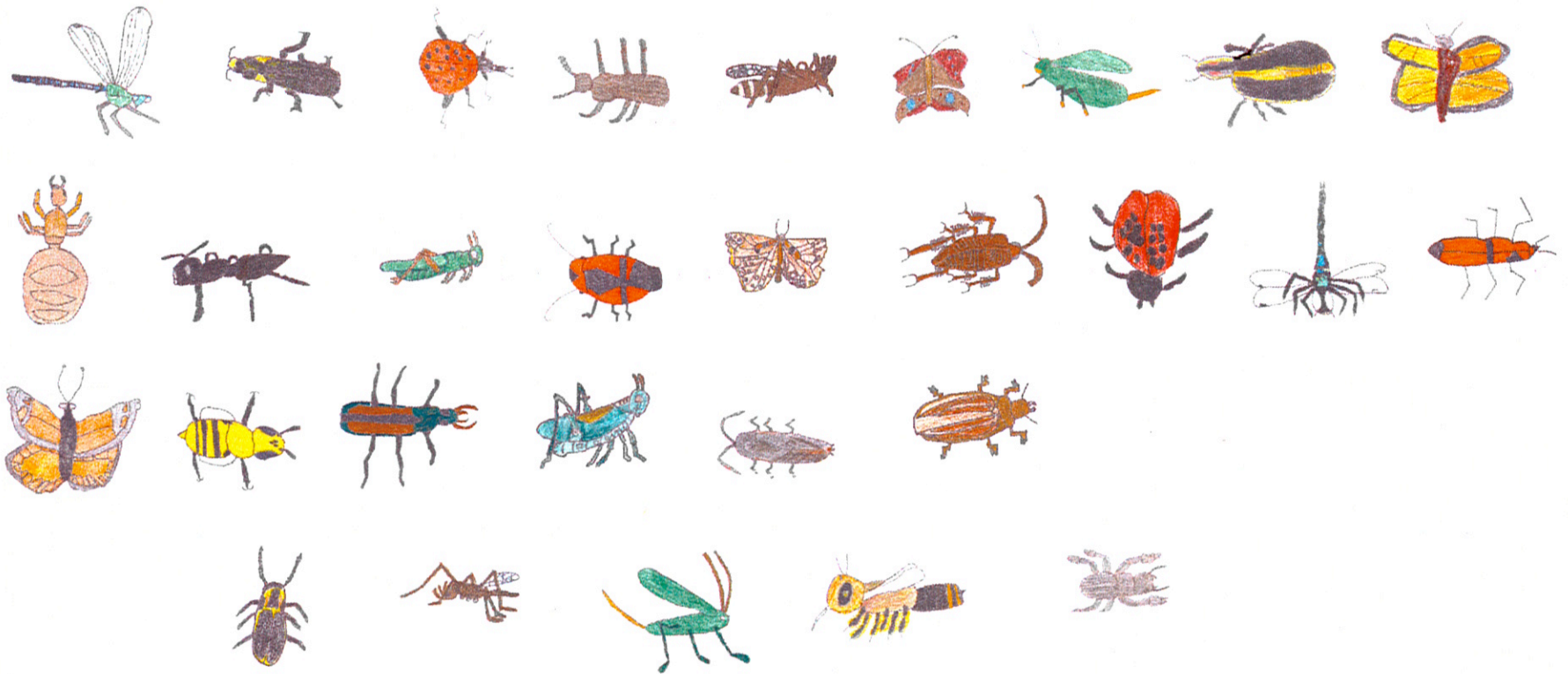


Field Guide to Insects in Western Massachusetts



Written and Illustrated by Grade 2 Students in Room 24

Table of Contents

Ryan and Kaylie	Ants
Helena and Angelica	Bees
McGuire and Samuel	Beetles
Brendan and Matthew	Cockroaches
Jada and Jose	Crickets
David, Frankie, and Coty	Darkling Beetles
David and Amanda	Dragonflies
Tri and Julian	Fireflies
Kiara and Alejandro	Grasshoppers
Damean and N'Shiya	Ladybugs
Sidney and Leanne	Milkweed Bugs
Naomi and Kamri	Monarch Butterflies
Joel and Elyjah	Mosquitoes
Miriam and Emily	Painted Lady Butterflies

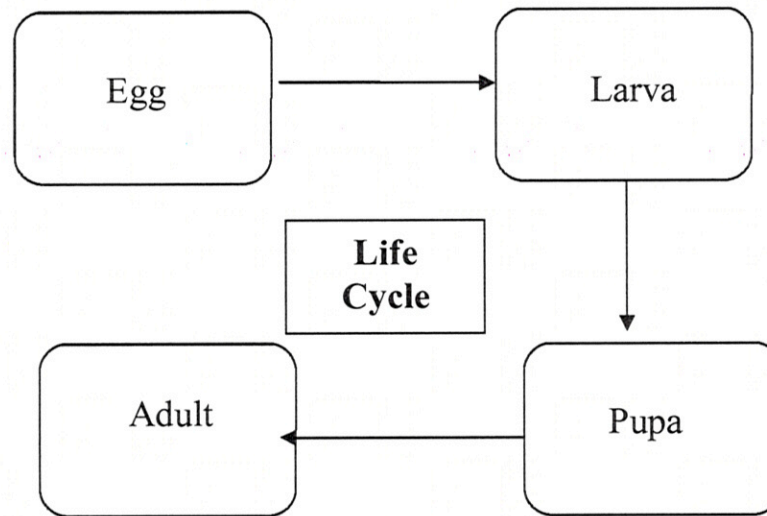
Ants

Habitat

Ants live everywhere in the world except Antarctica. They live in North America, South America, Africa, Europe and Asia. Ants live in trees and hollow logs. Ants can live in your home too! Sometimes they get in your plants and garden. You can find ants just about everywhere. Ants live in **colonies**.

Predators

The ants' predators are anteaters, lizards, birds, beetles, frogs, spiders. Other insects eat ants. Sometimes ants fight each other. Ants are also eaten by worms. Some ants even eat ants from different nests.



What do ants eat?

Ants eat worms, aphids, caterpillars, plants, seeds and sometimes they eat cookie crumbs. Ants eat fruit, beetles, termites, flies, spider eggs, and earthworms. Ants even eat other ants.

Interesting Facts:

- Some people use a biting ant head on their cut like stitches.
- Ants are strong for their size and can carry 20-50 times their weight.
- A queen can live from ten-twenty years.

Characteristics

An ant's body is divided into three sections they're called the head, thorax and abdomen. Some ants have wings on their thorax. Ants have three jointed legs on each side of their thorax. An ant's head has two eyes, two antennas and mouthparts on the front of the head. A narrow waist connects the thorax and abdomen together. Some ants can be brown, red, black, green or gray.

Bees

Habitat

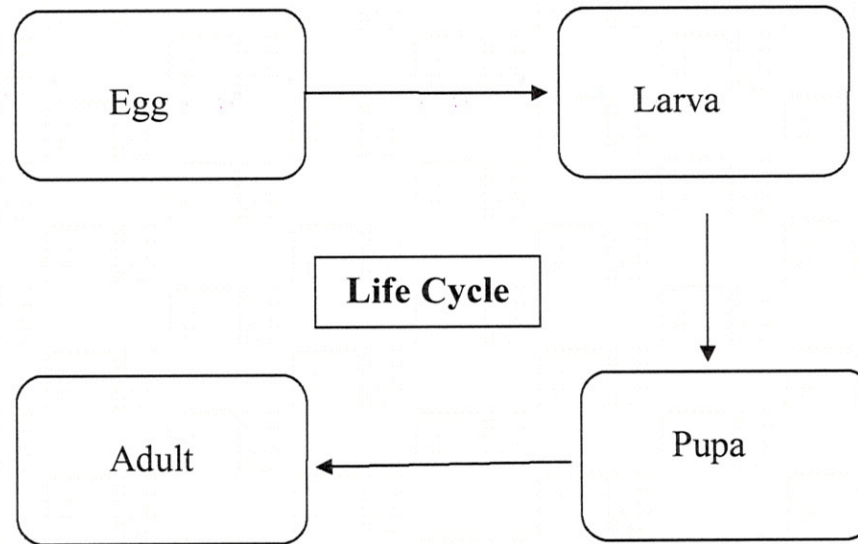
Most bees are found in hives. They also live underground. Lots of bees live in people's houses. Bees live in hollow trees and stumps. Bees live in **colonies**.

Predators

Bees have one kind of predator. Some birds eat bees.

How are bees helpful?

Bees are helpful because they make honey for us. They also help plants. They go from flower to flower collecting pollen. When they go to another flower they leave pollen behind. The flower uses the pollen to make new seeds.



What do bees eat?

Bees eat a little pollen, and nectar. Bees eat honey in the cold weather. They get the food from different flowers. The young eat the bee bread.

Interesting Facts

- Bees are social insects that live in hives.
- Bees can fly 15 miles per hour.
- The queen bee spends her life laying eggs.

Characteristics

Bees have a hairy body with brown and yellow hairs. They have black and yellow stripes. Bees have eyes that can see up, down, backwards and forward at the same time. They have three eyes on top of their head. They have 5 eyes in all. Bees have antennas that touch and smell.

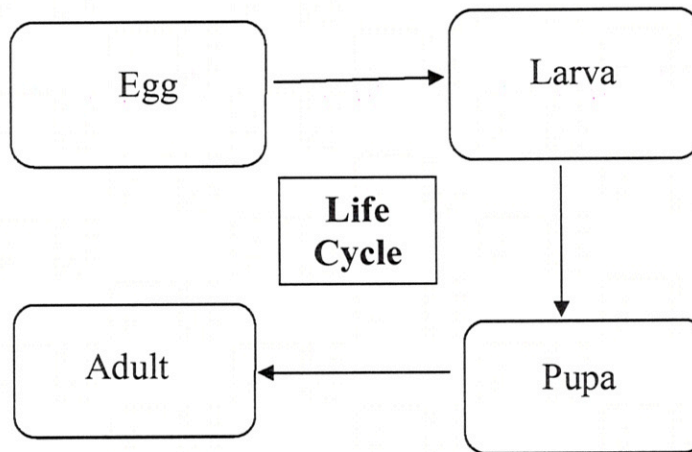
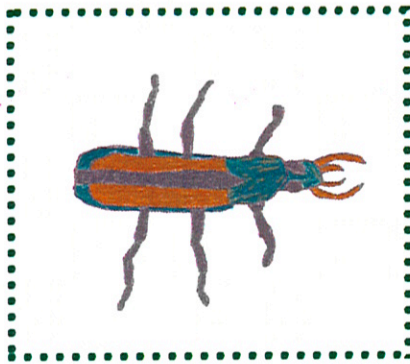
Beetles

Habitat

Beetles live in nearly every country on Earth. They live in rivers and streams. They live in grassland and woodlands. They live on mountains too.

Predators

Beetles predators are frog and birds. Other predators are lizards. Some people eat them in soup.



What do Beetles eat?

Beetles eat snails and worms. They also eat tadpoles. Some kill and eat dead animals, plants and seeds. Some beetles kill animals to eat.

Interesting Facts

- Goliath beetle is as big as man's fist.
- Scarab beetles are one of the largest in the world.
- Glow worms and fire flies are beetles.

Characteristics

A beetle has six legs. It has three body parts. The three body parts are called head, thorax, and abdomen. They have hairy legs and two eyes. Most beetles are black, brown, or dark red.

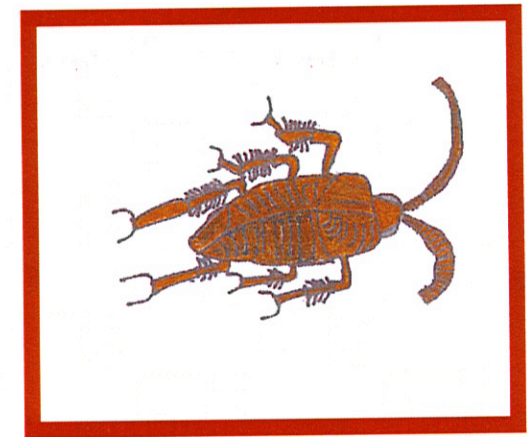
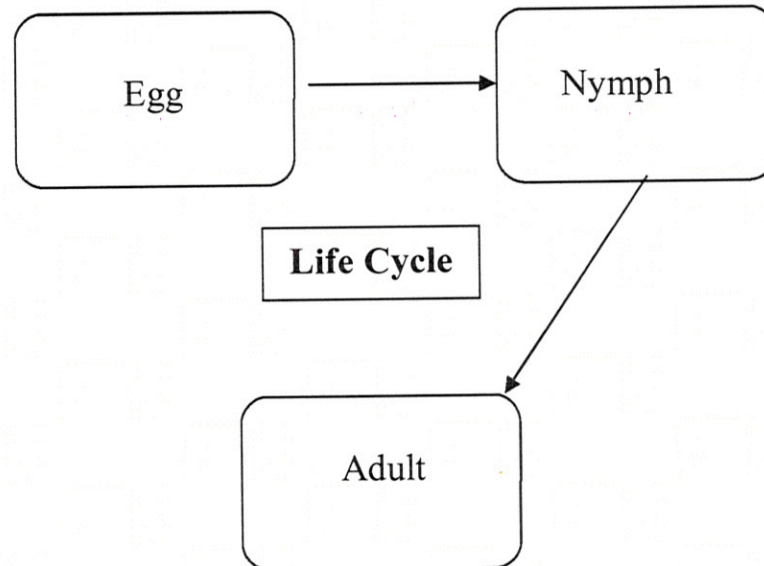
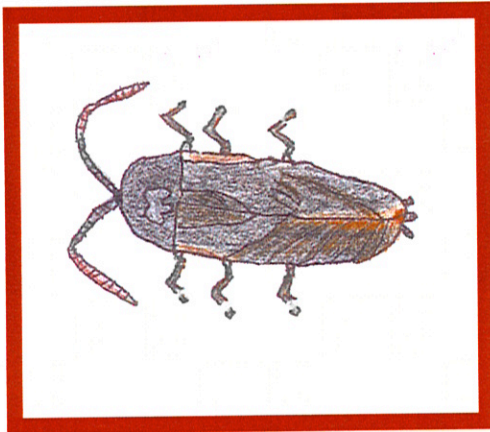
Cockroaches

Habitat

Cockroaches live most anywhere. They can live on forest floors and under rocks. Cockroaches can live in caves and in your home.

Predators

Cockroaches' predators are lizards, frogs, bird, and toads. Did you know people in other countries eat cockroaches? People use chemicals to kill cockroaches.



What do cockroaches eat?

Cockroaches eat whatever they can find. They eat soap, paper, and glue. They also eat dead or dying plants, dead or dying animals and rotting wood. Some cockroaches eat their own cast off skin and egg capsules. Cockroaches nibble at book bindings, photographic film, starched linen, and leather goods.

Interesting Facts

- There were cockroaches in the world about 300 million years ago.
- They stay hidden all day and look for food at night.
- They can run 12 feet in one second!

Characteristics

Cockroaches look very hairy. They have two pairs of wings and two pairs of feelers. They have thin legs and flat oval bodies. Cockroaches have long legs covered with bristles. It feels through its **bristles**. Cockroaches have feelers that act like a nose. They have a pair of long feelers on there head.

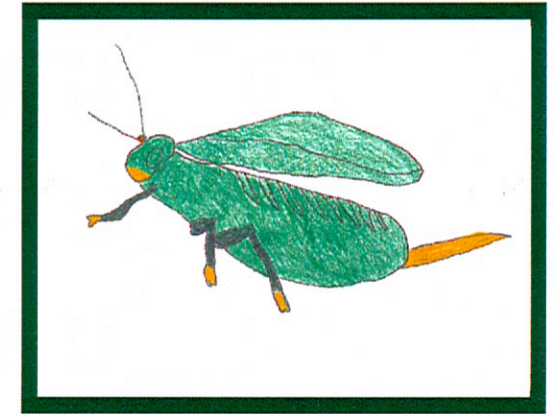
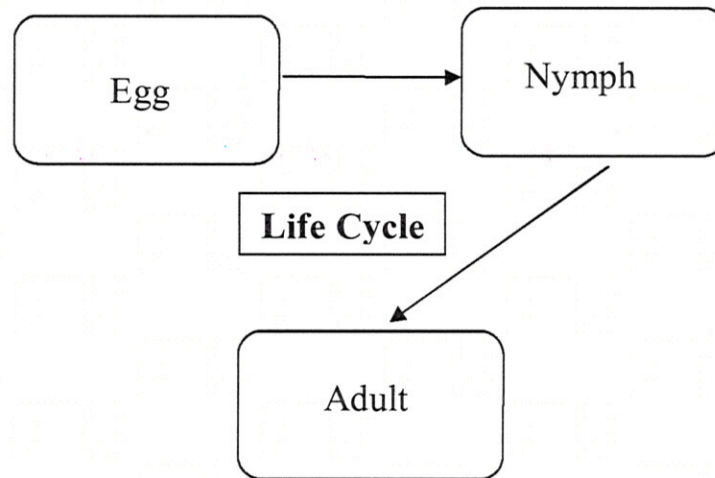
Crickets

Habitat

Field crickets live in meadows all over the world. Some live indoors. Some live on the ground or in trees. Crickets live in wet, dark places in the woods of Europe and they live in the savannas of Africa. They live in Australia. They may also live in your backyard in North America.

Predators

The crickets' predators are cats, lizards, frogs, snakes, skunks, birds, reptiles, rodents, and spiders, too.



What do crickets eat?

Crickets eat many plants. The mole cricket eats roots and seedlings. Some crickets only eat the plants and animals. The kinds of food a cricket eats depends on what kind of mouthparts it has. House crickets eat almost anything. When they eat their jaws move sideways.

Interesting Facts

- Crickets chirp faster when it is warmer. The colder it gets the less they chirp.
- You can hear crickets from the spring to the fall during the day or night.
- Crickets **molt** many times as they develop.

Characteristics

Crickets have four wings on their thorax. Crickets have white and yellowish blood. They also have long antennae. Crickets are brown with black stripes. Some are green. A cricket has a head, thorax and abdomen and three pair of legs. The head is the first part. The thorax is the middle part. The abdomen is the last part.

Darkling Beetles

Habitat

You can find darkling beetles in the USA, Mexico, and Europe. You should look in dark corners, barns and in cereal and grain. The best time to look for them is at night because darkling beetles are **nocturnal**.



Predators

One of the darkling beetles predators are spiders. Lizards also eat darkling beetles predators. Rodents are their predators too. Even other beetles eat darkling beetles.

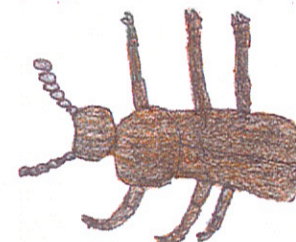
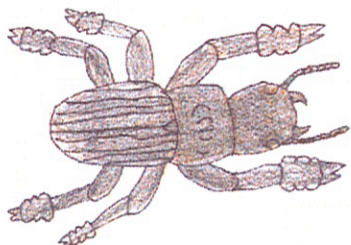
Egg

Larva
(mealworm)

Life
Cycle

Adult

Pupa



What do darkling beetles eat?

The darkling beetles eat little pieces of grain. They eat sticks and falling leaves that are rotting. The darkling beetles also like eating poop.

Interesting Facts

- Each female can lay about 275 eggs.
- Mealworms don't have lungs. They have **spiracles**.
- Mealworms are insects not worms.

Characteristics

Darkling beetles are so small and hard to see. They have a head, thorax abdomen. Their antennae are next to their eyes. The Darkling beetles are black or brown or yellow.

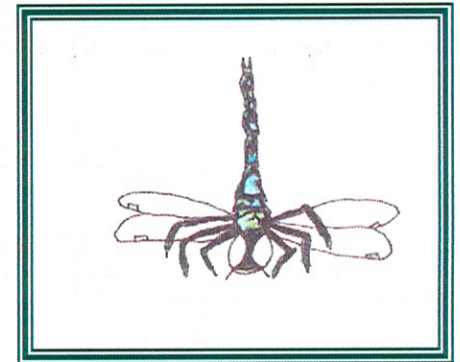
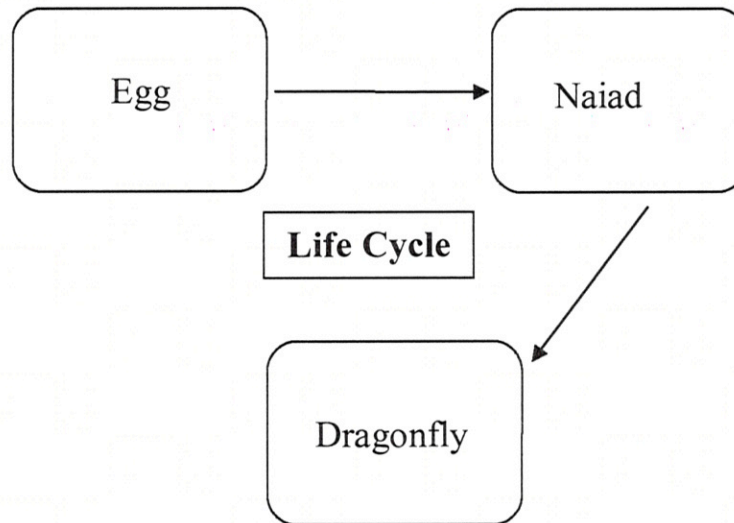
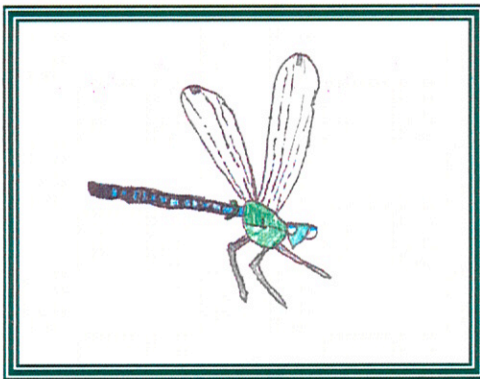
Dragonflies

Habitat

Dragonflies live all over the world. Most dragonflies live near water like lakes. Dragonflies live near water for many reasons. One reason is because the adults lay eggs in the water. Another reason is because they look for food in the water and to look for food.

Predators

Frogs eat many dragonflies. Mosquitoes, flies and gnats are other predators. Bees and fish are also predators.



What do dragonflies eat?

Dragonflies eat many kinds of insects and creatures like mosquitoes, flies, gnats, bees, frogs and fish. Sometimes they catch their prey in mid-air! When they eat their prey they fold their legs into a basket.

Interesting Facts

- Dragonflies can lay about 100,000 eggs at once.
- There are 5,000 kinds of dragonflies.
- They lived 300 million years ago.

Characteristics

Dragonflies have two short antennae on top of their head. They have colorful skin like red, blue and yellow. They also have huge **compound eyes** on the sides of their head. Damselflies and dragonflies look alike. They have 4 wings and 3 body parts with six legs on their thorax.

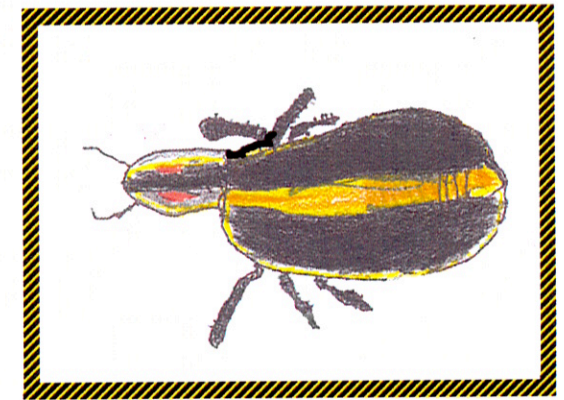
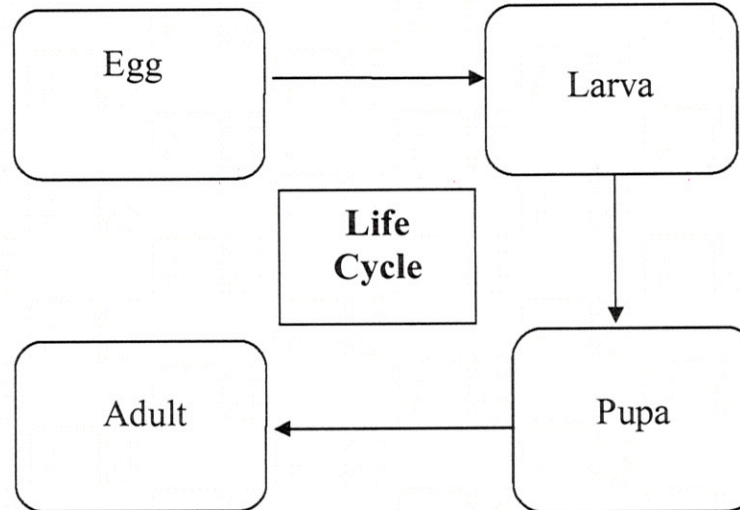
Fireflies

Habitat

Fireflies live in trees and woods and bushes. You can find fireflies in the United States. They live near ponds and streams.

Predators

One predator of the firefly is the lizard. Frogs and toads are also predators. Other predators are spiders, birds and fish.



What do fireflies eat?

Fireflies eat slugs and snails. They also eat tiny insects. Fireflies look for food at night. They are **nocturnal**.

Interesting Facts

- The firefly uses its front wings to protect its body.
- There are more than 2,000 kinds of fireflies.
- Females lay their eggs in soil.
- There are chemicals in the abdomen that help the firefly light up.

Characteristics

Fireflies have a flat body that is black or brown with red or yellow markings. Fireflies have three body parts called the head, thorax and abdomen. Fireflies are about 2 centimeters long. Fireflies have six legs. The six legs are attached to the thorax. The antennae are attached to the head. Fireflies have two large eyes.

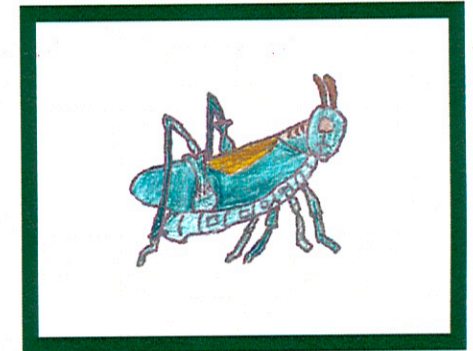
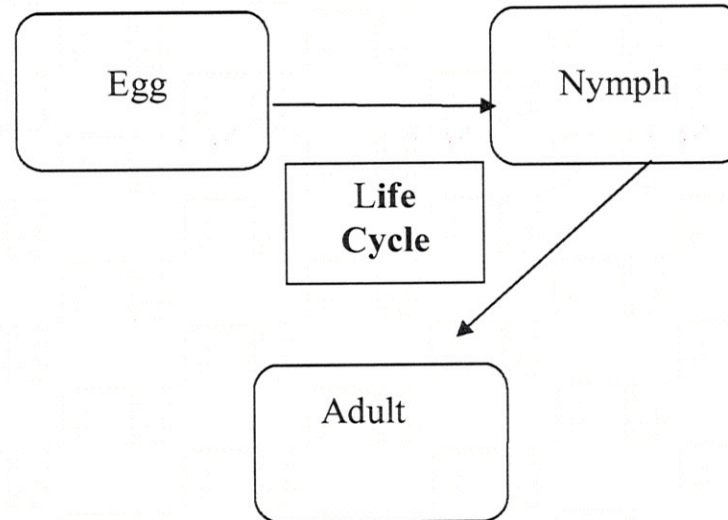
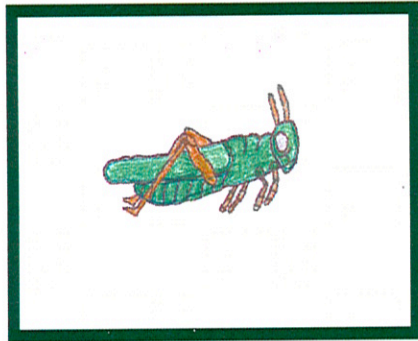
Grasshoppers

Habitat

You can find grasshoppers all over the world except the north and south poles. Some types live in sand or on cliffs. Some grasshoppers live in large green fields. Most grasshoppers live in grassy places.

Predators

Many things eat grasshoppers. They are birds, snakes, beetles, frogs, spiders, some rodents and reptiles. Grasshopper's eggs are sometimes eaten by flies. Grasshoppers use spit to keep enemies away.



What do grasshoppers eat?

Grasshoppers eat plants. There are some grasshoppers that eat only one kind of plant. Grasshoppers also eat dead animals or other insects.

Interesting Facts

- They cannot live through a cold winter but their eggs can.
- Grasshoppers have ears but not on the sides of their heads like you do.
- There are about 10,000 different **species** of grasshoppers.

Characteristics

Grasshoppers have long bodies. Grasshoppers are green, brown, or sand colored. They have a head, thorax, and abdomen. Grasshoppers have ears on the sides of their thorax. Their two back legs are longer than their front legs. Their front legs are short. They have six legs. Their back wings are large. They have four wings.

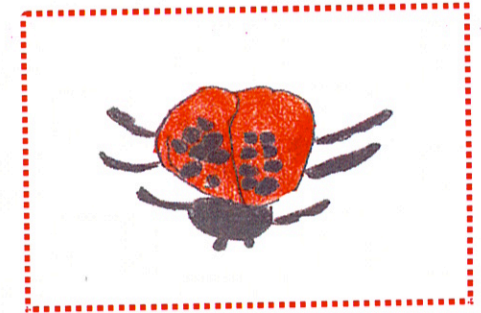
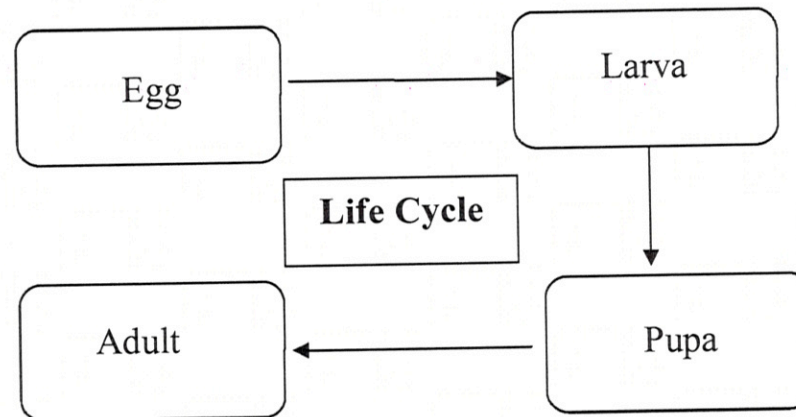
Ladybugs

Habitat

Ladybugs live on plants where the ladybugs can find aphids, scales, and mites. Ladybugs live on plants like the milkweed plant and broccoli.

Predators

Ladybugs' predators are birds and spiders. When spiders and ladybugs fight the spiders eat the ladybug. Birds also eat ladybugs.



What do ladybugs eat?

Ladybugs eat aphids on leaves. Some ladybugs eat the leaves of plants.

Interesting Facts

- There are more than 5,000 different kinds of ladybugs in the world.
- Ladybugs play dead when they are threatened.
- Ladybugs are also called lady bird beetles.

Characteristics

Ladybugs are red, orange or yellow. Ladybugs have black or white spots. They have a head, thorax and an abdomen. They are small and round. They have strong jaws. Ladybugs have two antennas for smelling. They have two hard wings for covering the soft wings. They have six legs. Ladybugs have two eyes that can see up, down, backward and forward at the same time. Ladybugs don't have ears so they can't hear.

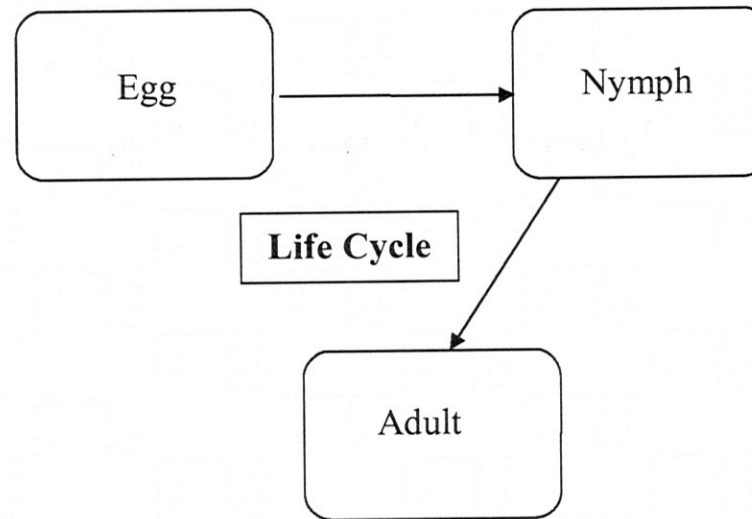
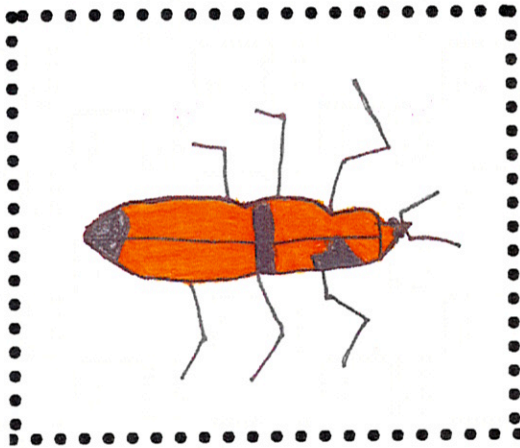
Milkweed Bugs

Habitat

Milkweed bugs are found on milkweed plants. They can be found on the leaves and blossoms. Milkweed bugs live in Southern Canada, the United States, and Mexico. You can find them in meadows. Milkweed bugs are only found on milkweed plants.

Predators

The Milkweed bug's predator is birds. Milkweed bugs have one predator because they taste bad. The adult Milkweed bug eats a poison plant that makes it taste bad. That's why predators don't eat them.



What do milkweed bugs eat?

Milkweed bugs eat the tissue of the milkweed plant. The milkweed bugs that live in containers eat the shells of sunflower seeds. Milkweed bugs' favorite food is the milkweed plant.

Interesting Facts

- People named milkweed bugs after the plant they eat.
- Adult males attract females by making a sound. Males rub their back wings over their abdomen to make this sound.
- Milkweed bugs fall to the ground and lie still when they are in danger.

Characteristics

The Milkweed bug has a y-shaped head. It is orange-red and black or black and red. The Milkweed bug has different segments on its antenna. It has 6 legs. The Milkweed bug's body is an oval shape.

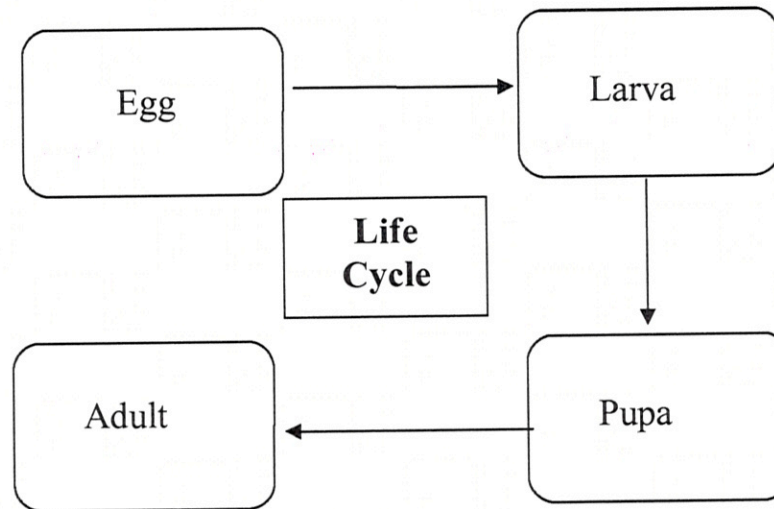
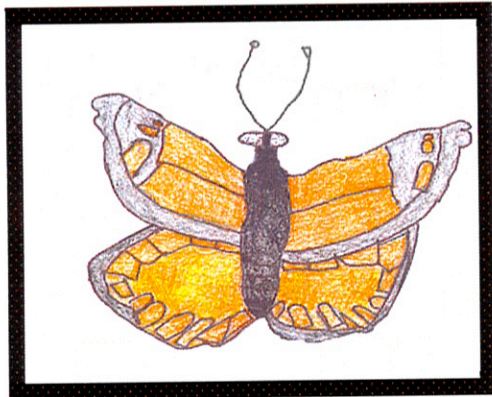
Monarch Butterflies

Habitat

You can find the monarch butterfly throughout North America. They go to Florida, Southern California and Mexico when they migrate. In the spring these butterflies will migrate north again to fields with milkweed plants.

Predators

One of the monarch's predators is the bird. Another predator is the frog. Other predators are lizards and mice.



What do monarch butterflies eat?

When the butterfly is a caterpillar it eats its egg shell then the caterpillar eats milkweed plant leaves. When it an adult it drinks from flowers. Butterflies sip flower nectar for food.

Interesting Facts

- There could be over 100 butterflies traveling together.
- There are 100,000 **species** of butterflies.
- Some butterflies migrate 4,000 miles.

Characteristics

The Monarch Butterfly has orange and black wings with white spots. They have two wings, 6 legs, 3 body parts and two antennas.

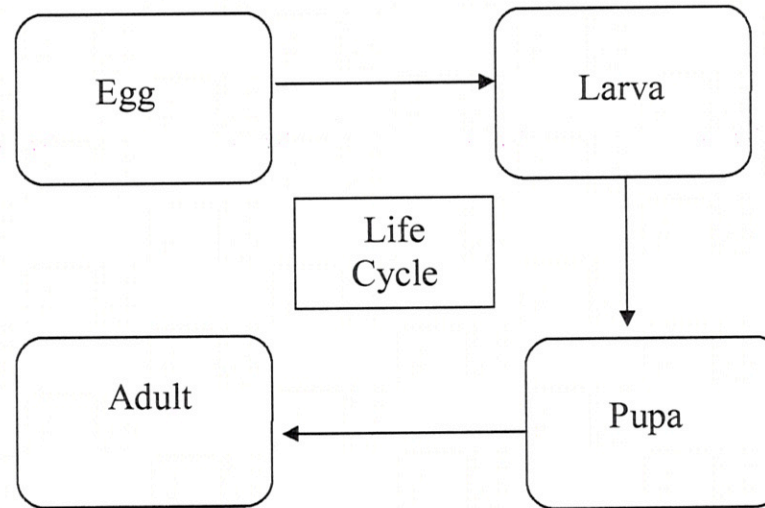
Mosquitoes

Habitat

Mosquitoes are found around the world. They rest on tree trunks and in grasses. Mosquitoes live near water and in dark places.

Predators

Mosquitoes' predators are birds, bats, dragonflies, lizards, spiders, toads and frogs.



What do Mosquitoes eat?

Mosquitoes eat nectar, sap and plant juices. Only females drink blood from frogs, snakes, people and other animals.

Interesting Facts

- There are more than 2500 kinds of mosquitoes.
- The females drink blood through their **proboscis**.
- Mosquitoes can fly 1 to 1.5 miles per hour.

Characteristics

Mosquitoes have large eyes and long feelers. They have six legs on their thorax. Some mosquitoes are a brownish and reddish color. Others are a reddish and blackish color.

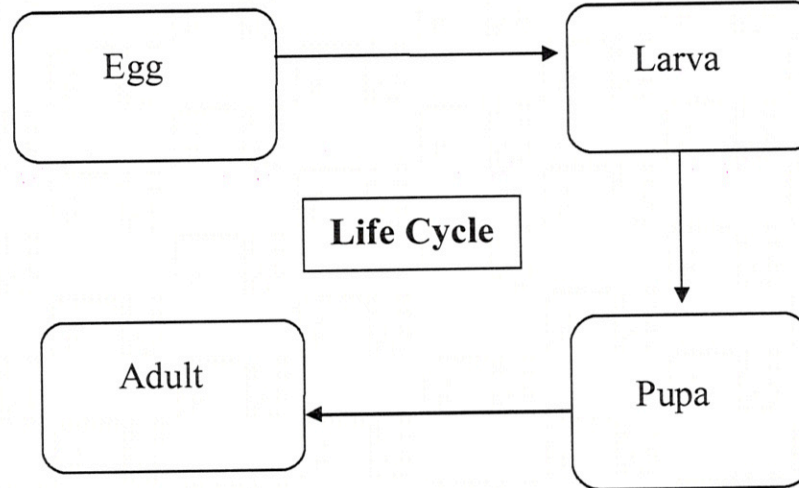
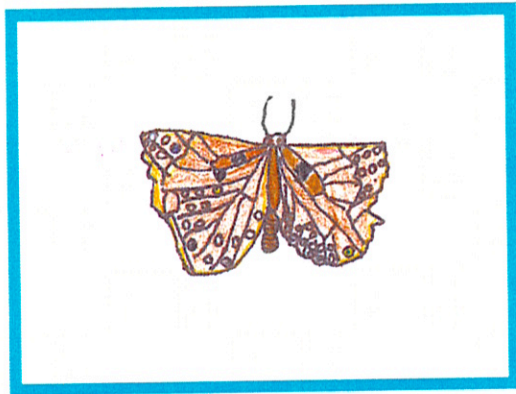
Painted Lady Butterflies

Habitat

Painted lady Butterflies live in flowery meadows and on mountaintops. Painted lady butterflies live all over North America, Asia, Africa, and Europe. You can see them between March and October.

Predators

The painted lady butterflies predators are birds, spiders and toads.



What do painted lady butterflies eat?

Painted Lady Butterflies drink nectar and sap from flowers. They use their legs to taste nectar. Painted Ladies really love to eat thistles.

Interesting Facts

- They use their antennas to smell nectar and their feet to taste it.
- A painted lady butterfly egg is the size of a pinhead.
- They like nectar from plants that are 3 to 6 feet tall like thistle.

Characteristics

The painted lady butterfly has two antenna each side of the head. They also have three legs on the thorax and 2 pairs of wings on each side. Their wings are blue brown and light blue with red spot.

Glossary

bristles- short, stiff hairs

compound eyes- eyes that have many small lenses

characteristics- a special feature or trait of an insect

colonies- a group of insects that live and work together

habitat- a place where an insect normally lives

life cycle- the changes animals go through from birth to death; the changes insects go through from egg to adult

molt- when animal sheds its outer covering

nocturnal- active at night

predator- an animal that kills and eats another animal

proboscis- long, thin mouthpart

species- type or kind of animal

spiracles- tiny breathing holes on an insect's body

The words in this glossary were chosen and agreed upon by students from the nonfiction text they used as they conducted their research.

**This Insect Field Guide was researched and developed by
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