

Backyard Butterflies

Teaching Guide

BUTTERFLY HABITAT & LIFE CYCLE THE LIFE CYCLE AND HABITAT OF BUTTERFLIES

Butterflies have many enemies. Birds, spiders, and insects eat them. But the greatest damage comes from humans. In the United States and Canada, butterflies face direct habitat destruction caused by humans. New roads, housing developments, and agricultural expansion all transform a natural landscape in ways that make it impossible for butterflies to live there. The more concrete we lay, the fewer butterflies we will see. The more wildflowers we replace with non-native plants, the fewer caterpillars we will find. The more insecticide we spray, the fewer flying insects will fill the sky. It is estimated that 8 out of 10 butterflies never reach adulthood. If the eggs aren't mashed or the caterpillars eaten, the adults will probably die of thirst or drown in pesticide somewhere along the way. "Progress" is inevitable, of course. Man is a significant animal on our planet, but man's actions are causing our fellow inhabitants to suffer and in many cases perish, often to the point of extinction. We have the technology on our side. We are winning the battle to expand our living areas at the expense of theirs. That is why butterflies desperately need our help. They need us to use our technology to help them maintain their livelihood.

The place to start helping is in your own backyards. There needs to be the kind of gardens to attract butterflies from the woodland into the suburban/urban setting. If every school had a butterfly garden planted, eventually there would be more butterflies for everyone to enjoy. It would give butterflies a reason to venture into the city or town. They need color and fragrance flowers, ponds, trees, even mud, not the cold expanse of glass and concrete, the offensive odor of pollutants, or the threat of death on the windshields and grilles of speeding vehicles.

Butterflies need healthy surroundings in order to survive. By supplying their needs, you can help them beat the odds against an early death and this curriculum will help you accomplish the goal. This curriculum will give you information on gardening and habitat construction that will allow butterflies to flourish. It will give you an understanding of the life cycle and will help you nurture them into becoming lively, healthy adults. It will even make you a better student by assisting you in becoming butterfly friendly.

HELPFUL HINTS

Notification of Parents

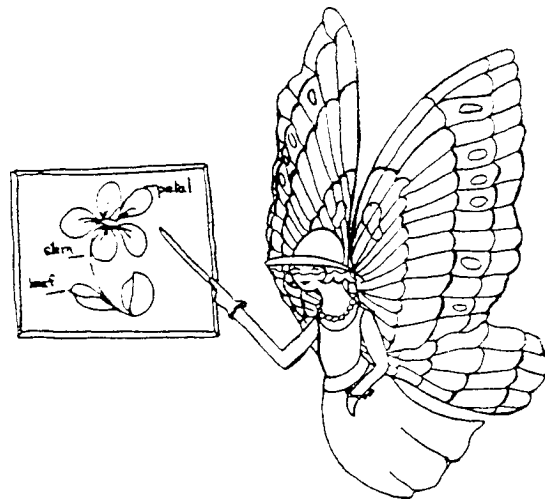
Send a letter explaining the activity asking parents to notify you if they feel their child should not take part. Possibly having the parent sign the notification and returning it with the student would be a good idea. A sample letter is attached.

Recruit Volunteers

Asking a couple of parents to help will make the construction of the butterfly cages, boxes, wood stack, watering dish, nets, and rearing containers, go much quicker (and it will be easier on you). Ask the parent volunteer(s) to help you gather the material for the containers.

Cleaning Up

Make sure that students wash with soap after contact with soil, butterflies or caterpillars. Also, if there are any scratches or cuts, clean them out with peroxide or send them to the school nurse. Butterfly culture is a safe activity, but childhood scrapes can be a problem if not cleaned and treated immediately.



SAMPLE LETTER

Dear Parents,

Your child is about to embark on a new adventure, one that he or she will likely wish to share with you. Our class is taking part in the "Butterfly Habitat & Life Cycle" activity series. This program will introduce students to the life cycle of the butterfly and the plants to attract butterflies in a habitat.

We will be working with soil, soaps, sugar water, and cages both indoors and outdoors. If you feel your child should not participate in the hands on activities because of allergies or respiratory problems, please notify me. We anticipate a safe, fun learning experience and welcome your participation.

Sincerely,



BUTTERFLY HABITAT & LIFE CYCLE MATERIAL LIST

Lesson 1

Drawing Paper, Graph Paper

Crayons or colored pencils

Seeds or seedlings

Gardening supplies

(garden mix and potting soil, organic fertilizer, shovel, rake, hoe)

Containers to start seed

Containers of plants to be placed in the garden

Student Handouts:

"A Plant in a Butterfly Habitat"

"Procedure for Planning a School Butterfly Garden"

"Nectar Plants for Butterflies"

"Food (Host) Plants for Caterpillars"

"Herbs for Butterflies"

Lesson 2

Life cycle line drawings for wheel book

Copies of the wheel book pattern on card stock

Life cycle line drawings for picture book

Card stock Paper (4"X 6" for cards) for picture book

Brads

Glue

Scissors

Crayons, markers

Student Handouts:

"Are you Like a Butterfly?"

"Butterflies Are Insects"

"Name the Stages of a Butterfly"

"The Butterfly's Life Cycle"

"Making Life Cycle Picture Cards, Book & Wheel"

Lesson 3

Molding clay

Oil Paints

Brushes

Student Handouts:

Drawings of 8 butterfly eggs

Lesson 4

Clear 2-liter plastic soft drink bottle

Scissors

Small plastic tub, like a margarine container

Nail or pencil

Tape

Scrap of netting or old panty hose

Strong rubber band

Student Handouts:

5 Pictures of caterpillars

"Find the Parts of a caterpillar"

Making a caterpillar growing container, page 48-51 in "The Family Butterfly Book" (see resources)

Lesson 5

Toilet-paper tube

Tongue depressor or ice cream pop stick

Heavy paper with two butterflies drawn on it

6" piece of pipe cleaner, folded in half

Markers or crayons

Scissors and glue

Student Handouts:

Drawings of Chrysalis

"Butterfly Emerging from a Chrysalis"

Lesson 6

Student Handouts:

Drawings of a butterfly

"Butterfly Anatomy and Life Cycle"

"Making a Butterfly Net"

1 piece of nylon netting or organdy, 2 feet by 3 feet

1 coat hanger

1 broomstick or -" /4 inch dowel, 4 feet long

"Building a Butterfly Cage to Hang"

Hanger or large embroidery hoop

Cardboard round (e.g., from pizza) for base of cage

String or rope. Toothpicks, Paper clips, Bridal veil netting

When Releasing a Butterfly from page 85 of "The Family Butterfly Book" (see resources)

BUTTERFLY HABITAT & LIFE CYCLE
PRE-TEST

This test is not for a grade. Answer as best you can.

1. *Butterflies and moths have:*

- | | |
|-------------------|--------------------|
| <i>a. 6 wings</i> | <i>b. 4 wings</i> |
| <i>c. 2 wings</i> | <i>d. no wings</i> |

2. *The job of the caterpillar's mouth is to:*

- | | |
|------------------------------------|-------------------------------------|
| <i>a. eat food and spin silk</i> | <i>b. keep birds from eating it</i> |
| <i>c. look for food and things</i> | <i>d. move the insect</i> |

3. *A butterfly needs wings in order to:*

- | | |
|----------------------|---------------------------------|
| <i>a. keep warm</i> | <i>b. get away from enemies</i> |
| <i>c. taste food</i> | <i>d. spin silk</i> |

4. *What does a caterpillar change into?*

- | | |
|-----------------------|------------------------------|
| <i>a. egg</i> | <i>b. larva or chrysalis</i> |
| <i>c. grasshopper</i> | <i>d. butterfly</i> |

5. *Butterflies are most attracted to the color(s):*

- | | |
|----------------|-----------------------------|
| <i>a. red</i> | <i>b. purple and yellow</i> |
| <i>c. blue</i> | <i>d. black and white</i> |

True or False

_____ 1. *Host plants provide food for butterflies.*

_____ 2. *A butterfly is not an insect.*

_____ 3. *Nectar plants provide life-sustaining food for butterflies*