Monarchs Gone

Walland Elementary, TN

GREAT SMOKY MOUNTAINS INSTITUTE AT TREMONT

Watch Now

The Great Smoky Mountains are a nursery for many monarch butterflies every fall. Milkweed, a toxic plant monarchs can consume, is essential for the insect's life cycle and migration to Mexico's Oyamel fir forests every winter. Scientists have yet to determine whether this is an instinctual or learned behavior. Regardless, the journey is an incredible example of an organism's ability to adapt to seasonal changes in the environment. Unfortunately, the decreasing milkweed population due to human activity dramatically reduced the number of North American monarchs. However, thanks to conservation efforts by organizations and concerned citizens, the population is increasing once again. Students can continue to help monarch butterflies by planting milkweed in their communities and educating others about the benefits of maintaining monarch habitat.

LIFE SCIENCE

4.LS2.3	Using information about the roles of organisms (producers, consumers, decomposers), evaluate how those roles in food chains are interconnected in a food web, and communicate how the organisms are continuously able to meet their needs in a stable food web.
4.LS2.4	Develop and use models to determine the effects of introducing a species to, or removing a species from, an ecosystem and how either one can damage the balance of an ecosystem.
4.LS2.5	Analyze and interpret data about changes (land characteristics, water distribution, temperature, food, and other organisms) in the environment and describe what mechanisms organisms can use to affect their ability to survive and reproduce
5.LS1.1	Compare and contrast animal responses that are instinctual versus those that that are gathered through the senses, processed, and stored as memories to guide their actions.
5.LS3.1	Distinguish between inherited characteristics and those characteristics that result from a direct interaction with the environment. Apply this concept by giving examples of characteristics of living organisms that are influenced by both inheritance and the environment.
6.LS2.1	Evaluate and communicate the impact of environmental variables on population size.
6.LS2.3	Draw conclusions about the transfer of energy through a food web and energy pyramid in an ecosystem.
6.LS2.6	Research the ways in which an ecosystem has changed over time in response to changes in physical conditions, population balances, human interactions, and natural catastrophes.
6.LS4.1	Explain how changes in biodiversity would impact ecosystem stability and natural resources.
6.LS4.2	Design a possible solution for maintaining biodiversity of ecosystems while still providing necessary human resources without disrupting environmental equilibrium.
7.LS1.6	Develop an argument based on empirical evidence and scientific reasoning to explain how behavioral and structural adaptations in animals and plants affect the probability of survival and reproductive success.

EARTH & SPACE SCIENCE

4.ESS3.2	Create an argument, using evidence from research, that human activity (farming, mining, building) can affect the land and ocean in positive and/or negative ways.
6.ESS3.3	Assess the impacts of human activities on the biosphere including conservation, habitat management, species endangerment, and extinction.

ENGINGEERING, TECHNOLOGY & APPLICATIONS OF SCIENCE

6.ETS1.1	Evaluate design constraints on solutions for maintaining ecosystems and biodiversity.

I'm hatching out and onto milkweed now
These leaves to munch on for today
And I sure would like to pupate today
Going to form a chrysalis, there I'll hang

Now I change, now I change
I'm never going to be the same
You're going to see me in two weeks
You're going to see me with my wings, oh
You're going to love the way I change

When I emerge, when I emerge
I'm ready for my winter home
I was made to live really old
Because it's turning really cold, oh
It's time for me to be moving on

I've got my new wings for the long way down
I'm flying down to Mexico
It's got mountains, it's got rivers
Oyamel firs to stop the shivers
But these trees are all being cut down

These trees are gone, these trees are gone
Where will we winter when they're gone?
Three thousand miles on the thermals
We really need these Oyamels, oh
This is our only winter home

Milkweed's gone, milkweed's gone
We've lost our host plant to the farms
We're going to miss where we lay eggs
We're going to miss where our larvae hangs, oh
We can't live on if milkweed's gone

Monarchs gone, Monarchs gone
Our whole species could be gone
You can plant milkweed everywhere
Plant in your yard if you really care, oh
You can keep monarchs flying on