First Grade
Unit B: LIFE SCIENCE
Chapter 3: Needs of Plants and Animals
Lessons 1 to 3
1. **Living**: Things that are alive, grow, and change. Plants and animals are living things.

2. **Air**: A gas that plants and animals need to live. You cannot see air.

3. **Plants**: A living thing that cannot move around on its own. Many plants grow in a forest.

4. **Sun**: A big ball of hot gas that shines light on Earth. Light from the sun (sunlight) warms the land, water and air. Plants need sun to grow.

5. **Water**: Liquid that plants and animals need to live.
Opening Activity: Discuss Living and Non-Living Things
Let’s Read About Living Things

Living Things are alive. Plants and animals are living things. Plants and animals grow and change. Living things have needs like food and water.

Sample questions for student response:
What are examples of living things? What are examples of non-living things?
Living: Things that are alive, grow, and change. Plants and animals are living things.
Plants: A living thing that cannot move around on its own. Many plants grow in a forest.
Soil: Sometimes called dirt, clay or sand. Soil is the layer of earth made up of particles (small parts) of rocks, minerals and other nutrients (once-living decomposing material).
Air: A gas that plants and animals need to live. You cannot see air.
Sun: A big ball of hot gas that shines light on Earth. Light from the sun (sunlight) warms the land, water and air. Plants need sun to grow.
Water: Liquid that plants and animals need to live.
What do plants need?

Student Response:
Plants are living things that need ______, ________, ________, and ________.
Water Cycle: The way water moves around the Earth.
Water Cycle
Tune: She'll Be Coming Around the Mountain (Hand Motions in Yellow)

Water travels in a cycle, yes it does (X 2) (use pointer finger to make a big circle)

It goes up as **evaporation** (moves hands up to the sky)

Forms clouds as **condensation** (make a cloud overhead with arms)

Then comes down as **precipitation**, yes it does! (sprinkle with fingers while bringing arms down in
Parts of a Plant

- **Flower**: Produces seeds.
- **Leaf**: Uses sunlight and chlorophyll to convert CO2 and water to sugar. Gives off water and oxygen.
- **Stem**: Supports leaves, transports water and nutrients.
- **Fruit**: Protects the seed and helps with seed dispersal.
- **Roots**: Supports plant and takes in water and nutrients.
- **Seed**: Produces new plant.

Ms. Shapiro
Vocabulary List
Unit B Life Science Chapter 3
Lessons 2  How do plants get what they need?

1. **Roots**: The parts of a plant that hold the plant in the ground and take in water and nutrients from the soil.

2. **Nutrients**: Materials that living things need. Plants can get nutrients from the soil.

3. **Leaves**: The parts of a plant that use sunlight, air and water to make food for the plant.

4. **Light**: Something a plant needs to live. Plants may get light from the sun.

5. **Soil**: The top layer of the earth’s surface.
The Plant Part Song
Sung to the Tune of The Farmer in the Dell – Written by Mrs. Jones

The seed makes a plant.
The seed makes a plant.
With soil and rain and sunny days,
The seed makes a plant.
The **roots** find the water.

The **roots** find the water.

With soil and rain and sunny days,
the **roots** find the water.
The Plant Part Song

The **stem** holds it up.
The **stem** holds it up.
With soil and rain and sunny days,
the **stem** holds it up.
The **leaves** make the food.
The **leaves** make the food.
With soil and rain and sunny days, the **leaves** make the food.
The flower makes the fruit.
The flower makes the fruit.
With soil and rain and sunny days, the flower makes the fruit.
The Plant Part Song

The **fruit** holds the seeds.
The **fruit** holds the seeds.
With soil and rain and sunny days,
the **fruit** holds the seeds.
Many **plants** have the same parts. Most plants have **roots**. Roots hold a plant in the **ground**. Roots take in **water** and **nutrients** from the **soil**. Plants then make their own food. **Leaves** of green plants make food. The **stem** takes water and nutrients from the roots and carries them to the leaves. Green leaves take in **air** and **energy from sunlight**. Green leaves use energy from sunlight, air, and water to make food.
What are the parts of a plant? How do the parts help the plant meet its needs?

Student Response:
A plant has ________. The ________ help the plants to __________.
Can You Roar Like a Lion?

Vocabulary List
Unit B Life Science Chapter 3
Lessons 3 What do animals need?

1. **Animals**: A living thing that moves about. A giraffe is an animal with a long neck.

2. **Mammals**: Animals that are warm-blooded; *most* don’t lay eggs. Example: Bears

3. **Reptiles**: Animals that are cold-blooded; lays eggs on land. Example: Snakes

4. **Amphibians**: Animals that are cold-blooded; lays eggs in water. Example: Frogs

5. **Birds**: Animals with feathers, wings, bill, two legs, and lay eggs. Examples: Seagulls, Penguins

6. **Fish**: Animals with scales or bony plates, fins, and live in water. Example: Goldfish
Animals: A living thing that moves about. Example: A giraffe is an animal with a long neck.
What do animals need?

Animals are living things that need an environment that provides for...

1. Air
2. Water
3. Food (Energy)
4. Shelter (Safe Place)
What do animals need?

Student Response:
Animals are living things that need ________, ________, ________, and ________.
Species: Five Types of Animals

1. Mammals (warm-blooded; most don’t lay eggs)
2. Reptiles (cold-blooded; lays eggs on land)
3. Amphibians (cold-blooded; lays eggs in water)
4. Birds (feathers, wings, bill, two legs, lay eggs)
5. Fish (scales or bony plates, live in water, fins)
**Mammals**

Mammals are animals that are warm blooded. Most mammals do not lay eggs.
Reptiles and Amphibians

**Reptiles** are animals that are cold blooded. Reptiles lay eggs on land. Examples are turtles and snakes.

**Amphibians** are animals that are cold blooded. Amphibians lay eggs in the water. Examples include frogs.
Birds have feathers, wings, a bill, two legs, and lay eggs. Most birds can fly but not all birds. Penguins and ostriches are birds that cannot fly.
Fish

Fish have fins, scales or bony plates and live in water. However, some animals that live in the water are not fish but mammals. Sharks are fish but dolphins and whales are mammals.
Classifying Activity (i.e., Thinking Map: Tree Map)

Can you think of animals that are...

1. Mammals
2. Reptiles
3. Amphibians
4. Birds
5. Fish
Plants and Animals are living things!
Living Things have to meet their needs in order to grow, change, and survive.
Let’s Take a Closer Look at Plants
Sunflower: From Seed to Plant
What do sunflowers need to grow?

Like most plants, sunflowers need...

1. Water
2. Sunlight
3. Air
4. Soil (nutrients)
The Parts of a Sunflower Plant

A sunflower has many parts. Each part plays an important role in growing. The parts are…

1. Flower (fruit/seeds)
2. Leaves
3. Stem
4. Roots
5. Seeds
Sunflowers begin as seeds.

Seeds are planted in nutrient rich soil and given water. Some seeds are planted deep and others shallow. Seeds are sometimes protected with a coating to keep the worms and other underground pests from eating the seeds.
Different Soils (dirt)
Soil (Dirt)

Soil covers the earth. Soil types such as sand, clay and silt cover the earth.

Soil is made up of broken down (weathered) rock particles and decaying plants and animals such as leaves and worms.

Soils that lack nutrients are not good for growing plants.
Sunflower seeds grow roots.
Roots act like a sponge underground. The roots “soak” up the nutrients and push out a sprout.
The **stem** grows from the sprout and **acts like a straw** to carry the nutrients.
The leaves of a plant act like sunglasses. They use light for photosynthesis.
Leaf Making Food for Plant

Diagram # 1

- Sunlight
- Carbon Dioxide
- Water
- Food

Diagram # 2

- Water + Light = Chemical Energy
- Chloroplasts trap light energy
- Carbon dioxide enters leaf through stomata
- Sugar leaves leaf

Chemical Energy + Carbon Dioxide = Sugar
photosynthesis = Energy (Plant Food)
The sunflower will grow more seeds. Birds will eat and spread the seeds.
First Grade
Unit B: LIFE SCIENCE
Chapter 4: Environments
Lessons 1 to 4
Plants and animals live together in different places. Plants have different parts and animals have different body parts that help them live in their environment. Plants and animals have needs that they must meet to live, grow and change. Plants and animals need air and water and sunlight. Plants make food and animals eat food. Plants and animals depend on each other for food and/or shelter. Some animals eat plants, some eat meat and some eat both. We can infer what some animals eat by looking at their teeth.
1. **Environment**: A place where plants and animals live. An environment has (1) food, (2) water, and (3) air.

2. **Habitat**: The environment where an animal lives.

3. **Features**: Special (unique) body parts that an animal has that it uses to live. Example: An elephant has a large trunk that it uses like an arm or hand to pick things up.

4. **Hooves**: The hard parts of the feet of some animals. A sheep has hooves to climb rocks.

5. **Claws**: The sharp, curved nails of some animals. The bear uses its claws to climb trees.
Have you ever been to the zoo?

(Drawing on Prior Knowledge)

Animals live at the zoo. Zoologists and others re-create environments or habitats for these animals to live. Zoos help people learn about, protect and see animal life up close. Most animals live in their “natural” environments where their needs are met.
Environment: A place where plants and animals live. An environment has (1) food, (2) water, and (3) air.
Habitat: The environment where an animal lives.
Animals: Alike and Different
Many have unique traits or **features**.
Many animals have unique “traits” that help them to survive. A kangaroo has a pouch to carry and protect her baby. Black bears have sharp claws that allow them to climb trees. Penguins have rubbery wings that are made for swimming not flying. Skunks have the ability to spray a stinky pheromone (smell) to ward off predators. Rabbits move their ears to communicate with one another. Owls have night vision as they are nocturnal.
Features: Special (unique) body parts that an animal has that it uses to live. Example: An elephant has a large trunk that it uses like an arm or hand to pick things up.
hooves: The hard parts of the feet of some animals. A sheep has hooves to climb rocks.
Claws: The sharp, curved nails of some animals. The black bear uses its claws to climb trees.
Camouflage

Some animals have colors that allow them to “hide” or blend in with an environment. A chameleon can even change its colors to match its surrounding environment.
Environments
Let’s read about environments:

An environment is a place where plants and animals live. An environment has air, food, water, and shelter. An environment gives plants and animals what they need to live. Three environments where animals live are the forest, the desert and the ocean.

1. What is an environment?
2. What are some of the things you would find in an environment that plants and animals need to live?
3. Can you name three or more animal environments?
4. Who or what lives in a forest, desert or the ocean?
What is an environment?
What are three environments?

Student Response:
An environment is where______ and_______ live. Plants and animals live in ________, ________, and ______. But there are other similar or different environments, too!
Animals live on land and / or water
Four Environments

Environments include (1) forests; (2) deserts and (3) oceans. Some animals live in the (4) arctic.
Vocabulary List

Unit B Life Science Chapter 4 Lesson 2: What lives in a forest?

1. **Forest**: An environment that has many trees and other plants.

2. **Nest**: A shelter that some animals build. Some birds build nests in trees.

3. **Deciduous Trees**: Trees that lose their leaves in the winter.

4. **Coniferous Trees**: Trees with needle-like leaves and spread their seeds through cones. Most are evergreens.

5. **Rainforest**: Forest near the equator (center of the earth) with lots of rainfall.
A forest is an environment with big tall trees and lots of plants. Black Bears, Deer, Moose, Opossums, Owls and Porcupines are some examples of animals that live in forests.
Grasslands & Mountains

Some animals live in “forest”-like environments such as grasslands and mountains. Giraffes live in grasslands. Bighorn Sheep live in the mountains.
Forest: An environment that has many trees and other plants.
Shelter (Nests)

A shelter is a safe place for animals to live. Some animals build nests for shelters while others live in caves, dens, trees, bushes, burrows (underground holes), shells, and even other animals (e.g., fleas “nest” in the fur of animals).
Nest: A shelter that some animals build. Some birds build nests in trees. Other animals like rabbits build nests on or in the ground.
Deciduous Trees:
Trees that lose their leaves in the winter.
Coniferous Trees: Trees with needle like leaves and spread their seeds through cones. Most are evergreens.
Winter Forests: Which is which?
Rainforest: Forest near the equator (center of the earth) with lots of rainfall.
Video Opportunity

Scott Foresman
Discovery Channel School

Student DVD

Grade 1 LIFE

SCIENCE:

Temperate Rain Forests

(7 minutes)

Description: Travel to Olympia National Park in Washington state and discover the wide range of plants and animals that thrive in one of the few temperate rain forests in the world.
Vocabulary List
Unit B Life Science Chapter 4 Lesson 3: What lives in an ocean?

1. Ocean: An environment that is a large body of salt water. Also known as the sea.
2. Land: The part of the Earth’s surface not covered in water.
3. Gills: A body part a fish uses to get air. The fish has gills to breathe in water.
4. Lungs: A body part used to get air. Sea Mammals such as whales have lungs and must come to the surface regularly to breathe in oxygen from the air.
An ocean is a large body of salt water. The earth has four major oceans: (1) Atlantic; (2) Pacific; (3) Indian; and the (4) Arctic.
Life in the Ocean

- Dolphins
- Whales
- Sharks
- Sea Horses
- Octopuses and Squids
- Manatees
- Walruses
Ocean: An environment that is a large body of salt water. Also known as the sea.
Land: Part of the Earth’s surface not covered in water. Land surrounded by water is an island.
Gills: A body part a fish uses to get air. The fish has gills to breathe in water.
**Lungs:** A body part used to get air. Sea Mammals such as dolphins have lungs and must come to the surface regularly to breathe in oxygen from the air.

**ANATOMY OF A DOLPHIN**
(*Delphinidae*)

- Blow Hole
- Skull
- Melon
- Eye
- Brain
- Scapula
- Lung
- Kidney
- Spinal Column
- Dorsal Fin
- Blubber
- Flukes
- Median Notch
- Larynx
- Liver
- Intestines
- Stomach
- Anus
- Pelvis
- Teeth
- Esophagus
- Flipper
- Heart
How do animals “breathe” air in the ocean?

Some fish and other sea life have gills to breathe in the water. Others must come to the surface to get air. An octopus lives most of its life deep in the ocean where as a dolphin who breathes through its lungs and a blowhole must surface for air.
Blubber: The fat of a whale or other animals. Blubber keeps a whale warm in the ocean.
A Marsh is a Wetland Environment

Most environments include land and water and animals and plants. Even oceans have “land” at the bottom. Ponds, lakes, swamps and marshes are “wetland” environments where plants and animals live together and need one another to survive. In a marsh, tall grass grows. Crickets, frogs, snakes and hawks are some of the animals that live in a marsh. When people live near wetlands they must be careful not to upset this natural environment.
Animals living in a marsh.
1. **Desert**: An environment that is very dry.
2. **Cactus**: A plant that grows in the desert. A cactus has sharp spines.
3. **Dry**: Something with little water, rain or moisture. A desert is dry. Wet is the opposite of dry.
4. **Temperature**: How hot or cold something is. You can measure the temperature of air. A desert is hot (day) but can also be cold (night).
5. **Thermometer**: A tool that measures temperature. The numbers on a thermometer show the temperature.
Deserts

A **desert** is an environment that is very dry. It gets lots of sunlight and little rain. Coyotes, rattlesnakes, and vultures are some of the animals that live in deserts. A **cactus** is a plant that lives in desert environments.
Desert: An environment that is very dry.
Cactus: A plant that grows in the desert. A cactus has sharp spines.
Dry: Something with little water, rain or moisture. A desert is dry. Wet is the opposite of dry.
Temperature: How hot or cold something is. You can measure the temperature of air. A desert is hot (day) but can also be cold (night).
Thermometer: A tool that measures temperature. The numbers on a thermometer show the temperature.
The Arctic

Arctic environments are found near the top (north pole) and bottom (south pole) of the earth. Arctic weather is cold and icy. Much of the land frozen or rocky. Animals that live there have adapted to this environment.
Arctic Life
Animals: Endangered?

Because animals must compete with humans and one another for their needs, many animals are at risk of extinction or endangered. That is, without care, these animals will cease to exist the way dinosaurs have become
What environment would you find these animals?

A.

B.
What environment would you find these animals?

C.

D.
What environment would you find these animals?

E.

F.
What environment would you find these animals?

G. Zebra

E. Beaver
What environment would you find these animals?

H.

I.
Animals live throughout the world!
First Grade

Unit B: LIFE SCIENCE

Chapter 5:
Plants and Animals Living Together

Lessons 1 to 6
You know that different plants and animals live together in different places. You know that plants have different parts and animals have different body parts that help them live in their environment. You know that plants and animals have needs like water and air to live. You know that plants make food and animals eat food. You know that plants and animals depend on each other for food or shelter. You can infer what some animals eat by looking at their teeth.
1. **Shelter**: A shelter is a safe place for animals to live. Some animals use plants for shelters, building nests or living trees.
2. **Food**: Something animals need to live. Bears eat fish for food. Some insects eat plants for food.
3. **Insect**: A small animal that has six legs and a hard covering. Some insects eat plants.
4. **Fur**: A body covering for animals such as a bear or lion.
5. **Seeds**: A part of a plant.
6. **Scat**: Animal waste.
7. **Wind**: Moving air.
8. **Body Coverings**: Animals’ insides are covered or otherwise protected in fur, feathers, scales, shells, or skin.
9. **Food Chain**: The way food passes from one living thing to another.
10. **Diet**: What an animal eats.
11. **Omnivore**: An animal that eats both plants and meat.
12. **Carnivore**: An animal that eats mostly meat.
13. **Herbivore**: An animal that eats mostly plants.
14. **Predator**: An animal that hunts for other animals to eat.
15. **Prey**: An animal that must protect itself from other animals (predators) that want to eat it.
16. **Marsh**: A wetland environment. Many plants and animals live in a marsh.
17. **Teeth**: Part of an animal used to eat and chew. Some animals have flat teeth while others have pointed teeth.
18. **Flat Teeth**: Teeth that are smooth and used for chewing.
19. **Pointed Teeth**: Teeth that are sharp and used for cutting and tearing.
## Vocabulary

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- Shelter: Protection of the body.
- Food: Source of nourishment for living things.
- Insects: Small animals and insects that feed on plants.
- Fur: Soft, protective covering of animals.
- Seeds: Tiny plant structures that contain a seedling.
- Scat: Animal waste material.
- Wind: Natural force that can spread seeds.
- Body Coverings: Protective layers of animals.
- Food Chain: Sequence of organisms through which nutrients pass.
- Diet: Main food source of an organism.
- Omnivore: Animal that eats both plants and animals.
- Carnivore: Animal that eats only meat.
- Herbivore: Animal that eats only plants.
- Predator: Animal that hunts and feeds on other animals.
- Prey: Animal that is hunted and eaten by another animal.
- Marsh: Wetland ecosystem where living things get food.
- Teeth: Structures in animal mouths used for chewing and biting.
Chapter 1: How do plants and animals need one another?

Plants and animals need one another to live.

A shelter is a safe place where an animal lives.

Animals use plants and other animals for shelter and nests.

1. Can you name shelters where animals live?
2. What do animals use to make nests?
Shelter: A shelter is a safe place for animals to live. Some animals use plants for shelters, building nests or living trees.
Shelter

A shelter is a safe place for animals to live. Some animals build nests for shelters while others live in caves, dens, trees, bushes, burrows (underground holes), shells, and even other animals (e.g., fleas “nest” in the fur of animals).
Insect: A small animal that has six legs and a hard covering. Some insects eat plants.
How do plants and animals need one another?

1. Why do plants and animals need one another?
2. What is a shelter?

Student Response:
1. Plants and animals need one another to ____.
2. A shelter is...
Chapter 2: How do animals help to spread seeds?

Seeds need sunlight, air, water and nutrients from the soil. In order for seeds to survive, they must keep being planted. Animals and nature help seeds to keep growing. Animals may bury or carry seeds in fur or in scat. The wind and rain can also carry seeds to new places. New plants may grow when carried to another place.

1. What do seeds need to grow?
2. How do seeds get carried to other places?
3. Do humans help to spread seeds?
**Body Coverings**: Animals’ insides are covered in skin and/or otherwise protected by fur, feathers, scales, or shells.

There are different types of fur.

Fur can be thick and straight. What animal is this?
Fur: A body covering for animals. Lions, tigers and bears are covered in fur.
Fur helps to spread seeds.

Animals help to carry seeds so plants can survive elsewhere (i.e., grow in many places). For example, seeds might stick to the fur on a bear and as he moves through the forest he carries or transports seeds.
Seeds: A part of a plant.
Scat: Animal waste. This bear scat contains berry seeds.
Wind: Moving air. The wind helps to move seeds.
How do plants and animals need one another?

1. How do animals carry seeds from place to place?
2. How else do seeds get carried?

**Student Response:**

1. Animals carry seeds in their ______.
2. Seeds can also be carried by the ______.
Chapter 3: What is a food chain?

A **food chain** describes the process of how food passes from one living thing to another. Animals eat plants or other animals for food. As such, all plants and animals are connected and depend upon each other through food chains.

1. What is a food chain?
2. Describe a simple food chain?
3. Are humans part of the food chain?
FOOD CHAIN

- Sun
- Plant
- Grasshopper
- Eagle
- Snake
- Frog
Food Chain: The way food passes from one living thing to another.
Food Chain

Animals need food to live. What they eat is called their **diet**. A bear eats fish and berries for food. A **Food Chain** is the way food passes from one living thing to another. Plants and animals depend on each other through food chains. Example: A fox eats a bird. The bird ate a lizard. The lizard ate an insect. The insect ate a plant. Because animals depend on one another for food there are **predators** and **prey**.
Diet: What an animal eats. A koala’s diet is mostly leaves from eucalyptus trees.
What do animals eat?

Herbivores eat plants. That is, flowers, plants, leaves, stems, roots, seeds, nuts, fruits, vegetables. A rabbit is an example of an herbivore. Some humans are herbivores — we call them vegetarians or vegans.

Carnivores eat (mostly) meat. That is, other animals. African Lions are carnivores.

Omnivores eat both plants and meat. Bears are omnivores. Most humans are omnivores as we eat meat (e.g., chicken nuggets) and plants (e.g., salad).
Teeth (Animal)

Teeth: Part of an animal used to eat and chew. Some animals have flat teeth while others have pointed teeth.

- **Flat Teeth**: Teeth that are smooth and used for chewing.
- **Pointed Teeth**: Teeth that are sharp and used for cutting and tearing.
Animal Traits: Teeth

An animal’s teeth help scientists know what an animal eats. Animals with sharp, pointed teeth eat other animals (carnivores) whereas animals with flat, dull teeth are plant eaters (omnivores).
Herbivore: An animal that eats mostly plants. Zebras graze on grass and plants.
Carnivore: An animal that eats mostly meat.
Omnivore: An animal that eats plants and meat. Raccoons eat plants, worms, insects, and fish.
Predator: An animal that hunts for other animals to eat.
Prey: An animal that must protect itself from other animals (predators) that want to eat it.

predator (lion) and prey (zebra)
What’s for dinner?
How do plants and animals need one another?

1. What is a food chain?
2. Who is part of the food chain?

**Student Response:**
1. A food chain is a ________ where food passes from one living thing to another.
2. ________, ________, and ________ are all part of the food chain.
Chapters 4 & 5: How do living things get food in a desert or marsh?

A **food chain** are the process in which living things whether in a forest, desert, ocean or arctic. A marsh is a complex environment (or ecosystem) in which plants and animals depend on one another.

1. How do living things get food in the forest, desert, ocean or arctic environment?
2. What might happen if different animals are introduced to a different environment?
A Marsh is a Wetland Environment

Environments include land and water and animals and plants. Ponds, lakes, swamps and marshes are “wetland” environments where plants and animals live together and need one another to survive. In a marsh, tall grass grows. Crickets, frogs, snakes and hawks are some of the animals that live in a marsh. When people live near wetlands they must be careful not to upset this natural environment.
Animals living in a marsh.
Food for Marsh Animals

Activity: Food Chain Thinking Map (Flow Map / Sequence)
Food Chains in Marshes & Deserts & Other Environments

1. Describe a food chain in a marsh.

2. Read about how animals get food in a desert, the arctic or a forest.

Student Response:
Use “order” words to sequence the food chain: First, Next, Then & Last
Animal Traits Study: Body Coverings

Animals are covered with fur, feather, shells, scales or skin. (Note: Song & Thinking Map)
A lion has fur.
An ostrich has feathers.
A lizard has scales.
A turtle has a shell.
An elephant has skin.
Let’s Take a Closer Look at Animal Body Coverings!
Do you know what things are inside your body?

- Brain (Skull)
- Heart
- Bones
- Lungs
- Muscles
- Stomach
- & more!
There are many things inside our bodies that need protection. Skin covers our body to keep these things protected.
Animals have body coverings, too!
Animal Body Coverings

1. Fur
2. Feather
3. Scales
4. Shells
5. Skin
Fur, Feather, Scales, Shells or Skin

(Song – Sing & Act Out)

CHORUS:
Fur, Feather,
Scales, Shells,
or Skin,
What do they wear
to keep their insides in
(x2)

Note: Repeat chorus after every two verses.
A bear, a him or a her, is always dressed up in fur.

**One Side: Definition**

**Fur** is a body covering found on many animals that can also be described as hairy. Fur helps to keep animals warm. Bears are covered in fur. Fur can be thick or thin. Can you think of other animals that are covered in fur?
And birds never need sweaters ‘cause their all dressed up in feathers 🎵

Feathers are a body covering that we find on many birds and feathers help birds to fly. How many birds can you name that feathers? For example: This is a Peacock. A Peacock has feathers.
And fish right down to their tales, are always dressed up in scales.

**Scales** are the body coverings of many fish, reptiles like snakes and amphibians like frogs. What do you think scales do for fish and other reptiles and amphibians?
A turtle you know so well, it’s always wearing a shell.

**Shells** are hard body coverings that may be outside or attached to the body. Shells help to protect animals. Turtles have shells. Can you think of other animals that have a shell?
And now take a look at you from your head to your shoe.
Yes, you right up to your chin are all covered up in skin.

Skin is a body covering that protects the insides of animals and humans. Skin may be covered in fur or feathers or have scales or a protective shell. Elephants have
Fur, Feather, Scales, Shells, or Skin?

There are different types of fur.

Fur can be thick and straight. What animal is this?
A ______ has ___________.

- Fur, Feather, Scales, Shells or Skin?
A ______ has a ______________.

- Fur, Feather, Scales, Shells or Skin?
An ______ has ______________.

• Body Coverings: fur, feathers, scales, shells or skin?
The ______ have ______________.

- Fur, Feathers, Scales, Shells or Skin?
_______ have ______________.

• Fur, Feather, Scales, Shells or Skin?
Language Games
– Focus on Verbal (Oral) Language

**Language Games:**
Students will sort a group of animal picture cards by body coverings:

– Fur
– Feather
– Scales
– Shells
– Skin

**ELD Flash Cards (Avenues)**
Focus on Verbal (Oral) Language

Goal: Students practice using the targeted vocabulary using sentence frames provided by and modeled by the teacher.

Teacher
• What does the picture show?

Student (Sentence Frame)
The picture shows a (an) ________.
A (an) _________ is covered in __________.

Examples:
The picture shows an elephant. An elephant is covered in skin.
Language Games
-Focus on Reading/Writing

Thinking Map:
Tree Map (Classify)

<table>
<thead>
<tr>
<th>CIRCLE MAP</th>
<th>TREE MAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOR DEFINING IN CONTEXT</td>
<td>FOR CLASSIFYING AND GROUPING</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BUBBLE MAP</th>
<th>DOUBLE BUBBLE MAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOR DESCRIBING USING ADJECTIVES</td>
<td>FOR COMPARING AND CONTRASTING</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FLOW MAP</th>
<th>MULTI-FLOW MAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOR SEQUENCING AND ORDERING</td>
<td>FOR CAUSES AND EFFECTS</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BRACE MAP</th>
<th>BRIDGE MAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOR ANALYZING WHOLE OBJECTS AND PARTS</td>
<td>FOR SEEING ANALOGIES</td>
</tr>
</tbody>
</table>

WRITING:

- A ______ has fur.
- A ______ has feathers.
- A ______ has scales
- A ______ has a shell.
- A ______ has skin.
What body covering do you see?

I see __________.

Question A:  

Question B:
What body covering do you see?

I see __________.

Question C: ____________________________

Question D: ____________________________
What body covering do you see?

I see ___________.

Question E: ___________.

Question F: ___________.

[Image of a horseshoe crab] [Image of a textured surface]
Animal Life Cycles (ELD Integration)

Connect to Prior Knowledge

The Human Life Cycle:
Birth, Growth, Reproduce, Death
What is a life cycle?

Most animals have very simple **LIFE CYCLES**. These animals have four “**stages**.” That is...

1. They are born either alive from their mother or hatched from eggs. The young are typically similar to the parents, just smaller.
2. They grow up.
3. They have babies (or reproduce).
4. They die.

However, some animals have life cycles that are more complex (i.e., the opposite of simple). They go through an incomplete or complete **METAMORPHOSIS**.
Life Cycles

Butterfly (Insect)

Butterfly Life Cycle

Frog (Amphibian)
Life Cycles

Chicken (Bird / Feathers)

Turtle (Shell)
Life Cycles

Dolphin (Mammal / Ocean)

- Pregnant dolphin
- Baby is born
- The dolphins mate
- The calf grows
- Baby dolphin is called a calf

Plant (Fruit Tree)

- Pits from fruit
- Fall to ground & become seeds
- Mature tree with fruit that contain seeds
- Seed
- Seed with leaves
- Growing tree
- Seedling
- Small tree
Life Cycle of a Butterfly

- Metamorphosis
Butterflies
Hatch, hatch little egg, You’re so very small. Teeny tiny caterpillar, I can't see you at all.

Crawl, caterpillar, crawl, Munching on a leaf. Crawling, munching, crawling, munching, Eat and eat and eat.

Form, form chrysalis, You’re a different shape; Hanging by a silken thread Until you can escape.

Rest, rest, chrysalis While you change inside; Now at last your time has come To be a butterfly.

Stretch, stretch, pretty wings, It's a special day; Soon they will be strong enough For you to fly away.

Fly, fly, butterfly, Fly from flower to tree; Find a place to lay your eggs So they can grow and be...

...a BUTTERFLY!
Butterfly Life Cycle

STAGES

• Eggs
• Caterpillar
• Chrysalis
• Butterfly
Butterfly Life Cycle

1. A butterfly lays ________.
2. A ___________ hatches.
3. The caterpillar makes a ________.
4. A ___________ is born.
Life Cycle of a Frog

Metamorphosis
**Five Tiny Tadpoles** (Chant)

Five tiny tadpoles
With tails so long.
Out grow their legs.
Look!
Now their tails are gone.
Now they’re frogs
Singing out a song!

How to draw a Frog:
There are many species (kinds) of frogs
The Life Cycle of a Frog

There are three major stages of a Frog’s Life Cycle. During these stages the frog goes through a big change or *metamorphosis* as do butterflies.
The 3 Stages of the Frog’s Life Cycle

Stage 1: Egg

Stage 2: Tadpole

Stage 3: Adult Frog
Life Cycle of a Frog (illustrated)
Life Cycle of a Frog (photographs)

- Eggs
- Tadpole
- Froglet
- Frog
Stage 1: Eggs

Female frogs lay hundreds or thousands of eggs depending on the species. Frog eggs are usually laid in water such as a puddle, lake or pond. The eggs are protected by a jelly-like substance, which keeps them together and makes it difficult for fish to eat as they are slippery to grasp.
Tadpoles hatch from the eggs (or larvae) about 21 days after they are laid. At first the tadpoles have gills and a fin like a fish. As they swim, eat and grow legs, the gills are replaced with lungs. Tadpoles become ”froglets” a cross between a tadpole and a frog.
Tadpoles (Metamorphosis)

The tadpole “stage” includes “morphing” or changing. The tadpole will begin with gills, swimming and breathing like a fish, then developing lungs and legs to act more like a frog before emerging with four legs onto land.
Tadpoles

With gills

With back legs
A tadpole becomes a “froglet” – that is, it looks like a young adult frog, but it still has a small tail. A froglet has four legs and breathes with lungs.
Stage 3: Adult Frog

About 12 weeks after the egg was laid, a fully developed frog with lungs, legs and no tail emerges from the water. This frog will live mostly on land, with occasional swims. The young frog matures to adulthood over 2 to 4 years.
A Frog’s Life Cycle

Do you know how frogs grow? They go through many changes from an egg to a frog.

**Steps of a Frog’s Life Cycle**

1. Eggs
2. Tadpole
3. Tadpole with hind legs
4. Tadpole with front legs
5. Froglet
Frog Life Cycle

1. Mother frog lays ________.
2. ________ hatch. They have tails.
3. The tadpoles lose their tails and grow ________.
4. The ________ becomes a frog!