Batty Bats

Focus — bat habitat, anatomy, and activity
Hello and Name Songs
Finger play:
Bats have wings (arms to side)
And bats can fly (flap)
Out at night (stretch)
Up in the sky! (up)

• First 15 minutes—Gathering:
  • Read bat books, color bat pictures, compare bat wings to hands.
  • Try on paper bag bat wings.
  • Do the bat songs and fingerplays.
  • Have bats on straws to act out 5 little bats.
  • Have a large carton for a cave that the children can crawl into. Hang bats from the top.
Learning
Bats are mammals that fly. Most bats live in colonies. A colony has lots of bats. Colonies can be in caves or under bridges, in houses, trees, deserts or grasslands. Nursery colonies have mommies and babies. Bachelor colonies have daddies. Bats’ wings are like hands. Bats are nocturnal and sleep during the day and hunt by night. They hang upside down by their toes. They use sound and echoes to know where to go. Bats catch insects and help us by eating harmful insects. Bats make guano which is good fertilizer. Read Biggety Bat: Hot Diggety, It’s Biggety! by Ann Ingalls or Hello, Bumblebee Bat by Darrin Lunde. Sing Sleeping Bats and Bats in the Bat Cave.

Second 15 minutes—Walk
Hang bats in the trees for children to find. Look for insects bats might eat.

Third 15 minutes—Make and take
Have the children glue black bats and insects on black paper or cover a toilet issue roll with black paper and let the children glue on wings, ears and eyes.

Fourth 15 minutes—Snack
Make a pretzel bat with two pretzels wings and a chocolate kiss or mini TWIX bar for the body, and two white chips for eyes.

Closing
Tape bat stickers on a paper “cave”. Review the song, story and fingerplay, sing Good-bye songs, pass out handouts and preview the next class.
Outcomes Batty Bats

**Targets**
- Bats are mammals.
- Bats have wings and can fly.
- Bats sleep during the day.
- Bats help us by eating harmful insects.

**Extensions**
- Bat wings have bones like hands.
- Bats live in many kinds of habitats.
- Mommy and baby bats live in nursery colonies.
- Boy bats live in bachelor colonies.
- Bats make guano which is a good fertilizer.
Thinking about outcomes: Batty Bats

<table>
<thead>
<tr>
<th>Vocabulary</th>
<th>Concepts</th>
<th>Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bat, wing, fly,</td>
<td>Bats are mammals, fly at night and sleep during the day, live in colonies, eat insects</td>
<td>Assembling bat art, imitating motions in the fingerplay, participating in bat song</td>
</tr>
<tr>
<td>colony, mammal,</td>
<td></td>
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<tr>
<td>nocturnal, guano</td>
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<tr>
<td>Music and Story</td>
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<tr>
<td>Act out actions</td>
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<tr>
<td>in <em>Sleeping Bats</em> and <em>Bats in the Bat Cave</em>, and attend to bat poem.</td>
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<tr>
<td>Art/ Snack</td>
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<tr>
<td>Attach bat wings to bat body; attach pretzels or licorice wings to candy body.</td>
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<tr>
<td>Walk/Explore</td>
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<tr>
<td>Find toy bats in trees on the walk.</td>
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</table>
A Bear’s Lunch

Focus— Animals eat different foods.

Hello and Name Songs

Finger play:
Bears like berries (pick berries low)
Bears like meat (chew)
Bears like insects (flutter hands)
Bears like to eat! (clap)

• First 15 minutes—Gathering:
  • Collect Bear Food Cards, from Growing Up WILD, in paper bag “stomachs”.
  • Pretend to be a bear sleeping in a cardboard carton box.
  • Play with toy bears, bear books, plastic bears.
Learning
Prepare a bear food tray—toy insects, meats, berries—examine the different bear foods and talk about which are meat, bugs, or plants. Animals eat different ways. Some eat meat, some eat plants, some eat bugs, some eat dead things and some eat every kind of food. We call the ones that eat meat—carnivores, the ones that eat plants--herbivores, the ones that eat insects—insectivores, the ones that eat dead and rotting things detrivores and the ones that eat all kinds of foods—omnivores. Read Bear’s Big Breakfast by Lynn Rowe Reed. Sing the Bears Eat song.

Second 15 minutes—Walk
Find things bears could eat in the forest and places bears could hide.

Third 15 minutes—Make and take
Make bear paw prints on a roll of brown paper by dipping fists in paint.

Fourth 15 minutes—Snack
Dip Teddy Grahams in yogurt and eat “bear” foods like berries.

Closing— Make bear prints with stampers on a forest picture. Review the song, story and fingerplay, sing Good-bye songs, pass out handouts and preview the next class.
Outcomes A Bear’s Lunch

Targets
• Animals eat different kinds of foods.
• Some animals eat meat, some plants, some rotting things and some insects. Some animals eat all kinds of things.
• Bears eat all kinds of foods.

Extensions
• We call animals that eat meat “carnivores”.
• We call animals that eat plants “herbivores”.
• We call animals that eat insects “insectivores”.
• We call animals that eat rotting things “detrivores”.
• We call animals that eat all kinds of foods “omnivores”.
Thinking about outcomes: A Bear’s Lunch

<table>
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<tr>
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<tbody>
<tr>
<td>Bear, meat, plant, insect, <em>carnivore</em>, <em>herbivore</em>, <em>insectivore</em>, <em>detrivore</em> and <em>omnivore</em></td>
<td>Different animals eat different kinds of food. We have special names for animals depending on what they eat.</td>
<td>Examining foods</td>
</tr>
</tbody>
</table>

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<tbody>
<tr>
<td>Attend to <strong>Bear’s Big Breakfast</strong>, act out the fingerplay and song, walk like a bear.</td>
<td>Press fists with paint on bear trail. Dip Teddy Bears and choose bear foods.</td>
<td>Observe nature using all the senses.</td>
</tr>
</tbody>
</table>
Bloomin’ Blossoms

Focus—flower parts and growth

Hello and Name Songs

Finger play:
Stems (stand tall) and leaves (elbows out)
And petals (flutter fingers around face) too,
All the flowers, red, yellow, blue!
(pat three times across)

• First 15 minutes—Gathering:
  • Look at flowers.
  • Water flowers in pots.
  • Try on flower part costumes. ook at flower books.
Learning
---
Flowers grow from seeds. Flowers have stems to hold them up and leaves to make energy and roots to bring food and petals to attract insects and birds. Flowers need soil and sun and water to grow. Flowers come in different shapes and colors and sizes. Plants have flowers—grass and trees and cacti have flowers, too. Flowers make more seeds for new flowers. Make the flower parts out of paper bags—blossom=bottom of the bags, stem and leaves from the middle of the bag and roots from the top and let the children dress up as flowers. Have a sponge=roots, straw=stem, battery=leaves. Flowers look pretty to attract insects and birds to spread their pollen and seeds so there will be more flowers. Act out being a flower: sponge up nutrients from roots (slurp), carry up nutrients to leaves and blossom (whoosh) and make energy with leaves (chugchug) and use fingers to call the insects and birds. Insects and birds spread the pollen and seeds. Read *Planting a Rainbow* by Lois Ehlert or *The Little Gardener*, and have sheets of construction paper with flowers on them so the children can hold them up to be a garden rainbow. Sing *The Flowers Have Some Roots.*

Second 15 minutes—Walk
Find flowers on the trail.

Third 15 minutes—Make and take
Plant flower seeds in a cup. Squeeze glue on green paper and drop sand or soil and Easter grass on the glue to make a pattern—give each child a flower sticker to pat on. Tape a half cup to a paper. Place a green half straw or pipe cleaner inside. The child uses a dot marker to put petals on the flower.

Fourth 15 minutes—Snack
Make flowers from strawberry, banana and orange slices with celery stems.

Closing—
Review the song, story and fingerplay, 2 sided tape cut-out flowers to a garden poster, sing Good-bye songs, pass out handouts and preview the next class.
Outcomes Bloomin’’ Blossoms

Targets

• Flowers grow from seeds. Flowers have stems to hold them up, leaves to make energy and food, and petals to attract insects and birds.

• Flowers need earth and sun and water to grow.

Extensions

• Flowers come in many different sizes, colors, and shapes

• Plants have flowers which make fruits which have seeds
Thinking about outcomes: Bloomin’ Blossoms

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<tbody>
<tr>
<td>Flower, seed, leaves, stem, blossom, bloom, petals.</td>
<td>Growth, seeds, why flowers look pretty</td>
<td>Look at flowers. Find the stem, leaves and petals.</td>
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</tbody>
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<tr>
<td>Act out the flower song and fingerplay. Attend to the rainbow planting story.</td>
<td>Plant flower seeds by poking them into soil. Make a flower using fruit for petals.</td>
<td>Find flowers on the trail. Observe using sight and smell and touch.</td>
</tr>
</tbody>
</table>
Breakfast for a Bird

Focus— different beaks adapted for different foods

Hello and Name Songs

Finger play:
Some birds flap wings (flap arms to sides)
And some dive down (dive)
Some back and forth (move back and forth)
Some turn around! (turn around)

• First 15 minutes— Gathering:
  • Let the children experiment with the “beaks” and foods.
  • Examine feathers.
  • Look at bird books.
  • Sit in pretend nests.
  • Place toy birds in pretend nests.
  • Make toilet tissue roll binoculars.
Learning
Beaks are adapted for eating different foods, just like different utensils. Have toy fish, insects, small mammals models, seeds, juice boxes, dry fruit, rubber seaweed, gummy or lure worms. Simulate bird beaks with different utensils—cup, scoop, baster, eye dropper, tongs, tweezers, scissors, chopsticks, nutcracker, strainer, hair clip. Let the children see the foods and try the utensils. Read Little Green or Birds by Kevin Henkes, with puppet and actions. Sing This Is the Way We Flap Our Wings. Move like a bird (avian antics). Transition, using avian antic motions, outside.

Second 15 minutes—Walk
Find birds, bird nests, bird foods and collect cotton ball “mice” (with hair clips) and fishing lure “worms” (with tweezers) in a paper bag “bird stomach”. Have toilet tissue roll binoculars for looking.

Third 15 minutes—Make and take
Paint with feathers.

Fourth 15 minutes—Snack
Have a bird food buffet. Put out 3 bowls, one with cereal with tongs, raisins with a small fork, and goldfish with a ladle, and have the children fill bird stomachs (cups) using the “beaks”.

Closing—Have the children build and roost in nests, Review the song, story and fingerplay, sing Good-bye songs, pass out handouts and preview the next class.
Outcomes: Breakfast for a Bird

Targets
- Birds eat different kinds of foods.
- Bird beaks are different depending on the food the bird eats.
- Bird movements are different depending on how they get their food.

Extensions
- Birds have feathers
- Birds build nests.
- Birds fly.
- Birds lay eggs.
Thinking about outcomes: Breakfast for a Bird

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<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Bird, beak, feather, nest, eggs, fly, roost</td>
<td>Birds eat different foods. Beaks are <em>adapted</em> for the foods the bird eats.</td>
<td>Move like a bird. Eat like a bird.</td>
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</tbody>
</table>

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<tr>
<td>Attend to <em>Little Green</em> and do the actions. Imitate the actions in the fingerplay and songs.</td>
<td>Use feathers to dip and paint. Use analog bird beaks to get bird foods.</td>
<td>Listen for birds. Look for birds, nests and bird foods, as well as “mice” and “worms”. Observe birds.</td>
</tr>
</tbody>
</table>
Busy As a Bee

Focus— bee anatomy and roles
Hello and Name Songs
Finger play:
Here is the honeybee (pincer finger thumb)
Here is the hive (tent hands)
Working together (mesh fingers)
To keep bees alive (clap)!

• First 15 minutes—Gathering:
  • Have bee books, and honeycomb and beekeeper clothing and equipment (if available) out to explore.
  • Have a paper poster hive and flower pots with flowers. Let the children pick up pollen (baggies with yellow sand inside) and take the pollen to the hive.
  • Act out bee roles.
  • Act out bee dances.
Learning
Explain bee anatomy with analogs—pollen baskets (brushes), honey tummy (sticky honey in baggie), antennae (touch fingers), juice box and party blower for proboscis. Pass compound eyes around. Teach exoskeleton and have the children find their skeletons by tapping knees, elbows and skulls. Sing , with movements, Head, Thorax, Abdomen. Explain bee roles by comparing them to familiar roles— workers>house cleaner, nurse, forager (searching for pollen), guard, robber, queen=mommy, drone=daddy.—and giving each a bee role card. Bees collect nectar and pollen to make bee bread, bee milk, and royal jelly foods. They pass the nectar, which is mainly water, from tongue to tongue, and fan it with their wings to thicken it—that is how honey is made. Bees communicate with movement, scents and vibration. Explain bee dances with moving in a circle and figure 8. Sing do You Like to Buzz and Bumblebee, Bumblebee. Read Bee and Me by Elle McGuiness. Transition with dancing out to take a walk and look for bees..

Second 15 minutes—Walk
Look for bees and flowers that bees might like.

Third 15 minutes—Make and take
Let children pat hexagonal cereal on contact paper to make honey combs.

Fourth 15 minutes—Snack
Spread honey on crackers, or make Tastycake Krimpets bee snacks by squeezing on Wilton gel for stripes and eyes, and adding pretzel wings.

Closing
Stamp bees on a large brown paper hive. Review the song, and fingerplay, sing Good-bye songs, pass out handouts and preview the next class.
Outcomes Busy As a Bee

Targets
• Bees have three body parts, 2 pair of wings, antennae and 6 legs.
• Bees live in hives.
• Some bees make honey.
• Bees have different jobs in the hive.

Extensions
• Bees dance to communicate (talk) to each other.
• There is one queen bee—she makes the babies.
• Some of the different jobs are: making babies, taking care of babies, cleaning the hive, finding food and protecting the hive.
• Bees make three kinds of food.
• They have pollen baskets and honey stomachs.
### Thinking about outcomes: Busy As a Bee

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Bee, queen, <em>drone</em> (daddy), worker, <em>forage</em> (hunt for food), protect, guard, clean, <em>abdomen</em> (tummy), <em>thorax</em> (chest), <em>exoskeleton</em>, <em>antennae</em>, <em>hive</em></td>
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</tbody>
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<table>
<thead>
<tr>
<th>Concepts</th>
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</thead>
<tbody>
<tr>
<td>Parts of bee bodies, bee jobs, honeybees make honey, bees live in a hive, bees <em>cooperate</em> (work together)</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Skills</th>
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<tbody>
<tr>
<td>Finding parts of the body that are like a bee’s, pretending to communicate with antennae and dances, acting out bee jobs</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Music and Story</th>
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<tbody>
<tr>
<td>Touch body parts with the <em>Head, Thorax, Abdomen</em> song. Attend to <em>Bee and Me</em>.</td>
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<thead>
<tr>
<th>Art/Snack</th>
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<tbody>
<tr>
<td>Pat hexagonal cereal on contact paper to make honey combs. Spread honey on the cracker or insert the pretzel sticks in the Krimpet bee.</td>
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<tr>
<th>Walk/Explore</th>
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<tbody>
<tr>
<td>Look for flowers and bees. Observe bees.</td>
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</table>
Clever Spiders

Focus— spider anatomy and webs

Hello and Name Songs

Finger play:
“Itsy Bitsy Spider” fingerplay with “spider sticks” and tissue rolls

• First 15 minutes—
  Gathering:
  • Have specimens, books, and webs made of yarn or sticky tape.
  • Finger-walk the tape web.
  • String webs of yarn between chairs or tables or trees.
  • Walk the masking tape web.
  • Act out Anansi the Spider by Gerald McDermott, with popsicle puppets.
**Learning**

Sing *Spider Bodies Have Two Parts*. Spiders are mainly helpful. Insects have 3 (hold up 3 fingers) body parts, and 6 (hold up three fingers on both hands) legs, and 2 antennae (hold up 1 finger in each hand); spiders have 2 (hold up 2 fists and put them together) body parts, and 8 legs (hold up 4 fingers on both hands,) and no antennae. Ask if they would like to have their legs growing out of their heads. The spiders have a *cephalothorax* and the legs come out of it. Gently knock on head, elbow, knee—feel the bones—that’s our skeleton, it’s inside/under our skin—slide hands on skin. Spiders have an *exoskeleton*—their skeletons outside their bodies. They have jointed legs and chewing mouth parts. Spiders weave webs—they catch food, insects and small animals, in their webs. They can feel the insects walking on the webs (Hold ribbon and place vibrator on the ribbon.). The webs are sticky (Have 2 sided tape on tray for them to feel.) Spiders have bristly feet so they won’t stick to the web (Pass out selection of brushes to feel.) They have *spinnerets* that make silky threads to make the webs (Have embroidery floss pieces to feel.). Read *The Very Busy Spider* by Eric Carle. Transition—children hold silky “web” string and play *Fuzzy-felt Folk “Spin, Spider, Spin”* by Marcia Berman and Patty Zeitlin, to walk outside.

**Second 15 minutes—Walk**

Walk to find spiders, webs, places spiders might make webs, and insects. Place rubber or plastic webs and spiders along the trail with large foam spiders at the end to find.

**Third 15 minutes—Make and take**

Make a Model Magic and pipe cleaner spider encouraging the children to really play with the Model Magic. Make a web painting by dipping string in paint.

**Fourth 15 minutes—Snack**

Make ranch dressing webs and sprinkle raisins for insects on them.

**Closing**

The children get insect stickers to put on the large web in the front of the room. Review the song, story, and fingerplay, sing Good-bye songs, pass out handouts and preview the next class.
Outcomes Clever Spiders

Targets
• Spiders have two body parts, 8 legs and spinnerets to make silk.
• Spiders have an exoskeleton. That means their hard parts, like your bones, are on the outside.
• Spiders spin webs to catch food.
• There are different kinds of webs depending on how the spider traps the food.

Extensions
• Webs can be orb (circle), triangle, sheet (flat) or tangle (cobweb).
• Spiders have to shed= molt their exoskeletons= outsides, to grow.
Thinking about outcomes: Clever Spiders

<table>
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<tr>
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</thead>
<tbody>
<tr>
<td>Spider, <em>abdomen</em> = tummy, <em>cephalothorax</em> = chest and head, <em>exoskeleton</em>, legs, web, spin, silk, <em>spinnerets</em>, <em>molt</em>, <em>sticky</em>, <em>bristles</em></td>
<td>Parts of spiders’ bodies, web types, spinning webs from silk, webs are sticky, spiders have bristles on their legs so they can walk on the web, spiders feel vibrations</td>
<td>Inserting pieces to be legs, spinning around, stamping, finger extension for stickers</td>
</tr>
</tbody>
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<th>Music and Story</th>
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Deer, Oh Deer

Focus—what deer need to survive

Hello and Name Songs

Finger play:
• Deer need water (slurp) and a sheltering place (hands make roof over head)
• Deer need food (chew) and deer need space (wave arms out).

• First 15 minutes—Gathering:
• Get a deer bag and go to corners of the room and collect food, water, shelter pictures in a deer bag.
• Look at deer books.
Learning
Deer and animals need **FOOD, WATER, SHELTER** to stay alive. They need to eat to grow and have energy. They need water to stay healthy. They need a place to live where they can hide and move around. There must be enough space so all the deer can eat and drink and hide. Let’s make a roof (hands together over head) to be the “house” for the deer. Let’s make some food (rub tummy yummy) to feed the deer. Let’s make some water (cupped hand to mouth) so the deer can drink.

Deer can live in forests, or deserts or farmlands and sometimes in parts of cities. Deer prance and grunt and kick the ground to tell how they feel. You can be a deer and prance like deer, grunt like a deer, and kick your hoof (feet) like a deer. You can pretend to give a warning and lift up your tail and run and jump. Daddy deer are called stags. They have antlers on their heads. The stags have contests with each other. Baby deer are called “fawns”. They have spots to hide in the light and shadow in the forest. Mommy deer are called “does”. They take care of the babies. Deer have hooves which are like big strong nails on the end of their legs. Read *Dotty* by Paola Opal, and act out the motions with deer sticks. Sing *Did You Ever See a Forest* and *Deer Need Food*. Transition by prancing like deer to the walk.

Second 15 minutes—Walk
Find good places for deer to hide and find food. Look for plants squashed down that might be deer paths or resting places.

Third 15 minutes—Make and take
Make a paper bag fawn puppet by adding handprint antlers and dot marker spots, and eyes and nose on the flap.

Fourth 15 minutes—Snack
Make a deer treat—triangle bread slice spread with sunflower butter, with pretzel stick antlers and raisin eyes and nose.

Closing
Make hoof prints, with sponges and inkpads, on a large forest cutout, review the song, story and fingerplay, sing Good-bye songs, pass out handouts and preview the next class.
Outcomes Deer, Oh Deer

Targets
- Deer need food, water and a place to live.
- We have special names for mommy, daddy and baby deer.
- Deer have *antlers* and *hooves*.

Extensions
- We call daddy deer “stags”, mommy deer “does” and baby deer “fawns”.
- Deer show how they feel by prancing or bouncing around, kicking and *pawing* or stomping with their hooves.
- Antlers are made of bone and fall off each year. Horns are made of keratin like fingernails and do not fall off.
## Thinking about outcomes: Deer, Oh Deer

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<tr>
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<tbody>
<tr>
<td>Deer, stag, doe, fawn, shelter, hoof, antler</td>
<td>Deer need food, water and shelter. We have words to describe deer. Deer have antlers and hooves.</td>
<td>Imitating deer movement Using movement to represent food, water and shelter</td>
</tr>
</tbody>
</table>

### Music and Story
Do the actions for *Did You Ever See a Forest* and *Dotty*.

### Art/Snack
Use the dot marker to tap dots on the deer puppet. Poke pretzels and raisins on the deer snack.

### Walk/Explore
Look for good places for deer to hide, sleep and eat.
Lesson Fish Full Ocean

Focus—Fish have fins and scales and swim. Fish live in water.

Hello and Name Songs

Finger play:
Fish live in the ocean, with their fins and scales, (*pat body*)
And other ocean creatures like the octopus and whales! (*put out 8 fingers and then spread hands big*)

• First 15 minutes—Gathering:

• Have a fishing game with poles, strings and magnets on the end and paperclips on tag board fish.
• Have a clean plastic container of water and plastic fish for the children to scoop out.
Learning
Many kinds of living things live in the ocean—fish, mammals like whales, plants like algae, sponges, corals and octopuses. Most fish have fins and scales. The fins help them move. Put your hands together and move them like a fish swimming. The scales help protect them. Wrap your hands around your body to cover it like scales cover fish. Fish have different kinds of fins that keep them moving straight (*dorsal and anal*), propel them (*caudal*) or help them turn, back up or stop (*pectoral or pelvic*). Act out moving with the different kinds of fins. Fish are cold-blooded so they have the same temperature as their surroundings. Fish live in different places in the ocean—on rocks, in mud, by plants. Sing *I’m a Little Fish*. Read *Little Fish, Hooray for Fish* by Lucy Cousins or *Fish Eyes* by Lois Ehlert. Sing the fish song.

Second 15 minutes—Walk
Simulate an ocean with clear containers with water, sand, rocks and plastic aquarium plants and let the children find different ocean creatures attached to different surfaces.

Third 15 minutes—Make and take
Use a piece of contact paper and let the children pat on sand, rocks, leaves, bubble wrap or blue cellophane and fish cutouts.

Fourth 15 minutes—Snack
Give the children Goldfish and water bottles or blue jello.

Closing—Have a large brown paper fish and let the children stick dot stickers on to make the scales, review song and sing Good-bye songs.
Outcomes

Targets
• Different living things live in the ocean.
• Fish, whales, octopuses, sponges, coral and algae are some of the living things in the ocean.
• Most fish have fins and scales.

Extensions
• Fins help the fish move and go where it wants to go.
• Scales protect the fish.
• Fish live in different environments or ecosystems.
• Fish are cold blooded.
• Fish have different kinds of fins that keep them moving straight (dorsal and anal), propel them (caudal) or help them turn, back up or stop (pectoral or pelvic).
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<tbody>
<tr>
<td>Fish, fin, scale, <em>pectoral</em>, <em>pelvic</em>, <em>caudal</em>, <em>dorsal</em>, <em>anal</em></td>
<td>Fish have fins and scales. Other things live in the ocean. Ocean creatures live in different parts of the ocean.</td>
<td>Move hands like fins. Move hands to show scales protect the fish.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Music and Story</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Act out “I’m a Little Fishy “ song.</td>
<td>Make an ocean collage by patting materials onto sticky paper.</td>
<td>Find fish in different parts of the ocean.</td>
</tr>
<tr>
<td>Attend to Hooray for Fish, Little Fish or Fish Eyes books.</td>
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</tr>
</tbody>
</table>
Froggies

Focus—

Hello and Name Songs

Finger play:
Watch the little tadpole (hands swim together)
Turn into a frog, (hop)
Looking for a lily pad, (hands to forehead)
    Looking for a log!

First 15 minutes—Gathering: Frog Song

• Look at frog books.
• Put Velcro on the end of party blowers and reverse Velcro on insect cutouts and have the children catch the insects.
• Have models of frog eggs, tadpoles and froglets in a container of water for the children to find.
Learning
Use terms like grown up, baby to pair with scientific terms—eggs, tadpoles, froglets, frogs—to explain the life cycle. Compare creature growth to child growth finding and comparing parts of the body on children and adults. Use doll figures to demonstrate age changes. Sing *A Frog Lays Her Eggs* and *Little Froggie*. Read *I Love Frogs* by Amanda Miller and Sandra Mayer.

**Second 15 minutes— Walk**
Look for toy frogs placed along the trail.

**Third 15 minutes— Make and take**—Fold green paper plate in half and glue googly eyes on top and long curled strip of orange paper in between for a tongue.

**Fourth 15 minutes— Snack**
Use a pretzel for a log and 4 half grapes for frogs on a log, with sunflower butter or hummus to make the grapes stick.

Closing
Stamp frogs on a lily pad poster. Review the song, story and fingerplay, sing Good-bye songs, pass out handouts and preview the next class.
Outcomes Froggies

**Targets**

- We grow bigger.
- Animals change as they grow
- Tadpoles grow into frogs
- First they develop back legs, then front legs, then lose their tails.

**Extensions**

- Tadpoles start as eggs and become *froglets*, baby frogs and grown up frogs.
- Frogs are amphibians like toads, newts and salamanders. Amphibians start out in the water with gills and then move to land.
- Toads have rough skin and short legs while frogs have smooth skin and long legs.
## Thinking about outcomes: Froggies

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<tr>
<th>Vocabulary</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Frog,, tadpole, <em>(froglet)</em>, change, grow <em>(metamorphosis)</em></td>
<td>Relate growth to baby, child, grown-up.</td>
<td>Imitating actions for frog songs Examining frog materials</td>
</tr>
</tbody>
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<tr>
<td>Act out a changing from an egg to a frog. Attend to <em>I Love Frogs</em>. Act out <em>A Frog Lays Her Eggs</em> and <em>Little Froggie</em>.</td>
<td>Fold plate in two and attach googly eyes and tongue. Spread sunflower butter or hummus on pretzel and stick grapes on.</td>
<td>Look for toy frogs on the trail.</td>
</tr>
</tbody>
</table>
Flutter Fly Butterfly

Focus—
Hello and Name Songs

Finger play:
Eggs hatch to caterpillars, caterpillars grow (scrunch down and puff up),
Then spin a chrysalis (turn) and butterfly (flap wings) just so!

First 15 minutes—Gathering:
• Have models of butterfly metamorphosis for children to explore.
• Let children pretend to be butterflies using large pieces of cloth or paper for wings.
• Have flowers in pots and bags of yellow sand to represent pollen and let children “fly” from flower to flower pollinating.
Learning
Use terms like grown up, baby, pair scientific terms—adult, juvenile, larva, pupa, nymph—to explain the life cycle. Use doll figures to demonstrate age changes. This is complete metamorphosis. Butterflies are insects with three body parts, jointed legs, antennae and exoskeletons. Sing Head, Thorax, Abdomen. They have wings; scales on the wings make the pretty colors. Sing Flutter, Flutter Butterfly. Butterflies have a proboscis—like the birthday blowers—that acts like a straw to suck up nectar. Read Butterfly, Butterfly by Peter Horacek or The Very Hungry Caterpillar by Eric Carle. Transition to 1,2,3, Caterpillar Up the Tree.

Second 15 minutes--Walk
Walk to find plants butterflies might want to use for pollinating, laying eggs, pupating, or eating in the larval stage. Look for paper caterpillars and butterflies placed along the trail.

Third 15 minutes— Make and take
Take a paper cup chrysalis and make a coffee filter and clothespin butterfly (with watercolors and medicine droppers) to put inside.

Fourth 15 minutes— Snack
Make veggie, fruit and cheese hungry caterpillar kabobs. Have the children pull the pieces off.

Closing
Stamp butterflies on a flower poster. Review the song, story and fingerplay, sing Good-bye songs, pass out handouts and preview the next class.
Outcomes Flutter Fly Butterfly

Targets
- We grow bigger.
- Some animals change form as they grow.
- This is called metamorphosis.
- Caterpillars grow into butterflies.

Extensions
- Butterflies have complete metamorphosis—4 stages.
- Butterflies and moths start as eggs and become larva/caterpillar, then pupa/chrysalis/cocoon, then butterflies and moths.
- Butterfly wing colors come from scales.
Thinking about outcomes: Flutter Fly Butterfly

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</table>
| Butterfly, egg, caterpillar, (larva, pupa, cocoon), change, grow (metamorphosis) | Relate growth to baby, child, grown-up. | Imitating actions for caterpillar fingerplay
Examining butterfly materials |

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<tr>
<td>Act out changing from an egg to a caterpillar, chrysalis, butterfly</td>
<td>Drop colored water on the filter. Stuff the “caterpillar” into the cup. Pull speared vegetables and fruit off the food kabob.</td>
<td>Participate on the walk to find places caterpillars might eat or live. If available, observe caterpillars and butterflies.</td>
</tr>
</tbody>
</table>

Attend to the Very Hungry Caterpillar. March to 1, 2, 3, The Caterpillar’s Up the Tree.
Green Grows the Grass

Focus— grass foods we eat, grasshopper movement

Hello and Name Songs

Finger play:
Grasshoppers in the grass all day—(fingers up to make grass)
with strong legs to jump away! (fist long jump)

First 15 minutes—Gathering:

- Find toy grasshoppers in Easter grass. Look at grasshopper models.
- Explore foods that come from grass such as rice, wheat, oats and products made from them.
- Make minibook—What Are All the Things Grass Can Do?
Learning—Ask “Who ate grass today?” Explain that grains are part of grasses and look at grain foods and grain. Grass grows from seed. We eat lots of grass foods. Insects and reptiles live in grass. Grasshoppers have three body parts, 6 legs and two antennae. Sing *Head, Thorax Abdomen*. Grasshoppers have to molt to grow. Grasshoppers have incomplete metamorphosis (3 stages)—eggs, nymphs, adults. Grasses have stems (*culm/sheath*) and leaves (*blades*) and flowers (*inflorescence*) and seeds. Read *In the Tall, Tall, Grass*, by Denise Fleming or *Are You a Grasshopper*, by Judy Allen and Tudor Humphries. Sing *Springtime*. Transition by jumping like a grasshopper.

**Second 15 minutes—Walk**
Observe the different sizes, shapes, colors and textures of grasses. Look for paper grasshoppers.

**Third 15 minutes—Make and take**
Plant grass seeds in a cup. Make a collage of soil, Easter grass and grains on contact paper sticky side.

**Fourth 15 minutes—Snack**
Eat a selection of grass foods—cereal, crackers, corn puffs.

**Closing**—Stamp grasshoppers on a poster of grass and stick grass on two-sided tape on top. Review the song, story and fingerplay, sing Good-bye songs, pass out handouts and preview the next class.
Outcomes Green Grows the Grass

Targets

- Grass is a plant.
- Lots of animals eat grass.
- We eat grass foods.
- Grasshoppers are an insect that live in the grass.

Extensions

- Grasses come in different sizes, shapes, colors and textures.
- Grasses have stems \((\text{culm/sheath})\) and leaves \((\text{blades})\) and flowers \((\text{inflorescence})\) and seeds.
- Grasses are used to make clothes, baskets, fuel and houses.
- Grasses provide ecosystem services.
Thinking about outcomes: Green Grows the Grass

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<tbody>
<tr>
<td>Grass, stem (<em>culm, sheath</em>), leaf (<em>blade</em>), flower (<em>inflorescence</em>), seed, grasshopper, head, <em>thorax</em>, <em>abdomen</em>, soil, sun, rain, grain</td>
<td>Grass is a plant. Grasses come in different sizes, shapes, colors and textures. Grasses have stems (<em>culm/sheath</em>) and leaves (<em>blades</em>) and flowers (<em>inflorescence</em>) and seeds. Lots of animals eat grass. We eat grass foods. Grasshoppers are an insect that live in the grass.</td>
<td>Observing grass. Describing grass.</td>
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<td>Act out <em>Head, thorax, Abdomen</em> and grasshopper fingerplay. Attend to In the <em>Tall, Tall Grass</em> and <em>Are You a Grasshopper?</em>.</td>
<td>Press grass seed into the soil. Sample grass foods.</td>
<td>Find grasses. Observe differences in grasses. Look for grasshoppers.</td>
</tr>
</tbody>
</table>
Grow, Grow, Grow

Focus — life cycles

Hello and Name Songs

Finger play:
Eggs hatch to caterpillars, caterpillars grow (scrunch down and puff up),
Then spin a chrysalis (turn) and butterfly (flap wings) just so!

• First 15 minutes—
Gathering:

• Have zipper bags with laminated Grow As We Grow Card sets from Growing Up WILD.

• Act out changing from an egg to a butterfly or a frog.
Learning
Use terms like grown up, baby, pair scientific terms—adult, juvenile, larva, pupa, nymph—to explain the life cycle. Compare creature growth to child growth finding and comparing parts of the body on children and adults. Use doll figures to demonstrate age changes. Sing *Growing Kids* song with actions. Read *Ten Wriggly Wiggly Caterpillars* by Debbie Tarbelt and *Waiting for Wings* by Lois Ehlert.

Second 15 minutes—Walk
Walk to find living things that grow and change. Look for caterpillars, butterflies and toy frogs placed along the trail.

Third 15 minutes—Make and take
Make a life cycle plate—rice eggs, spiral pasta larva, shell pupa, and bowtie pasta butterfly.

Fourth 15 minutes—Snack
Make a metamorphosis snack of Cheetos, corn pops and pretzels.

Closing
Stamp frogs on a lily pad poster and butterflies on a flower poster. Review the song, story and fingerplay, sing Good-bye songs, pass out handouts and preview the next class.
Outcomes Grow, Grow, Grow

Targets
• We grow bigger
• Some animals change as they grow
• Caterpillars grow into butterflies
• Tadpoles grow into frogs

Extensions
• Butterflies start as eggs and become larva/caterpillar, then pupa/chrysalis/cocoon, then butterflies
• Tadpoles start as eggs and become froglets, baby frogs and grown up frogs
• Some animals have 4 stages=complete metamorphosis and some have three=incomplete.
Thinking about outcomes: Grow, Grow, Grow

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<td>Relate growth to baby, child, grown-up.</td>
<td>Imitating actions for caterpillar fingerplay and frog song</td>
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<td></td>
<td></td>
<td>Examining butterfly and frog materials</td>
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<tr>
<td>Act out a changing from eggs to adult. Attend to Ten Wriggly Wiggly Caterpillars and Waiting for Wings.</td>
<td>Glue the foods on the plate. Make a metamorphosis mix snack.</td>
<td>Participate on the walk to find places caterpillars might eat or live If available, observe caterpillars or tadpoles</td>
</tr>
</tbody>
</table>
Lesson

Focus—Animal use of color
Hello and Name Songs
Finger play:
I can blend in outside—(arms out and then wrapped around)
Spots and stripes let me hide!
(Right hand draws stripe across chest, left hand swipes down.)

• First 15 minutes—
  Gathering:
• Find the toy animals hidden around the room.
• Put on paper bags—demonstrating warning, mimic, and camouflage colors.
• Put animal stickers on camouflage paper.
• Look under camouflage flaps for hidden animals.
• Match color chips to basket of toy animals.
Learning

Prey animals that are hunted have different ways of tricking predator animals that want to find them. They can be colored so they blend in to the plants and rocks around them, and are hard to see. Baby deer (fawns) have spots to blend in dappled light. Animals can look like a different critter that the hunting animal doesn’t want—that’s called mimicking. Some flies look like stinging bees. They can have bright contrasting colors to warn the hunting animal to stay away—so skunks have a bright white and black striped tail. Or, they can freeze so the hunting animal can’t see them. Some animals hunt. Some animals are hunted. Animals use camouflage so they are hard to see. Animals also freeze=stop and stay still, so other animals won’t see them moving. Pretend to be animals and hide and freeze. Read How to Hide a Butterfly—and Other Insects by Ruth Heller, A Color of His Own by Eric Carle or Lots of Spots by Lois Ehlert. Sing Did You Ever See a Lizard? and Camouflage.

Second 15 minutes—Walk

Walk to find good hiding places in the woods, and toy animals planted on the way.. Take color chips and find things in the woods that match the color and would be good places to hide.

Third 15 minutes—Make and take

Give the children pictures of green or brown animals and insects and green and brown tissue paper and let them glue same color paper on the animal to hide it. Make a spots and stripes design with dot paints and Wikki Stix.

Fourth 15 minutes—Snack

Find “caterpillar” green pepper strips, coleslaw curls, grapes and noodles on a lettuce leaf to eat. Find animal crackers in trail mix.

Closing

Stick animals stickers on poster with matching color paper. Review the song, story and fingerplay, sing Good-bye songs, pass out handouts and preview the next class.
Outcomes

Targets
• Animals trick other animals hunting them in different ways.
• Some blend into the background—*camouflage*.
• Some freeze in place.

Extensions
• Some pretend to be a different animal—*mimic*.
• Some warn hunting animals to stay away with bright or contrasting colors.
• Some use color to attract each other.
### Thinking about outcomes Hide and Seek

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<tbody>
<tr>
<td><em>Camouflage, mimic, blend, dappled, hunt, attract, contrasting, green, brown, tan, black, white, prey, predator</em></td>
<td><em>Animals use colors in different ways. Animals protect themselves in different ways.</em></td>
<td><em>Listening to move and freeze on cue, looking for animals, patting pictures or stickers on paper</em></td>
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<tr>
<td>Acting out <em>Camouflage</em> and <em>Did You Ever See a Lizard?</em>. Attend to <em>How to Hide a Butterfly</em>—and Other Insects, <em>A Color of His Own</em> and <em>Lots of Spots</em>.</td>
<td><em>Art/Snack</em> Glue matching color tissue on animal. Pincer grip Wikki Stix and use dot markers. Find foods on the same color background.</td>
<td><em>Walk/Explore</em> Use vision to find animals and hiding places. Match color chips to colors in nature.</td>
</tr>
</tbody>
</table>
Lesson How Do I Feel

Focus—We have different feelings about different animals.

Hello and Name Songs

Finger play:
Animals can be friendly (Smile) and you want to have them play (Hug).
Animals can be scary (Frown) and you want to run away (Move feet quickly).

• First 15 minutes—Gathering:
  • Have a basket of various animals and let the children choose ones to hug.
  • Place a mirror in front and let the children practice making happy and scared faces.
  • Have the children place friendly animals in a dollhouse and scary animals in a cage.
Learning
Talk about we all have feelings, and give situations and ask the children if they are happy or scary. Pass a feelings basket and have children choose symbols for different feelings. Sort “friendly” and “scary” animals. Ask why the scary animals seem scary. Explain that animals each have different ways of getting food and communicating and some of these might be scary, but the animals are just being themselves! Have large construction paper barn, pet store, zoo and house and sort animals by domestic, pet, wild. Read *Who Is the Beast* by Keith Baker. Sing *If They’re Friendly and You Know It*.

Second 15 minutes—Walk
Take a hike and find traces of animals, sources of food and water, and places animals might live. You can plant toy animals on the trail for children to find.

Third 15 minutes—Make and take
Let the children use model magic and straw pieces into it to design their own animal.

Fourth 15 minutes—
Spread hummus on a rice cake and add raisins and apple slices to make a happy face.

Closing
Transition by moving like animals to a poster with different animals and have the children stick happy and sad faces on the animals. Review the songs, story and fingerplay, and sing Good-bye songs. Pass out handouts and preview the next class.
Outcomes How Do I Feel

Targets
- We have lots of different feelings.
- When we’re just starting to learn about animals, some animals may feel scary and other animals may feel friendly.
- We can learn more about animals to understand them.

Extensions
- Animals may feel friendly if we see them in movies or books.
- Sometimes real animals seem scary because we don’t understand how they live.
Thinking about outcomes: How Do I Feel

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<tr>
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<tbody>
<tr>
<td>Feelings, scary, friendly, wild, pets, tame, domestic</td>
<td>We have feelings about animals. When we learn how animals live, even scary animals may not feel as scary.</td>
<td>Acting out feelings</td>
</tr>
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<tr>
<td>Doing the motions with <em>If They’re Friendly and You Know It</em>. Attending to <em>Who Is Beast?</em></td>
<td>Creating an animal from Model Magic and straw pieces. Spread hummus on a rice cake and add raisins and apple slices to make a happy face.</td>
<td>Look for animals and places animals can live and things they could eat.</td>
</tr>
</tbody>
</table>
How’s the Weather

Focus — kinds of weather

Hello and Name Songs

Finger play:
Spring is for rain (hands go up then down)
And summer’s for sun (point up to the sky)
And fall is for wind (blow),
Winter snowflakes are fun. (wrap arms around)

• **First 15 minutes—Gathering:**
• Dress up in weather clothes, raincoats, boots, umbrellas, sun hat, sunglasses, swim cap, mittens, scarf, hat.
• Sort clothes into hot, rainy and cold baskets.
Learning
Weather changes. Rain comes from clouds. Rain and sun makes a rainbow. We feel the winds. Sometimes we see lightning and hear thunder in a storm. The sun makes us hot. In very cold weather we may have snow, ice, sleet and freezing rain. Water from the ground goes up to make clouds. Water in clouds comes down as rain. Sort spring things into upside down umbrella, summer things into sand bucket, fall things onto rake and winter things into knit cap. Read Hello World, Weather! By Jill McDonald or Spot Looks at the Weather by Catherine Farwell. Sing The Sun is Shining and What’s the Weather. Transition by running like the wind.

Second 15 minutes—Walk
Observe weather, notice the difference in sunny and shady places, and fly kites.

Third 15 minutes—Make and take
Glue cotton balls on blue paper to make a cloud collage, or paint with a cotton ball cloud.

Fourth 15 minutes—Snack
Add pretzel rays to a cheese circle sun.

Closing
Make a cloud and sky poster and let the children stamp fingerprint raindrops coming down. Review the song, story, and fingerplay, sing Good-bye songs, pass out handouts and preview the next class.
Outcomes How’s the Weather

Targets
• Weather changes.
• Rain comes from clouds.
• We feel the winds.
• Sometimes we see lightning and hear thunder in storms.
• The sun makes us hot.

Extensions
• Rain and sun makes a rainbow.
• When it gets cold we can get snow and ice.
• Sometimes when the air is cold we get sleet and hail—they feel like hard balls.
**Thinking about outcomes: How’s the Weather**

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<tbody>
<tr>
<td>Sun, wind, rain, clouds, rainbow, thunder, lightning, hot cold, wet dry</td>
<td>There are different kinds of weather. Weather comes from things in the sky</td>
<td>Observe the sky and wind. Observe the weather. Observe sun and shade.</td>
</tr>
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<tr>
<td>Do the actions with <em>The Sun is Shining</em> and <em>What’s the Weather</em>. Attend to Read <em>Hello World, Weather!</em> or <em>Spot Looks at the Weather</em></td>
<td>Pat cotton balls on 2 sided tape to make a collage. Paint with cotton balls. Stick pretzel sticks in a cheese sun for rays.</td>
<td>Look at the sky. Feel the wind. Feel the temperature in full sun and shade.</td>
</tr>
</tbody>
</table>
Leapin’ Lizards

Focus—kinds and characteristics of reptiles

Hello and Name Songs

Finger play:
I see a lizard in the tree (reach up)
Looking down so carefully (reach down).
It can change it’s color too (hands pass from head to feet)
To hide itself from me and you! (cover eyes with hands)

• First 15 minutes—Gathering:
• Look at reptile models, and place scales on two-sided tape on a large paper lizard.
• Put on paper bag 2-color costumes for changing colors.
• Look at lizard books.
Learning
Lizards are reptiles. Other reptiles are turtles, alligators, and snakes. Reptiles are cold
blooded—their temperature is close to the temperature outside. Reptiles lay, generally soft,
eggs. Reptiles have skeletons and dry scaly skins or plates. Some reptiles have sticky feet to
cling—the stickiness is made by tiny hairs (*setae*). Some lizards change colors to show
emotions. Lizards smell with their tongues to catch insects. Turtles, alligators, and lizards have
4 legs. Turtle shells developed from their ribs and vertebrae (Tap these parts of the body).
Snakes may have developed from burrowing animals; their skeletons are mainly vertebrae.
Read *Counting Little Geckos* by Charline Profiri and sherry Rogers Sing *Did You Ever See a Lizard*.

Second 15 minutes—Walk
Walk to look for lizards in trees.

Third 15 minutes—Make and take
Art—Give each child a piece of Model Magic to squeeze into a snake.

Fourth 15 minutes—Snack
Give each child a pretzel-twig and gummy snake or lizard to stick on with sunflower butter or
cream cheese.

Closing
Stamp alligator, lizard, turtle and snake stamps on a swamp picture, and review the song, story
and fingerplay, sing Good-bye songs, pass out handouts and preview the next class.
Outcomes Leapin’ Lizards

Targets

• Lizards are reptiles. Other reptiles are turtles, alligators, and snakes.
• Lizards have 4 legs, a head and a tail.
• Reptiles have skeletons and dry scaly skins or plates.
• Reptiles are cold blooded and lay eggs. (Shiver and make an egg shape with hands.)

Extensions

• Reptiles are cold blooded—their temperature is close to the temperature outside.
• Reptiles lay, generally soft, eggs.
• Some reptiles have sticky feet to cling.
• The adhesion comes from setae, tiny hairs.
• Some lizards change colors to show emotions and respond to temperature change.
• Lizards have tongues to smell with and catch insects.
# Thinking about outcomes: Leapin’ Lizards

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<tr>
<td>Reptiles, lizards, snakes, alligators, turtles, scaly, <em>plates</em>, <em>cold blooded</em>, tongue, sticky, change color, eggs, skeleton, <em>vertebrae</em>, <em>setae</em></td>
<td>Lizards are reptiles. Other reptiles are turtles, alligators, and snakes. Lizards have 4 legs, a head and a tail. Reptiles have skeletons and dry scaly skins or plates.</td>
<td>Explore reptile models, observe differences among reptiles</td>
</tr>
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<td>Act out <em>Did You Ever See a Lizard</em> . Attend to <em>Counting Little Geckos</em>.</td>
<td>Mold clay or play dough into a snake. Stick gummi lizards or licorice rope snakes on a pretzel log branch.</td>
<td>Look for places reptiles might live.</td>
</tr>
</tbody>
</table>
Living in a Tree

Focus—What lives in a tree?

Hello and Name Songs

Finger play:
What are all the things that can live in a tree?
A squirrel and a bat and a bird I see.
A snake and a spider and a butterfly—
Some down low and some up high!

First 15 minutes—Gathering:

• Feel pieces from trees in feely bags.
• Look for stuffed or model animals in trees.
• Try on tree costume made of paper bags (bottom=branches and leaves, middle=trunk, top=roots).
• Place model animals on a tree branch or stump.
Learning
Act out with, sounds and actions, parts of a tree—slurp=roots, whoosh=xylem up, phloem down, chug=leaves, lub'dub=heartwood, bowwow=bark. Use a sponge, straw and battery to represent roots, xylem and phloem, and leaves. The cambium layer is the growing layer. Demonstrate water transport with root (push), trunk capillary action (suck), and leaf (pull). Use toy animals to talk about “who lives in a tree”. Act out Toddler Tall Oak Tree using large pictures for the animals. Sing *The Little Owl* song. Read *The Busy Tree* by Jennifer Ward. Use *The Sun and the Rain*, *The Wise Guy Preschool Songs* to transition to the walk.

Second 15 minutes—Walk
Use all the senses to experience the parts, similarities and differences in trees. Look for animals, birds and insects in trees, signs of life in trees, and things that could be homes or food. Match paint color chips to bark and leaves.

Third 15 minutes—Make and take
Make a tree collage by sticking pieces of bark and leaves on a paper with dilute tacky glue and foam brushes. Paint with pine needles by dipping them in paint to use as brushes.

Fourth 15 minutes—Snack
Eat a selection of tree fruits.

Closing
Hang owls and leaves on a tree poster. Review the song, story and fingerplay, sing Good-bye songs, pass out handouts and preview the next class.
Outcomes Living In a Tree

Targets
• Trees have roots, trunk, bark, leaves
• Many different animals love in trees

Extensions
• Roots slurp up water and food and anchor the tree to the ground.
• Water and food go up the trunk in the xylem.
• Leaves make energy from sun and air.
• Energy goes down the trunk in the phloem.
• The trunk supports the tree.
• The bark protects the trunk.
• Water goes up the tree with root push, capillary action and leaf pull.
# Thinking about outcomes: Living In a Tree

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<thead>
<tr>
<th>Vocabulary</th>
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<tbody>
<tr>
<td>Trunk, roots, bark, leaves, xylem, phloem, cambium, capillary action</td>
<td>Many animals live in trees. Trunk supports the tree. Roots slurp up water and food. Leaves make energy from sun and air. Bark protects the tree.</td>
<td>Doing the sounds and actions of the tree parts Using the senses to explore and observe bark, tree sections and leaves</td>
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</tbody>
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<tr>
<td>Do the actions with <em>The Sun and the Rain</em> song. Imitate actions of the leaves fingerplay. Attend to the <strong>Busy Tree</strong> book.</td>
<td>Dip pine needles in paint and paint on paper. Attach bark and leaves to paper. Choose and sample nuts and fruit.</td>
<td>Observe trees and parts of trees.</td>
</tr>
</tbody>
</table>
Little Ladies

Focus—beetle anatomy

Hello and Name Songs

Finger play:
Ladybug, ladybug
Wings two pair—2 fingers
One to protect,—hug
One fly through the air!—hands up

First 15 minutes—
Gathering:

• Look at ladybug books.
• Find plastic ladybugs in a bin of cellophane grass or black beans.
• Observe a container of ladybugs.
Learning
Ladybugs, or Ladybird beetles, are beetles. Beetles have two pairs of wings—one hard pair to protect and one for flying. Ladybugs are male and female. They help farmers and gardeners by eating harmful insects. Ladybugs are not all red and do not all have spots; the color warns predators not to eat them. Ladybugs taste and smell with their antennae. Ladybugs develop from eggs to larvae, pupae and then into adults. The larvae molt. The wings on the ladybug must first dry and harden. Ladybugs have a pronotum to protect their heads. Sing Ladybug Show Your Spots and Fly, Fly, Fly. Read Ten Little Ladybugs or Lily Ladybird, The Very Lazy Ladybug, Beetles Bop.

Second 15 minutes—Walk
Find paper ladybugs taped to trees and shrubs.

Third 15 minutes—Make and take
Provide each child with a red plate with a black line down the middle; let them glue googly eyes and black dots on/alternative use black shoe polish.

Fourth 15 minutes—Snack
Use a half strawberry for the body, white chocolate chips for eyes, chocolate mini-chips for dots, and black thin licorice rope/alternative black Wilton gel for the center line.

Closing
Stick ladybugs on a garden poster. Review the song, story and fingerplay, sing Good-bye songs, pass out handouts and preview the next class.
Outcomes Little Ladies

Targets
• Ladybugs are beetles.
• Not all ladybugs are red or have spots.
• Ladybug color warns that they are poisonous and not tasty.
• Ladybugs eat harmful garden bugs.

Extensions
• Ladybugs are male and female.
• Beetles are insects distinguished by forewings modified into hard wing cases (elytra) that cover and protect the hind wings and abdomen.
• Ladybug larvae look like tiny black alligators.
• Ladybugs have a pronotum to protect their heads.
• Beetles have chewing mouth parts.
### Thinking About Little Ladies

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<tr>
<th>Vocabulary</th>
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</thead>
<tbody>
<tr>
<td>Beetle, ladybug, egg, larva, pupa, molt, wings, spots</td>
<td>Ladybugs are beetles. Ladybugs are helpful. Ladybugs can look different. They use color to warn.</td>
<td>Imitating actions in song and story</td>
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<tr>
<td>Participate in <em>Ladybug Show Your Spots</em> and <em>Fly, Fly, Fly</em>. Attend to <em>Ten Little Ladybugs</em> or <em>Lily Ladybird</em>, <em>The Very Lazy Ladybug</em>, <em>Beetles Bop</em>.</td>
<td>Stick eyes and spots on plate. Poke chips into strawberry.</td>
<td>Explore and observe nature looking for ladybug cutouts.</td>
</tr>
</tbody>
</table>
Mighty Ants

Focus—ant anatomy and roles

Hello and Name Songs

Finger play:
Ants work together—1,2,3 (put up 1,2,3, fingers)
Ants live in a colony!
(Spread fingers and bring both hands together.)

First 15 minutes—Gathering:

• Have sets of 2 pans—1 with sand and ants, and one empty with a shovel. Let the children dig in the pan to make an ant hill in the empty tub, and discover the ants.

• Look at ant books.

• Use multi facet lenses to see an ant's eye view.

• Follow a path of plastic ants.

• Make straw antennae bands to practice communicating.
Learning
Ants have head, thorax, and abdomen (3 paper plates) and 6 legs and 2 antennae (pipe cleaners). They have parts (comb, hooks), on the legs for cleaning and climbing, and communicate with *pheromone* scent (smell bottle). They have an exoskeleton (tap skull, elbow and knees). Use straw headbands to communicate. Ants live in groups and cooperate. Sing the *Ants Are Busy* song. Different ants have different jobs. Pass out broom, hammer, baby doll, grocery bag, crown to act out jobs. Sing *Head Thorax*. Use the *Ant Chant* with the power point pictures full size and ant Popsicle stick puppets. Call out “hey!” at the end of each set of lines and the children call out “Hey Little Ant!” and raise the puppets. Read or sing *Hey Little Ant* by Phillip and Hannah Hoose. Transition by lining up like an ant line and walk to *The Ants Go Marching* iTunes.

**Second 15 minutes—Walk**
Look for ants, anthills and plastic ants on the trail.

**Third 15 minutes—Make and take**
Make Model Magic ants with pipe cleaner legs and antennae. Have baggies with three balls of Model Magic and 8 pieces of pipe cleaner.

**Fourth 15 minutes—Snack**
Be a “colony” and form a line to go to the snacks like ants following to find food. Make ants using three small rice crackers, 8 pieces pretzel sticks and 2 raisin eyes.

**Closing**
Stamp ants a large brown paper anthill. Review the song, fingerplay and sing the Good-bye songs, give out handouts, and preview coming attractions.
Outcomes Mighty Ants

Targets
• Ants live in colonies/groups with different jobs.
• Ants have three body parts, 6 legs and 2 antennae.
• Ants have an exoskeleton.
• Ants live in anthills.

Extensions
• Ants communicate/talk with smell and touching antennae.
• Ants lay and follow pheromone smell trails.
• Ant jobs include building, protecting, gathering food, processing food, cleaning the ant hill, taking care of baby ants.
# Thinking about outcomes: Mighty Ants

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<tbody>
<tr>
<td>Head, thorax/chest, abdomen/tummy</td>
<td>Ants have three body parts (3 fingers) and 6 legs (3 fingers each hand), 2 antennae (2 fingers), 2 big eyes (2 fists), 3 little eyes. Ants have different roles.</td>
<td>Imitating actions for learning, fingerplays and songs Observing ants at food sample plates</td>
</tr>
<tr>
<td>Colony/group Ant hill</td>
<td></td>
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<tr>
<td>Legs, antennae, eyes</td>
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<tr>
<td>Act out Head Thorax, Abdomen and Ants Are Busy</td>
<td>Attach 3 balls to make ant body. Insert 6 pipe cleaner legs and 2 antennae. Arrange crackers, pretzels and raisins to make ant.</td>
<td>Imitating actions for learning, fingerplays and songs Observing ants at food sample plates</td>
</tr>
<tr>
<td>March to The Ants Go Marching.</td>
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<tr>
<td>Attend to Hey Little Ant.</td>
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<th>Walk/Explore</th>
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<tbody>
<tr>
<td>Participate on walk.</td>
<td>Look for ants. Observe natural features.</td>
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More and Less

Focus—reduce, reuse, recycle

Hello and Name Songs

Finger play:
Use it again or make it something new (hands mix)
That’s what good recyclers do! (clap)

• First 15 minutes—Gathering:
  • Find the triangular recycle symbol on containers.
  • Sort materials into trash and recycle bins.
  • Sort recyclables into glass, plastic, can and paper containers.
  • Sort trash into trash and compost containers.
Learning
Teach share, reduce, reuse, recycle—Act out sharing by having pairs hold something together. Act out recycle by pretending to throw something in a can. Act out reduce (conservation) by turning water and lights out. Find recycle symbols on trash. Sort trash into blue recycle or brown trash containers. Demonstrate reducing by showing recycle bag, CFL lightbulb, cloth napkin. Show a can reused as a flower pot. Sing the *Trying to Use Less, Sharing With Our Friends*, and *Reduce, Reuse, Recycle* songs from *Growing Up WILD*. Read *Don’t Throw That Away*, by Lara Bergen, and *Recycling Is Fun* by Charles Ghigna. Transition with *Recycle* by Coco Kallis on iTunes.

Second 15 minutes—Walk
Go on a walk to collect “planted” litter.

Third 15 minutes—Make and take
Use a recycled card to be torn up to decorate a recycled plastic container to be made into the recycling bin. Decorate the recycling bin by gluing on (option= 2 sided tape) a recycling symbol, and coloring with markers or dot painters. Use the bin to place snack recyclable in.

Fourth 15 minutes—Snack
Use any food in reusable or recyclable container and recycle the container. Put left over snacks in a composting bin.

Closing
Give children reusable bags and let them go grocery shopping with toy food or used food containers. Read *Compost Stew: An A to Z Recipe for the Earth* by Mary McKenna Siddals. Review the song, story and fingerplay, sing Good-bye songs, pass out handouts and preview the next class.
Outcomes More and Less

**Targets**

- We reduce waste by using less and sharing.
- We can re-use things by making them into something new or substituting things that can be cleaned and used again for things we would have thrown away.
- We can recycle somethings so we don’t have to put them in the trash.
- We can reduce trash by composting leftover food scraps.

**Extensions**

- We help the earth by making less trash.
- *Composting* is another way of making less trash.
- Some things can be recycled and others can’t.
- We identify recyclables by a symbol.
- Sometimes we need to separate things to recycle.
Thinking about outcomes: More and Less

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<tbody>
<tr>
<td>Reduce, re-use, recycle, trash, waste, compost, symbol, conserve, litter, glass, plastic, paper, cans</td>
<td>We want to make less trash. There are several ways we can help.</td>
<td>Looking for recycling symbol Placing reusables in a recycling bin</td>
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<tr>
<td>Act out sorting, recycling, and sharing. Act out <em>Trying to Use Less, Sharing With Our Friends, and Reduce, Reuse, Recycle.</em> Attend to <em>Don’t Throw That Away,</em> and <em>Recycling Is Fun.</em></td>
<td>Poke decorations on 2 sided tape, and glue decorations. Place recyclable container in the blue bin and trash in the brown bin.</td>
<td>Look for litter on the trail.</td>
</tr>
</tbody>
</table>
Pokies and Pricklies

Focus— adaptations for heat and drought
Hello and Name Songs
Finger play:
Cactus pads green and flat (hand pat like pancake)
With a sharp and pointy spine (1 finger touch to other like point)
And some fruits and flowers (open fist like tuna blooming)
Bright and looking fine! (clap)

• First 15 minutes—Gathering:
• Explore cacti in pots and cactus books.
• Explore other low water, high heat tolerant plants such as succulents, trees with multiply pinnate leaves, agave, yucca.
Learning
Cacti are green and can have pads and fruit and flowers. Cacti have sharp spines. Cacti don’t need a lot of water. Cacti have big spines (develop from leaf), and little spines (glochids). They have fruit called tunas and flowers. Some cacti have flat pads and some have pads like sticks. Cacti have names like Prickly pear, Pencil or Christmas cactus. The white on cactus is cochineal, from a scale insect—it makes red dye. Cacti don’t need a lot of water. Another plant that doesn’t need a lot of water is the yucca. Yucca constricta has narrow leaves and Yucca rupicola has twisted leaves. Read Cactus Charlie by Angela Muse and Ewa Podles and sing the Oh the Cactus and I’m a Little Cactus. Read Casey Cactus PowerPoint.

Second 15 minutes—Walk
Walk to find prickly pear and pencil cacti, agarita, sedges, sandbur grass, agave and yucca.

Third 15 minutes—Make and take
Stick toothpicks in green play dough to make a cactus.

Fourth 15 minutes—Snack
Spread celery with hummus and place cranberry tunas on. Spread agave honey on crackers and drink SoBe pomegranate drink.

Closing
Have the children place toothpicks on large paper cactus covered with two-sided tape. Review the song, story and fingerplay, sing Good-bye songs, pass out handouts and preview the next class.
Outcomes Pokies and Pricklies

Targets

• Cacti are green and can have pads and fruits and flowers.
• Cacti have sharp spines.
• Cacti don’t need a lot of water.
• Cacti survive in high heat.

Extensions

• Cacti have big spines and little spines (glochids).
• They have fruit called tunas and flowers.
• Some cacti have flat pads and some have pads like sticks.
• Cacti have names like Prickly pear, Pencil or Christmas cactus.
• *The white on cactus is cochineal,* from a scale insect—it makes red dye.
• Another plant that doesn’t need a lot of water is the yucca. Yucca constricta have narrow leaves and Yucca rupicola has twisted leaves.
• *Xeric* (heat adapted) plants use three techniques—escape=hide, e.g. bluebonnets (annuals), evade=avoid e.g. Artemisia (perennials) , endure=last it out (cacti, agaves, deciduous trees, etc.)
### Thinking about outcomes: Pokies and Pricklies

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<tbody>
<tr>
<td>Cactus, <em>tuna</em>, pad, flower, spine, <em>cochineal</em>, <em>glochids</em>, <em>xeric</em>, escape, evade, endure</td>
<td>Cacti are green and can have pads and fruit and flower. Cacti have sharp spines. Cacti don’t need a lot of water.</td>
<td>Exploring and observing <em>xeric</em> (low water, high temperature adapted) plants</td>
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<tr>
<td>Do the actions with <em>Oh the Cactus</em> and <em>I’m a Little Cactus</em>. Attend to Cactus Charlie.</td>
<td>Stick toothpicks in green play dough to make a cactus. Spread hummus dots on celery and press cranberries in.</td>
<td>Find cacti and yucca and observe and describe them.</td>
</tr>
</tbody>
</table>
Rockin’ and Rollin’

Focus—kinds of rocks and components of soil

Hello and Name Songs

Finger play:
Some rocks come from seas (wave hands)
And some rocks come from heat (volcano up)
And some rocks become soil (tilling)
But every rock is neat! (clap).

First 15 minutes—Gathering:

- Feel and look at lots of rocks (igneous, sedimentary, metamorphic and composite), clay, silt, and sand.
- Dig and sift bins of sand and rocks.
- Have books about rocks and soils out.
- Wash rocks.
Learning
Read *The Earth and I* by Frank Asch. Have the children feel clay, silt, and sand (with supervision). Act out the size differences with hands. Let them feel igneous (melted) and sedimentary (little pieces) rock. Act out being an igneous rock (volcano exploding) and a sedimentary rock (layer hands) or a metamorphic rock (circle hands). Talk about what the earth does--support, we stand on it (stamp feet), build on it (pat floor), grow things on it (hands go up). Soil has water (shake water jar), nutrients (show vegetable peel) and air (deep breath). Sing *The Worms Are Mixing Up the Soil.*

Second 15 minutes—Walk to look at soil and rocks.

Third 15 minutes—Make and take
Paint a rock with acrylic paint. Make a ‘landscape’ by painting weak glue on cardstock and sprinkling colored sand over the glue. Paint with mud. Make cornmeal (spud) mud pies.

Fourth 15 minutes—Snack
Put some a graham cracker in the bottom of the cup to represent the rocky parent material; add brown sugar, white sugar and Wilton gel for sand, silt and clay; crumble a brownie layer for humus, add sunflower seeds and raisins for small rocks and organic material.

Closing—Make a shaker with small pebbles for a rock band, and make a soil collage with contact paper the children can pat soil on. Sing good-bye songs: preview next class.
Outcomes Rockin’ and Rollin’

Targets
• Rocks are hard
• Rocks come in different shapes, colors and *textures* (feel)
• Rocks break up to make soil

Extensions
• Rocks are made in different ways.
• Rocks break up in many ways.
• Soil has several parts.
• Soil lies in layers.
Thinking about outcomes: Rockin’ and Rollin’

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<tr>
<td>Rock, soil, <em>humus</em>, <em>topsoil</em>, <em>subsoil</em>, <em>bedrock/parent</em>, <em>sand</em>, <em>silt</em>, <em>clay</em>, <em>igneous</em>, <em>sedimentary</em>, <em>metamorphic</em>, <em>composite</em></td>
<td><strong>Features of rocks</strong>&lt;br&gt;Parts of soil&lt;br&gt;Relationship of rocks to soil</td>
<td><strong>Exploring/observing rocks, soil and components</strong></td>
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<tr>
<td>Act out <em>The Worms Are Mixing Up the Soil.</em>&lt;br&gt;Attend to <em>The Earth and I.</em></td>
<td>Brush dilute glue on paper, sprinkle sand.&lt;br&gt;Paint rocks.&lt;br&gt;Crumple cracker and brownie.</td>
<td>Observe rocks and soil in the natural environment</td>
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Seeds We Need

Focus— Seeds travel in different ways.

Hello and Name Songs

Finger play:
The seeds are scattered everywhere (move hands all about)
Some by animals (bend down on all fours), some by air (puff).

First 15 minutes—Gathering:

- Have trays of seeds and seed foods we eat for the children to explore.
- Read A Fruit Is a Suitcase for a Seed, by Jean Richards, and let the children put foods into the suitcase.
- Do seed “dissection” with mango, avocado and kiwi.
Learning
Read *The Carrot Seed* by Ruth Krauss. Act it out using dolls, seed packet, watering can and weeder. Sing *Dropping Seeds* to *Frere Jacques*. Have lots of seeds to feel and scatter for the fingerplay. Use Velcro and cotton balls to simulate seeds catching in fur. Seeds sprout and grow into plants. Act out seeds travel in different ways—hooked onto animal fur, eaten by animals, and birds and “pooped out”, loosened as animals eat, or buried and hidden by animals. Seeds also travel on wind and water. We eat foods which are seeds—cereals, breads, beans, nuts, fruits, etc. Simulate seed travel by giving each child a real seed, (dry raisin, nut, wheat berry, grass or flower) and have them walk or run and drop the seed. Tell them we eat seeds and show them seed foods and foods made from seeds (grains). Transition with *The Sun and the Rain* by Toy Band on iTunes.

Second 15 minutes—Walk
Walk to find seeds and scat.

Third 15 minutes—Make and take
Plant seeds to take home. Make a seed collage (seeds in Model Magic).

Fourth 15 minutes—Snack
Make edible seed collage with hummus or sunflower butter, nuts and dry fruit on a rice cake. Transition with *The Sun and the Rain* song.

Closing
Have the children place beans, rice and popcorn on a poster of a forest. Use *The Sun and Rain* song to regroup, and sing the good-bye songs, and preview the next session.
Outcomes Seeds We Need

Targets
• We eat seeds and foods made from seeds.
• Some foods are seeds and others have seeds inside.
• Seeds travel and spread in lots of different ways.

Extensions
• Seeds travel by sticking to animal fur, being eaten and “pooped out”, and being hidden by animals.
• Seeds can travel by air or water.
## Thinking about outcomes: Seeds We Need

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<tbody>
<tr>
<td>Seeds, fruits, vegetables, grow, sprout, plants, flowers, grass, travel (<em>dispersal</em>)</td>
<td>Plants come from seeds. Many foods come from seeds. Animals eat seeds. We eat seeds. Seeds travel in different ways.</td>
<td>Using all the senses to explore seeds and plants that grow from seeds</td>
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<tr>
<td>Acct out the seed fingerplay and <em>Dropping Seeds</em> movements. Act out <em>The Sun and the Rain</em> song. Attend to <em>The Carrot Seed</em>.</td>
<td>Poke seeds into Model Magic with extended finger. Poke seeds into dirt to plant them. Pour water in cup to water seeds. Spread humus on rice cake and place seeds on it.</td>
<td>Participate on walk by observing grass, flower, plant and tree seeds. Look for seeds in <em>scat</em>.</td>
</tr>
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Turkeys Are Terrific

Focus—turkey anatomy
Hello and Name Songs

Finger play:
The turkey is a funny bird (hands make big belly)
Its head goes wobble, wobble (side to side)
And the only thing that it can say (up and down)
Is gobble, gobble, gobble! (front and back)

• First 15 minutes—Gathering:
  • Feel feathers and turkey models.
  • Make paper bag wings, breast, tails and heads and use “bag” wings, breasts, tails and heads to practice movements (flap, puff out, gobble, roost in nests).
  • Make “nests” out of boxes filled with shavings and roost on plastic eggs.
Learning
Talk about hen and tom (mommy and daddy) turkeys, poult (babies) and jennies and jakes (young female and male turkeys). Compare the turkey roles to babies, children, and grown-ups. Strut (practice with puffy chests forward and hands in back forming tails), roost (sit on=squat) and gobble (practice). Play hen and tom turkeys—sit on make believe nests (crushed brown paper bags) and strut. Talk about camouflage (hiding). Turkeys have feathers. They eat seeds. They live in forests. Toms are colorful so they are handsome. Hens blend in so they are hidden and safe. Turkeys have \textit{beards}, \textit{wattles}, \textit{caruncles}, \textit{dewlaps}, \textit{snoods}, and \textit{spurs}. A group of turkeys is a \textit{rafter}. Read \textit{I’m a Turkey} by Jim Arnosky or \textit{10 Fat Turkeys} by Tony Johnston and sing \textit{The Turkey Pokey} and \textit{Turkey Has a Red Feather} (Give each child a colored feather.).

\textbf{Second 15 minutes—Walk}
Take a walk in the woods to find good roosting, feeding, and hiding places. “Seed” the trail with hard boiled eggs or plastic eggs in nests for the children to discover.

\textbf{Third 15 minutes—Make and take}
Do feather painting. Make a Model Magic, stick and grass nest, in a bowl.

\textbf{Fourth 15 minutes—Snack}
Make your own turkey food mix of dried cranberries and other fruit, nuts, seeds.
Transition: Strut into the circle.

\textbf{Closing}
Have the children tape feathers on a big paper turkey in the front of the room. Review the song, story and fingerplay, sing Good-bye songs, pass out handouts and preview the next class.
Outcomes Turkeys Are Terrific

Targets
• Turkeys have feathers, wings and tails.
• Turkeys sit on eggs in nests.
• Turkeys roost in trees.
• We have special names for turkeys at different ages.
• Turkeys gobble.

Extensions
• Turkeys have beards, wattles, caruncles, dewlaps, snoods, and spurs.
• Baby turkeys are poults, young girl and boy turkeys are Jennies and Jakes, and grown up turkeys are Hens and Toms or gobblers.
• Turkeys can run and fly.
• A group of turkeys is a rafter.
Thinking about outcomes: Turkeys Are Terrific

<table>
<thead>
<tr>
<th>Vocabulary</th>
<th>Concepts</th>
<th>Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wings, tails, feathers, <em>wattles, caruncles, dewlaps, beards, spurs</em>, turkeys, toms, hens, <em>poults, jennies, jakes</em>, rafter, roost, nest, eggs</td>
<td>Body parts of turkeys, stages and roles of turkeys, turkeys run, fly, roost and gobble</td>
<td>Tracing hand, assembling nest, imitating turkey actions</td>
</tr>
</tbody>
</table>

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<tr>
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<tr>
<td>Imitate actions in <em>The Turkey Pokey</em> and <em>Turkey Has a Red Feather</em>. Attend to <em>I’m a Turkey</em> or <em>10 Fat Turkeys</em>.</td>
<td>Paint with feathers. Assemble nest pieces and press them into the Model Magic nest. Use pincers to get “turkey” foods.</td>
<td>Find eggs. Observe places turkeys could roost or find food.</td>
</tr>
</tbody>
</table>
**Water, Water Everywhere**

**Focus**— Water states, cycle, forms and uses

**Hello and Name Songs**

**Finger play:**
Water in the river, (hands make waves)
Water in the pool, (swim)
Water from the faucet, (turn handle)
Rain water makes us cool (raindrops falling).

**First 15 minutes—Gathering:**

- Have ice, water and spray bottle for the children to explore, pails of water with containers and funnels for pouring, as well as sponges and bubbles.
- Have books about water.
- Have pictures of some forms of water—lakes, streams, rivers, oceans, glaciers, waterfalls, pools, rain—and ways we use water—drinking, washing, bathing, shampooing, brushing teeth.
- Paint the walls and tables with water.
Learning
Read *Water* by Frank Asch. Have the children act out ways we use water. Talk about how plants and animals use water. Ask the children to tell you where we have water in class. Then have them point to themselves and say we are made of water. Have the children show, with hands and arms, different bodies of water (pond=hand close together, lake =make an arm circle, ocean=spread arms wide, creek=finger, river=arm out). Act out *adhesion* (Press hands to floor.) and *cohesion* (Press hands together). Act out water *molecules* for states of water (hands still for ice, hands flowing for water, hands moving fast for vapor). Act out water cycle—*evaporation, condensation, precipitation*—with hands up, then making circle cloud overhead, and falling down. Read *We Need Water*, by Charles Ghigna. Sing the water states, forms, cycle, and use songs.

Second 15 minutes
Walk to find sources and uses of water. Do a water walk or water play.

Third 15 minutes—Make and take
Make a paper plate water source with foil, bubble wrap, and blue cellophane and attach water creatures. Paint with water and food coloring on paper towels.

Fourth 15 minutes—Snack
Use a tub of ice and water bottles for snack of Goldfish and watermelon.

Closing
Attach items that use water, boats, cups, plants etc. to water poster. Review the songs, story and fingerplay, sing Good-bye songs, pass out handouts and preview the next class.
Outcomes Water, Water Everywhere

Targets
• Animals and plants need water to live.
• We use water in lots of different ways—drinking, cooking, bathing, cleaning, recreation.
• There are many sources of water—lakes, rivers, rain, faucets, bottles.

Extensions
• Water takes 3 states—gas, water and ice.
• Water cycles through these forms.
• Water is also in clouds, breath, tears, glaciers and icebergs.
• We conserve water.
• Water has properties of adhesion and cohesion; we can observe surface tension and capillary action.
# Thinking about outcomes: Water, Water Everywhere

<table>
<thead>
<tr>
<th>Vocabulary</th>
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<tr>
<td>Water, river, lake, pond, stream, creek, ocean, rain, cloud, steam, ice, wet, dew, cold, hot, recreation, evaporation, condensation, precipitation, cohesion, adhesion, surface tension, capillary action</td>
<td>Water is necessary for all living things. There are lots of forms of water. We use water in lots of ways. Water changes state in water cycles.</td>
<td>Pouring, stirring, painting, washing, wiping, squeezing, dabbing, painting</td>
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We Love Leaves

Focus — leaves color change and leaf foods

Hello and Name Songs

Finger play: The leaves are blowing (blow) all around (hands go around)
They go up in the air (reach high) and down to the ground (bend over and touch the ground)!

• First 15 minutes—Gathering:
  • Rake leaves and sweep leaves.
  • Examine a variety of leaves using all four senses.
  • Gather leaves.
  • Make a leaf fort.
  • Jump in leaf piles.
  • Crumple leaves.
Learning
Have a tray of leaves of plants we use, including foods we eat, and leaves we smell. Use all the senses (taster foods in individual baggies) to learn about leaves. Pass around leaves of different shapes, sizes, textures, colors, for children to explore. Leaves have veins, teeth or lobes—compare to veins in our arms, teeth in our mouths, earlobes. Insects may lay eggs on a leaf; the tree makes a gall to protect itself. We eat leaf foods; animals eat leaf foods. Act out parts of a tree with sounds and actions—Heartwood makes the tree strong. (lubdub, pat chest), roots get food and water from the soil. (slurp, squeeze hands by feet), water and nutrients go up to give the tree food and drink—whoosh, leaves make energy (engine, rotate hands, chug-chug), the sun helps the leaves make energy which goes down to the tree (whoosh), the bark is like clothing that protects the tree (give a hug). Read Fresh Fall Leaves by Betsy Franco, Let It Fall by Maryann Coca-Leffler, or Leaves by David Ezra Stein. Sing Autumn Leaves Are Falling Down and Leaves Are Falling. Transition to The Sun and the Rain song by Toy Band, The Wise Guy Preschool Songs.

Second 15 minutes—Walk
Collect leaves for art. Use smell/feel/look to compare leaves and bark. Smell tree fruit or flowers. Match paint color samples to bark and leaf colors.

Third 15 minutes—Make and take
Paint with leaves. Place crumpled leaves on paper brushed with glue.

Fourth 15 minutes—Snack
Make leafy wraps by having the children wrap cheese (cubes or strings) in a lettuce leaf. Transition to The Sun and the Rain song by Toy Band, The Wise Guy Preschool Songs.

Closing
Have the children tape real leaves on a large tree made out of brown paper in the front of the classroom. Review the songs, sing the Good-bye songs, and preview the next session.
Outcomes We Love Leaves

Targets

• Leaves grow on plants and trees.
• Leaves come in different shapes and sizes.
• Leaves turn colors in the fall.
• We eat leafy foods.
• Each tree part—roots, trunk, leaves and bark--has a function.

Extensions

• Leaves have different textures and shapes.
• Leaves have different smells, and colors.
• Leaves have veins and stems.
• Some leaves have teeth or lobes.
• Color changes are triggered by cold and light and are due to chemical changes as the leaf dies.
Thinking about outcomes: We Love Leaves

<table>
<thead>
<tr>
<th>Vocabulary, leaves, trees, green, red, yellow, brown, orange, veins, rough, smooth, hairy, scratchy, shiny, lettuce, spinach, vein, stem, lobe, teeth</th>
<th>Concept</th>
<th>Skills—using the senses, observing, painting, raking, sweeping leaves</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>We can use all our senses to experience leaves. Leaves grow on different plants. We eat leafy foods.</td>
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<td>Act out Autumn Leaves Are Falling Down and Leaves Are Falling. Attend to Let It Fall, Leaves, Fresh Fall Leaves.</td>
<td>Dip leaves in paint and dab on paper. Roll cheese in leaves.</td>
<td>Observe trees, plants, and leaves using all the senses</td>
</tr>
</tbody>
</table>
Where’s the Energy?

**Focus**— energy from plants

**Hello and Name Songs**

**Finger play:**
Animals and plants give us foods to eat,
Give us energy and grow our hands and feet!

- **First 15 minutes—**
- **Gathering:**
  - Pull pictures of foods out of reusable bags.
  - “Shop” for toy food with a reusable bag or toy grocery cart.
  - Have plastic bags with garden picture and vegetables; a farm picture and eggs, cheese, meat, grains; an orchard picture with fruit and nut; factory picture with processed food inside.
Learning
We get food from different things—animals and plants. Animals and plants need sun and water and air and a safe place to grow. Different animals eat different things. We call animals that eat plants **herbivores**. We call animals that eat meat **carnivores**. We call animals that eat insects **insectivores**. We call animals that eat different kinds of foods **omnivores**. Have a bag decorated with animal pictures and pull out eggs, cheese, luncheon meat which come from animals. Have a bag decorated with trees and pull out nuts, orange and orange juice. Have a bag decorated with grain and pull out bread slice and baggie of cereal. Have a bag decorated with vegetables and pull out carrot and cucumber. Read *Eating the Alphabet* by Lois Ehlert. Sing *Where’s the Energy*?

**Second 15 minutes—Walk**
Take a walk to find possible foods in the woods—leaves, nuts, berries, insects, animals, birds.

**Third 15 minutes—Make and take**
Have a tan circle on a plate and let children squeeze red, brown, yellow and green paint “toppings”, to make a “pizza”.

**Fourth 15 minutes—Snack**
Provide quarter flour tortillas, grated cheese, and cup of tomato sauce and let children make a pizza wedge.

**Closing**
Stamp or place stickers of foods on a large brown paper grocery bag. Review the songs, story and fingerplay, and sing Good-bye songs. Pass out handouts and preview the next class.
Outcomes Where’s the Energy

**Targets**
- Plants give us food.
- Animals and insects can be food too.
- Plants need sun and rain and space to grow.

**Extensions**
- Plants make energy and food from the sun.
- We get energy from food from plants and animals.
- Animals get energy from eating plants or other animals.
- We eat a “rainbow” of foods to get all kinds of energy.
Thinking about outcomes: Where’s the Energy

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<tr>
<td>Plant, animal, sun, food, energy, rainbow, herbivores, carnivores, omnivores, insectivores</td>
<td>Plants make energy and food from the sun and earth and water. Animals can eat plants, insects and animals.</td>
<td>Acting out growing, exploring foods</td>
</tr>
</tbody>
</table>

**Music and Story**
- Attend to *Eating the Alphabet*. 
- Do the actions with *Where’s the Energy*.

**Art/ Snack**
- Squeeze paint on a plate. 
- Spreading tomato sauce on tortilla. 
- Sprinkling grated cheese on tortilla.

**Walk/Explore**
- Use the senses to observe plants and animals.
Wild Things

Focus— wild, pet, domestic animals

Hello and Name Songs

Finger play:
Animals can be tame (Smile) and you want to have them play (Hug).
Animals can be wild (Frown) and you need to stay away (Move feet quickly.).

Animals can be friendly (Smile) and you want to have them play (Hug).
Animals can be scary (Frown) and you want to run away (Move feet quickly.).

• First 15 minutes—Gathering:
  • Play with toy animals—pets, domestic and wild.
  • Look at animal cards of wild and friendly animals and choose an animal to act out.
  • Move like an animal.
  • Have three bins—one with a zoo picture on it and the wild animals in it, one with a barn picture and domestic animals, and one with a house and pets inside. Let the children pull animals out of the bins. Have additional animals for the children to put in the bins.
  • Have zoo and farm sets for play.
Learning
Wild animals survive on their own; pets or domestic animals depend on us to survive. Read the modified *A Day in a Life* story and act it out. Discuss animals’ basic needs—water, food, shelter. Talk about feelings and act out “friendly” with hugging stuffed animals, and scary with putting stuffed animals “in the zoo”. Read Brian Wildsmith’s *Wild Animals, Who is Beast?* by Keith Baker. Sing the *Wild Animal or Here We Sit Watching in the Wilderness* song.

Second 15 minutes—Walk
Take a hike and find traces of animals, sources of food and water, and possible “homes”. You can plant toy animals on the trail for children to find.

Third 15 minutes—Make and take
Have the children mold Model Magic and stick pipe cleaner pieces into it to design their own animal.

Fourth 15 minutes—Snack
Press animal crackers on a square cracker covered with hummus or sunflower butter.

Closing
Transition by moving like animals to a poster of a house, barn and zoo. Stick domestic, wild and pet animals on the poster. Review the songs, story and fingerplay, and sing Good-bye songs. Pass out handouts and preview the next class.
Outcomes Wild Things

Targets
• Some animals are scary and some animals are friendly.
• We see wild animals in the zoo.
• We see domestic/farm animals on farms.
• We have pets in houses.

Extensions
• Wild animals live in forests and deserts and jungles.
• Wild animals take care of themselves.
• We take care of pets and farm animals.
• We get food from farm animals.
Thinking about outcomes: Wild Things

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<tbody>
<tr>
<td>Scary, friendly, wild, zoo, <em>domestic</em>, farm, pets, <em>tame</em></td>
<td>We have feelings about animals. We see animals in different places. Some animals take care of themselves and we take care of some animals.</td>
<td>Acting out animal movements, acting out feelings</td>
</tr>
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<tr>
<td>Doing the motions with <em>Wild Animals</em> or <em>We Sit Watching in the Wilderness</em>. Attending to <em>Who Is Beast</em>? Acting out the dog and squirrel.</td>
<td>Poke pipe cleaners into Model Magic bodies to design an animal. Poke animal crackers on a cracker spread with hummus or sunflower butter.</td>
<td>Look for animals and places animals can live and things they could eat.</td>
</tr>
</tbody>
</table>
Worm Tracks

Focus— worm anatomy and functions

Hello and Name Songs

Finger play:
Earthworms break up garbage (mixing with hands), earthworms are neat (cheer).
Earthworms turn the soil (mixing motion) and birds find them a treat (pretend to be a bird pecking at an earthworm)!

- First 15 minutes—Gathering:
  - Observe and feel worms.
  - Have worm fishing lures to find in dirt bins.
  - Find night crawlers in a pile of dirt.
Learning
Use a slinky to demonstrate stretching, corrugated cardboard to demonstrate segments, brush for *setae*, and long balloons for circular and longitudinal muscles, envelope flap for *prostomium*, food grinder for *gizzard*, plastic bag for *crop*, and silly putty for squishy. Have the children make a hand circle and squeeze it for circular muscles and put arms out wide and bring them together for longitudinal muscles. Demonstrate how the muscles make the worm move. Demonstrate aeration with clumps of soil. Ask if each one is a boy or girl. Worms are both boy and girl! Read *Bob and Otto*, by Robert O. Bruehl, *The Game of finger Worms* by Herve Tullet or *Wormy Worm*, by Chris Rashka. Sing *Worm Bin Pokey* and *The Worms are Mixing Up the Soil*. Make a worm line and dance out to the walk with *Wriggly Worm* by Kidzone.

Second 15 minutes—Walk-
Walk to find places worms might live—have a pile of dirt on a tarp or shoe boxes with dirt and seed them with nightcrawlers. Have the children find and explore worms.

Third 15 minutes—Make and Take
Make Model Magic worms—roll back and forth to make a long shape and use plastic fork to make segments. Do worm painting with mud or paint and fishing worm lures.

Fourth 15 minutes—Snack
Make worms and soil snacks—crush and “aerate” Little Debbie brownies and place in cups with gummy worms and spoons. Transition with *Wriggly Worm* by Kidzone.

Closing
Attach yarn “worms” to a poster with dirt glued on. Review the song, story and fingerplay, and sing Good-bye songs. Pass out handouts and preview the next class.
Outcomes Worm Tracks

Targets

• Worms are small, and long, with bumps (segments), and bristles (setae).
• Worms move by squeezing circle muscles and lengthening long muscles; the bristles grip.
• Worms make good soil by adding air and turning material into fertilizer.

Extensions

• Worms don’t have teeth. Their gizzards, with stones and dirt they swallow, grind food.
• Worm “mouths” (prostomium) are shaped like envelopes.
• They have crops like bags, to store food.
• They have 5 hearts.
# Thinking about outcomes: Worm Tracks

<table>
<thead>
<tr>
<th>Reference Vocabulary</th>
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</tr>
</thead>
</table>
| earthworm, *segments*, *crop*, gizzard, bristles, setae, soil, aerate, fertilizer | Earthworm parts  
Earthworm movement  
Earthworm function          | Imitating actions  
Exploring earthworms using vision and touch |

- **Music and Story**
  - Act out the movements in *Worm Bin Pokey* and *The Worms Are Mixing Up the Soil*.
  - Attend to *Wormy Worm* and *Bob and Otto*.

- **Art/Snack**
  - Roll Model Magic into a long tube.
  - Make segments with a fork.
  - Dip rubber worms in paint.
  - Paint with rubber worms.
  - Crumple the cracker and brownie.

- **Skills**
  - Walk to find worms and dirt and rocks.
  - Touch the worms.
  - Watch the worms moving.