polar and desert regions and some parts of Asia, Indonesia, and the Pacific Islands.

Expert Group: Black Bear

The American Black Bear is the smallest and most common species of bear. They mark their territory by embedding their claws into trees. Dominance is determined by which claw mark is the highest.

Black bears are omnivores, with their diet varying greatly based on the seasons. Up to 90% of their diet consists of vegetation. They eat young shoots from trees and shrubs in spring along with fruits, berries, and nuts. They are fond of honey and will gnaw through trees to get a hive full of honey.

Black bears live in forested regions in much of Canada and the United States. They are concentrated in the northeast, the northern Midwest, the Rocky mountains, the west coast and Alaska. There are approximately 200,000 black bears in North America and their population is only increasing. They are definitely not endangered!



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title:
author:
characters:
setting:
plot-what happens in the story
beginning:
middle:
end:



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Home/School Connection #1:

Discuss the physical characteristics of a black bear with someone at home. Name 3 things you talked about and draw a picture describing those things.



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Home/School Connection #2:

Describe the habitat of a Kit fox and draw a picture of where a Kit fox might live.



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Home/School Connection #3:

Talk to someone at home about the Animal Ark. What do they do there and why? What animals live there?



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Animal Ark Families Yes Ma'am

By Shannon Longfield

Is that a Canid?

Yes Ma'am!

Is that a Canid?

Yes Ma'am!

How do you know?

It is a carnivore.

How do you know?

It runs swiftly.

What are some examples?

Coyotes, foxes and wolves.

Is that a Feline?

Yes Ma'am!

Is that a Feline?

Yes Ma'am!

How do you know?

It's an efficient predator.

How do you know?

Their bite is lethal.

What are some examples?

Cheetah, bobcats and tigers.

Is that a Reptile?

Yes Ma'am!

Is that a Reptile?

Yes Ma'am!

How do you know?

It is cold-blooded.

How do you know?

It is oviparous.

What are some examples?

turtles, lizards and snakes.

Is that a Raptor?

Yes Ma'am!

Is that a Raptor?

Yes Ma'am!

How do you know?

It can fly.

How do you know?

It eats rodents.

What are some examples?

Falcons, caracaras and owls.



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Animal Ark: Animal Families QUIZ

1.