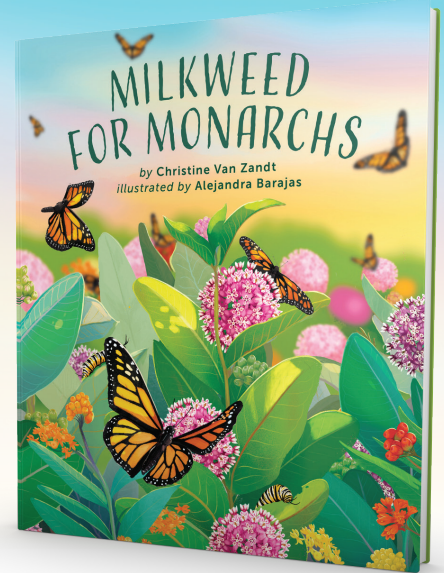




MILKWEED FOR MONARCHS DISCUSSION GUIDE FOR PARENTS AND EDUCATORS



Milkweed for Monarchs will capture a child's attention with its vivid images and intriguing facts.

Monarchs are amazing animals. Their life cycle includes complete metamorphosis involving these stages: egg, larva (caterpillar), pupa (chrysalis), and adult (butterfly). They are the only known butterfly to complete an annual two-way North American transcontinental migration. Monarch butterflies somehow know to return to where their ancestors were born, near milkweed plants that they ate as caterpillars.

Milkweed is an incredible plant that repeatedly grows new leaves, providing a steady food source for monarch caterpillars. The plant's flowers supply nectar for the butterflies. Its seed pods become brown and dry, sending out seeds attached to fluffy tufts of hair called "comae." These keep the seeds floating through the air, like when you blow on the fluff of a dandelion.

BEFORE YOU READ

Examine the book's front cover.

- What is the title of the book?
- Describe the picture you see on the book's cover.
- How many monarch caterpillars can you find?
- How many monarch butterflies can you find?
- What colors are the milkweed flowers?
- Can you guess what this story might be about?
- A person who writes a book is called an author. Who is the author of this book?
- A person who creates the art is called an illustrator. Who illustrated this book?

TABLE OF CONTENTS

Before you Read	1
The Inside of the Book	2
Activities	2
Poetry Lesson Plan	3
We're All in This Together	3
Movement Activity	4
Sharing Experiences	4
Glossary	5

THE INSIDE OF THE BOOK

This picture book has two main parts: a poem and facts that support it. You can read the poem all the way through, then come back and read the facts, or you can read all of the words as you go along—it's your choice.

The pictures show things that are in the poem, but they also show things that are not in the poem because the illustrator has added her own ideas to the story. Can you find places where the words and the pictures match? How about places where the pictures show something that's not in the poem?

ACTIVITIES

Where can you see monarchs?

Find pictures of what milkweed looks like in your area. Then search for it in community gardens, school gardens, or other public places.

If you see orange and black monarch butterflies, you may be on the right track!

Monarch caterpillars have white, yellow, and black stripes. To find them, look on the flowers and on top of or underneath the leaves. (*Don't pick any flowers or leaves because the milky substance that comes out contains toxins and can hurt you if you get it in your eyes or mouth.)

Look for tiny, whitish monarch eggs in the flowers or on the leaves.

Once you find them, enjoy them in the wild. Do not bring them home; the caterpillars can only eat milkweed and need to stay where the milkweed is growing because "a monarch butterfly returns to lay eggs on the milkweed where her ancestors hatched" (page 8).

- **Identify other kinds of bugs and plants that you find.** If you can't tell what they are, ask your teacher or parent for help.
- **Make a drawing.** Look for caterpillars and butterflies. Make a drawing of the ones you find. Be sure to include the plants they're on.
- **Write a poem about the bugs you found or how it feels to be outside.** There are lots of kinds of poems. If you need help getting started, look at the poem in the book.
- **Create a field guide.** This is an illustrated manual for identifying animals and plants. Put one together once you get enough drawings of your own or among friends.
- **Plant a butterfly garden at home, school, or your local community garden.** Monarch caterpillars need milkweed, but other caterpillars need other kinds of plants. Figure out which plants to include in your garden. For the butterflies and other pollinators, include flowers because these insects need nectaring plants.



POETRY LESSON PLAN

1) Talk about the poem.

The story of the book is written as a poem. This is called writing in verse. Some poems rhyme; others do not. Lines of poems that are grouped together are called stanzas.

- How many lines are in each stanza?
- Which lines rhyme?
- How does the story make you feel?

2) Brainstorm and write a poem together or individually. (Or this can be done as a class activity.)

- Think up two words that rhyme with "fly" and write them down.
- Work with a partner. Do you have the same words or different ones?
- Write two rhyming lines using at least one word from each person's list.

For example:

Up high in the sky
I see a butterfly.

3) Write your poem in your best handwriting on a clean sheet of paper. Now, illustrate it and share it with someone. (If a class is doing this, have each student write and illustrate one line of the completed poem and then put all the poems together in a book.)

WE'RE ALL IN THIS TOGETHER

Talking about how humans can hurt the environment and the creatures in it may seem daunting. But kids of any age can start learning about this difficult reality. It's okay if you don't have all the answers. You can help kids better understand this topic by discussing it, showing you care, and listening to their thoughts.

To begin a conversation about climate change, look at the illustrations on pages 4 and 5 to see how harmful chemicals are sprayed near monarchs and how milkweed is being removed.

Additional information can be found on page 37. Global warming is not a one-time conversation; this topic can be expanded upon in other lessons.

See the "How You Can Help" section on page 38. Can you think of other ways to help monarchs from becoming extinct?



MOVEMENT ACTIVITY

Pretend you're a monarch butterfly.

- Move your arms like wings and gently flutter while sitting at your desk.
- Stand up and look for a milkweed plant.
- Fly softly to the milkweed plant watching out for other butterflies.
- At the milkweed plant, decide if you want to take a sip of nectar or lay some eggs.
- Once you're done, flutter back to your desk.

Act out this movement poem about a butterfly's life cycle, or write one of your own.

I hatch from a tiny egg.

As a hungry caterpillar
I eat and I poop.
I grow and shed my skin.

This repeats
until I'm a full-grown caterpillar.

Then I hang in a J-shape
and wiggle, wiggle, wiggle,
forming my chrysalis.

I hold still as time goes by.

The sun's warmth tells me it's time
to crawl out of my chrysalis
as a newborn butterfly.
I pump my wings, waiting for them to dry.

Finally, I can fly!



SHARING EXPERIENCES

Using the five Ws and H, have students ask one another the following questions and record each other's answers:

- Who can help caterpillars or butterflies?
- What did you learn about butterflies from this book that you didn't know before?
- When do you think we'll see the most butterflies? In the winter? In the spring?
- Where do you see butterflies?
- Why are butterflies and all insects important?
- How do you feel when you see a caterpillar or a butterfly? Watch a video of a butterfly hatching.

GLOSSARY

Asclepias – This is the genus name for flowering plants known as milkweeds. They are called milkweeds because they have a milky latex in their leaves and stems that contains toxins.

chrysalis – Caterpillars that will become butterflies create an exoskeleton around themselves. This is the stage between caterpillar and butterfly while the monarch is undergoing metamorphosis. In Latin and Greek, this word means “gold” and is related to the gold color found on some chrysalises.

cocoon – Caterpillars that will become moths spin cocoons from silk encasing themselves.

comae – The fluffy hairs that milkweed seeds are attached to. Comae help keep seeds in the air so they can float away and find a new place to grow.

Danaus plexippus – The scientific name for the monarch. These are Greek words that mean “sleepy transformation.”

frass – Insect poop.

genus – A group of animals or plants.

insecticide – A pesticide used to harm insects.

insects – These are the creatures we call “bugs.” They have three pairs of legs, usually one or two pairs of wings, and a three-segmented body with the head, thorax, and abdomen. Spiders are not insects, they are arachnids with eight legs and a two-segmented body.

instar – The intervals between molts. Monarchs undergo five. During the pupal stage, the transformation from larva to adult is completed.

larva – A stage of growth during an insect's life cycle. A caterpillar is the larva of a butterfly.

metamorphosis – The change in form or structure of an animal that happens after it has hatched. Monarchs undergo a complete metamorphosis that includes these stages: egg, larva (caterpillar), pupa (chrysalis), and adult (butterfly).

Methuselah or super generation – The monarch butterflies that overwinter are called the Methuselah or super generation because they can live up to nine months, whereas the other generations live only two to six weeks.

migration – A species' pattern of travel to live in another place. When the weather becomes colder, monarch butterflies travel south as many as 3,000 miles to overwinter in a warmer climate in order to survive the colder months. The monarch is the only known butterfly to make a two-way migration as some birds do.

molt – A stage when the monarch caterpillar sheds its skin because it needs to grow bigger.

monarch – The common name for a *Danaus plexippus*. The creature is a monarch whether it is an egg, caterpillar, or butterfly.

native plant – A plant that would grow naturally in a certain area.

overwinter – Spending the winter in warmer, southern locations. Monarch butterflies do this from about October through March.

pesticides – Chemicals designed to harm specific things. For example, insecticide is a pesticide that can be sprayed on plants and crops to try to eliminate insects that live there.

predator – Animals that hunt and eat prey.

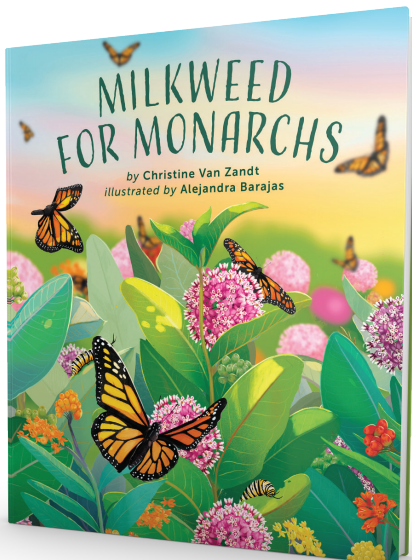
prey – Animals that are hunted and eaten by predators.

pupa (pupal stage) – When the monarch is in its chrysalis undergoing metamorphosis from caterpillar to butterfly.

reproductive diapause – The time when monarch butterflies overwinter after their migration and stop mating and laying eggs.

roost - Monarch butterflies only migrate during the day and they do so alone. However, at night, they come together, gathering in clusters. A cluster of butterflies is called a roost. They choose places near sources of nectar and roost in trees that provide shelter from the weather and predators.

toxin – A substance produced by plants or animals that, when eaten, will make you sick or can cause death.



MILKWEED FOR MONARCHS

Written by Christine Van Zandt
Illustrated by Alejandra Barajas
Published by Beaming Books

