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Investigating **Monarchs**

by Ania Driscoll-Lind
and Kirsten Letofsky

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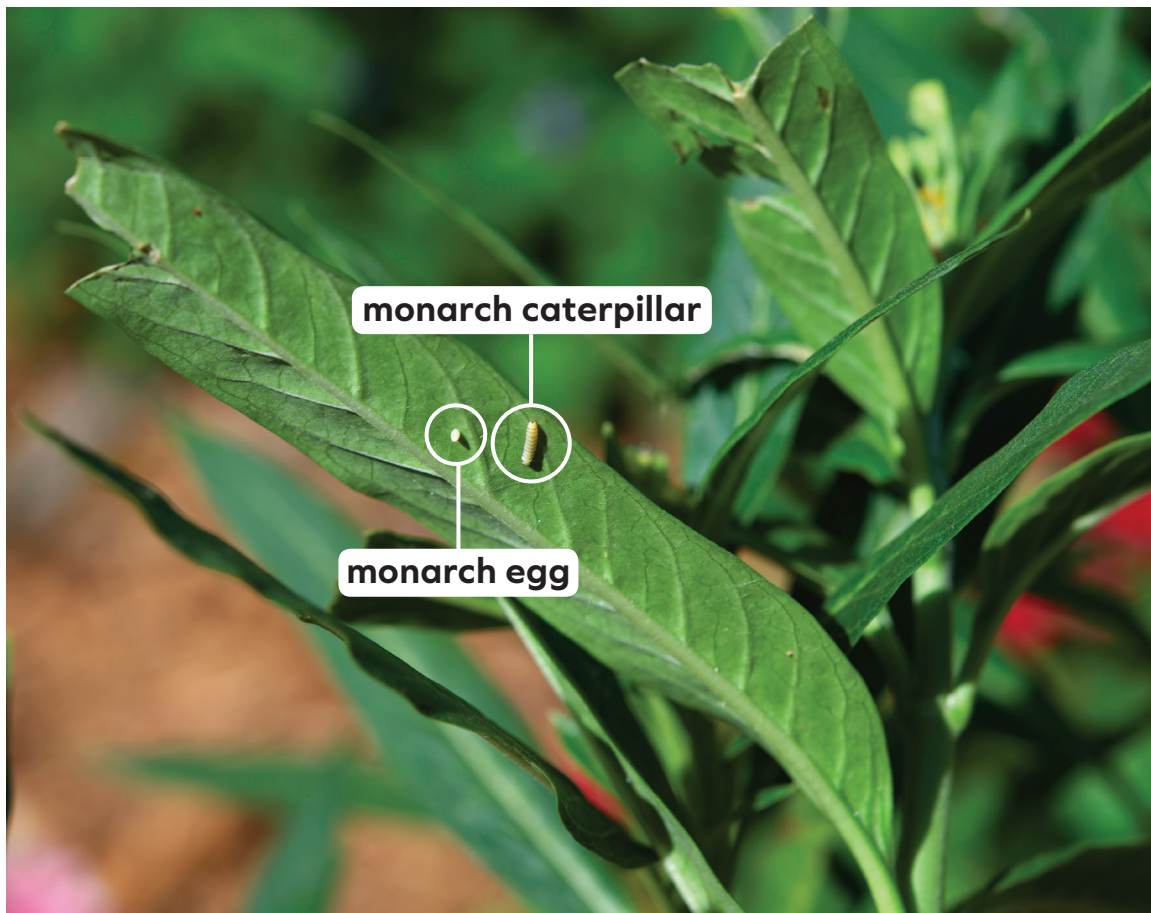
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Grade K
Investigating Monarchs
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This picture shows a monarch caterpillar next to a monarch egg. The caterpillar just hatched and it is very tiny.

When a monarch caterpillar first hatches from an egg, it is very small. It is smaller than a grain of rice.

A monarch caterpillar is an **animal**. Like all animals, caterpillars need to eat food to live and **grow**.





Monarch caterpillars need to eat, but they are picky. They will only eat one kind of food: milkweed **plants**.

The tiny monarch caterpillar eats milkweed **leaves** and grows bigger. It keeps eating milkweed, growing bigger and bigger every day.

It eats and grows until one day, it has eaten enough to change into . . .



Monarch caterpillars turn into monarch butterflies.

A butterfly!

Before it can become a butterfly, a caterpillar needs to eat a lot of milkweed leaves. The **habitat** of monarch caterpillars must have milkweed plants. In the spring all over the United States, caterpillars are eating milkweed leaves and becoming butterflies.



Butterflies drink their food from flowers on many plants.

Once a monarch has become a butterfly, it no longer eats leaves. Monarch butterflies get the food they need by drinking nectar from flowers. The habitat of monarch butterflies must have many flowers with nectar. Monarch butterflies drink nectar from flowers all summer long.



This is the forest where monarch butterflies spend the winter.

When winter comes, it gets too cold for monarch butterflies to live in the United States. Monarch butterflies fly a very long way to a forest in Mexico. This forest habitat has many trees that protect the butterflies from the cold.



A scientist carefully observes a butterfly in Mexico.

Scientists in Mexico **investigate** monarch butterflies to learn more about them. Each winter they **observe** the butterflies that come from the United States.



The scientists want to know how many butterflies come to Mexico each year. They use their **observations** to figure out how many butterflies are in the whole forest.



Each winter, the scientists **record** how many butterflies they observe in the forest. They **compare** the number of butterflies to the number they recorded the year before.

The scientists have compared the number of butterflies for many years. By comparing the number of butterflies, the scientists learned that there were not as many butterflies as there used to be.







Scientists wanted to understand why there weren't as many butterflies. They knew that butterflies need many trees in their winter habitat. The scientists investigated and learned that there were not as many trees as there used to be. People were cutting down the trees to build houses.

People were changing the winter habitat of monarch butterflies by cutting down trees.



People in Mexico planted new trees to protect the butterflies in the winter.

The scientists shared what they learned. Many people in Mexico began working together to protect the butterflies' winter habitat. People stopped cutting down trees. People also started planting new trees.



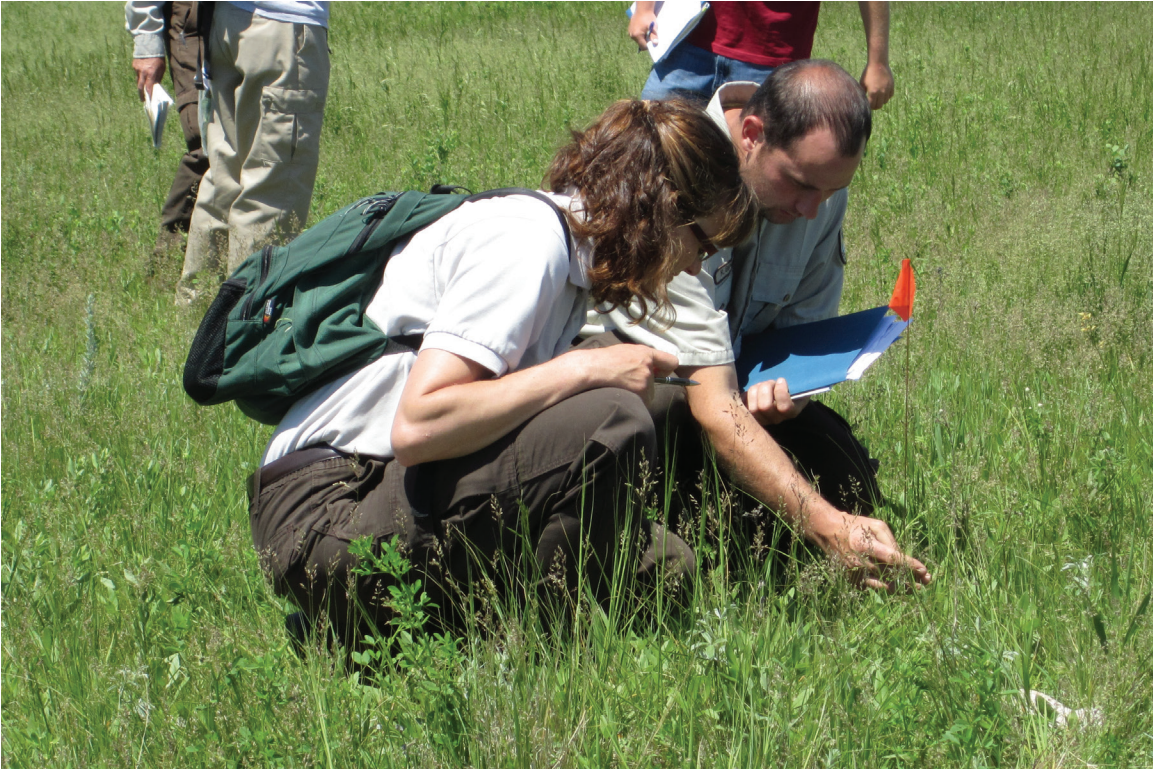
There are still not as many butterflies coming to Mexico each winter.

Scientists are still recording the number of butterflies in Mexico every winter. They have found something surprising. Even though the winter habitat has been protected, the number of butterflies is still smaller than it used to be.



Monarch butterflies need flowers in their summer habitats.

Now scientists have a new question to investigate: Why are not as many butterflies coming to Mexico each winter, even though their winter habitat is protected? To answer this question, scientists need to learn more about what is happening to the monarchs during the spring and summer. They are observing the habitats of monarchs in the United States.



These scientists are investigating the habitats of monarch caterpillars.

Scientists have observed that people are changing monarch habitats in the United States. Not as much milkweed is growing. Monarch caterpillars need to eat milkweed leaves to grow into butterflies. With less milkweed to eat, not as many monarchs can grow.



How do you think these kids are helping monarchs get what they need?

People in Mexico helped make sure monarchs could get what they need. What do you think people in the United States can do to help make sure monarchs get what they need?

Glossary

animal: a living thing, such as an ant, a cat, a clam, or a bird, that needs to eat

compare: to notice how two or more things are alike or different

grow: to get bigger or get new parts

habitat: the place where an animal or plant lives and grows

investigate: to try to learn more about something

leaves: the flat, green plant parts that catch light

observation: something you notice using any of the five senses (sight, hearing, smell, taste, touch)

observe: to use any of the five senses (sight, hearing, smell, taste, touch) to learn more about something

plant: a green living thing, such as a tree, a cactus, or a grass, that needs sunlight

record: to draw or write down information

scientist: someone who learns about the natural world

Books for *Needs of Plants and Animals*:

Science Walk

A Plant in the Desert

Above and Below

Investigating Monarchs

Handbook of Plants

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Scientists study amazing things, like butterflies!

Monarch caterpillars need the right food to grow into butterflies. Scientists have discovered that there are not as many monarch butterflies as there used to be. They are finding out why.



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