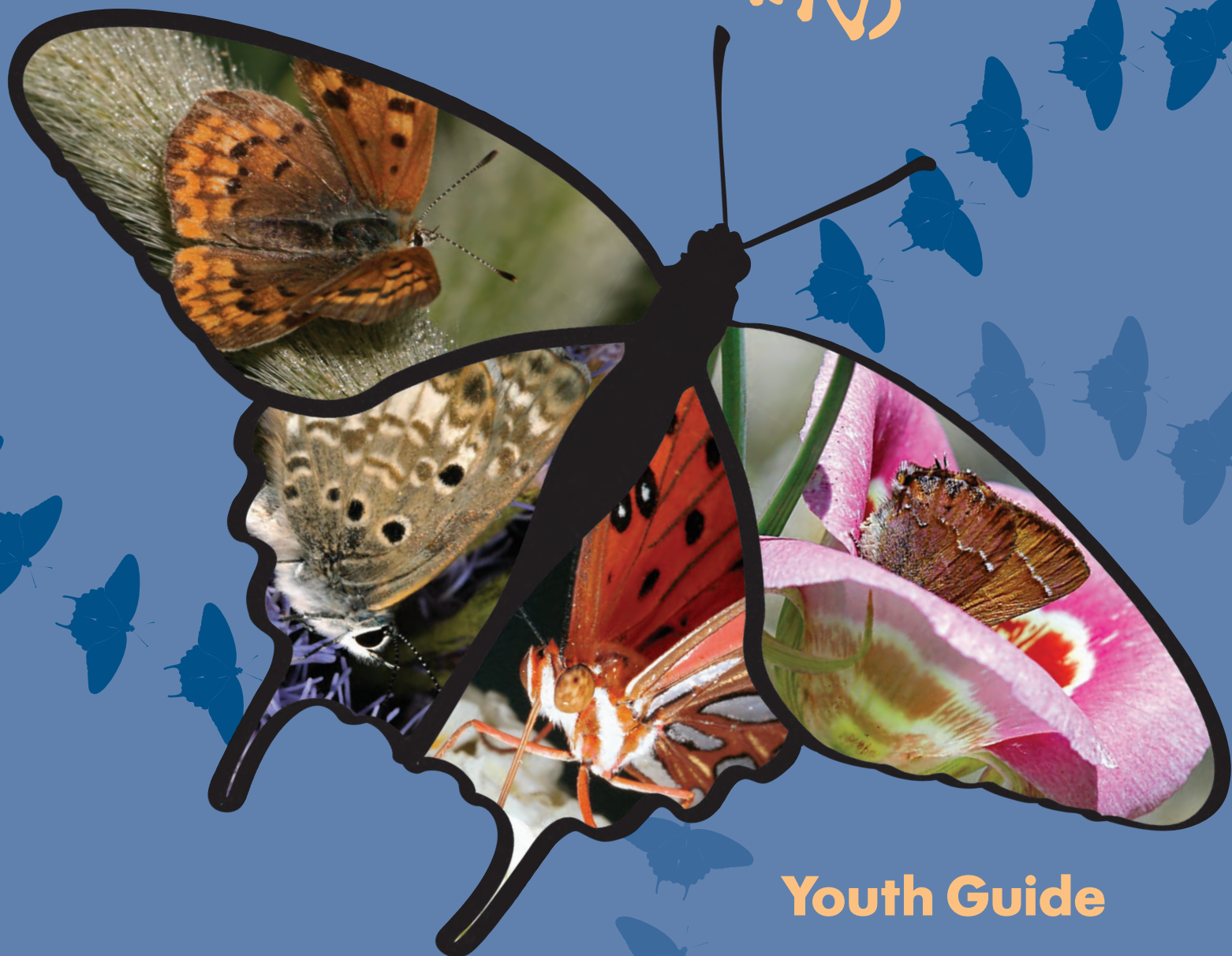




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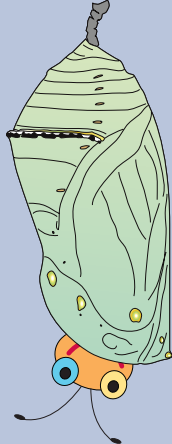
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# Project Butterfly WINGS



Youth Guide





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[www.flmn.h.ufl.edu/wings](http://www.flmn.h.ufl.edu/wings)

For ordering information contact National 4-H Council Supply Service at:  
(301) 961-2934

# Welcome to Project Butterfly WINGS!

Winning Investigative Network for Great Science

**WINGS** guides you through an adventure into the world of butterflies, where the possibilities for exploration are endless.



Explore



Contribute

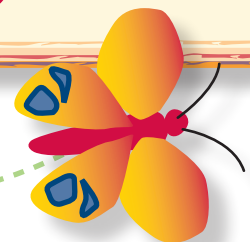


Learn



Investigate

Let's Go!





# The WINGS Youth Guide

## WINGS Chapters

Project Butterfly WINGS takes you on a discovery adventure of butterflies and their habitats in four chapters:

- 1 - Explore** butterflies and their habitats.
- 2 - Learn** to master the skill of butterfly identification.
- 3 - Contribute** to butterfly science as a member of the WINGS citizen scientist team.
- 4 - Investigate** as a scientist by designing your own question quest.

## WINGS Activities

WINGS offers a variety of required activities, many outdoors. Each activity highlights:

### Activity

What you do.

### Science Connection

Science skills you practice.

### Life Skill

Skills you use for life.

### Stewardship Quest

Big ideas to think about.

## Let's Go!

Learn by doing the activity.

## Reflect and Connect

Discuss what you learned with your helper:

### How'd it go?

Talk about what you did and what happened.

### Go back

What did you learn from the activity?

### Go bigger

How can you use this experience in other areas of your life?

### Go beyond

How can you apply what you learned in new ways?

## Journal Reflection

Reflect on the activity and write your thoughts.

## More!

Optional activities that help you learn more about the topic.

## Butterfly Times

Stories about scientists and ongoing research.

**Now find a project helper to guide you through WINGS.**

Your name

Helper's phone number

My project helper is

Helper's e-mail address

Note to Helper  
Please see pages 92-93

## Let's set some goals!

Complete all 11 required activities.

Review and choose three MORE! activities

Explore More!

Learn More!

Contribute More!

Investigate More!

Complete three leadership experiences.

Complete your self evaluation at the end of chapter 4.

My goal is to complete Project Butterfly WINGS by \_\_\_\_\_



### Activity Record

Complete these 11 required activities:



#### Chapter One—Explore

Explore your world

Step into the world of butterflies

A closer look: What's happening here?

What's the connection?



#### Chapter Two—Learn

Parts and marks

Butterfly detective

It's all in the family



#### Chapter Three—Contribute

Select a site

Practice butterfly watching

Be a citizen scientist

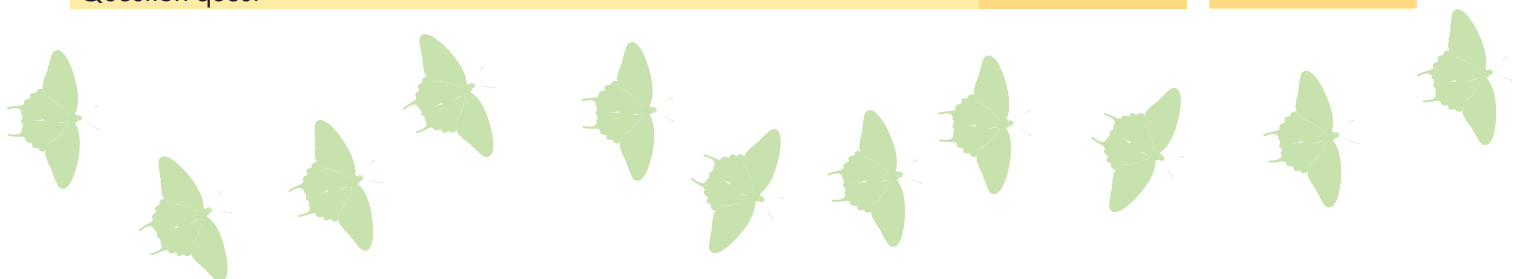


#### Chapter Four—Investigate

Question quest

Date completed

Helper's initials



# 4 Introduction

**Review and choose three More! activities.** Check the ones you plan to do.

## Chapter 1—Explore More!

- ☐ Interview a butterfly expert
- ☐ Build a world for butterflies
- ☐ A closer look: The life cycle
- ☐ Do you have a connection?

## Chapter 2—Learn More!

- ☐ Use field marks
- ☐ Create a family album
- ☐ Create a skill-a-thon

## Chapter 3—Contribute More!

- ☐ Decorate your special butterfly-watching place
- ☐ Find your favorite butterfly field guide
- ☐ Plant a Monarch Waystation

## Chapter 4—Investigate More!

- ☐ Research rare butterflies

Date completed

Helper's initials

Where do butterflies go in the winter?

Which butterflies live near you?

What happens inside a pupa?

Where can you find butterfly eggs and larvae?

How long do butterflies live?



Longwing eggs



Longwing egg

Why do larvae eat so much?

What do butterflies eat?



A Cloudless Sulphur larva hatches from its egg



Without magnification, these eggs are only a few millimeters long.

**Complete three Leadership Experiences** Check the ones you plan to do:

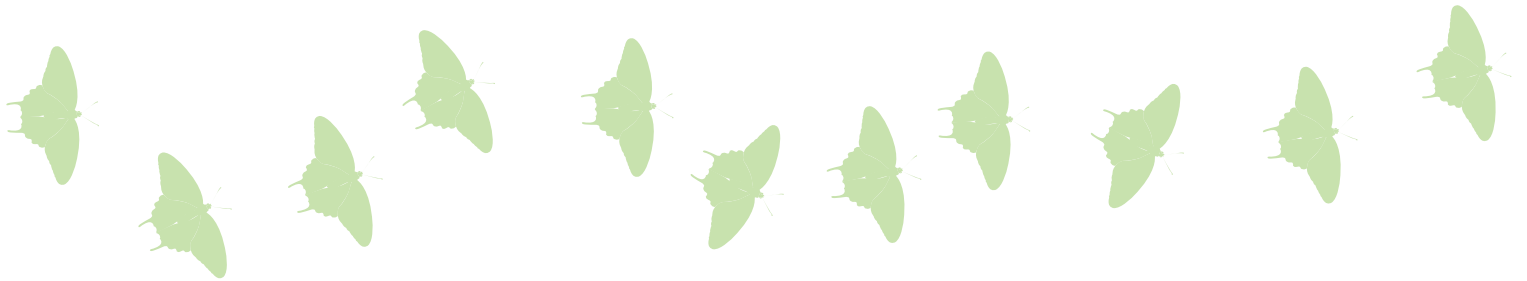
- ☐ Give a tour of one of your butterfly sites.
- ☐ Invite a friend to participate in Project Butterfly WINGS.
- ☐ Present a poster, speech or demonstration on butterflies or being a citizen scientist.
- ☐ Develop a butterfly checklist for a friend, neighbor or nature center.
- ☐ Or write your own ideas for leadership experiences here:

Date completed	Helper's initials



### Complete the self-evaluation

Review what you have learned with this final activity on page 87.



### Your WINGS checklist

- backpack
- clipboard
- hat
- insect repellent
- magnifying lens
- pencil
- sneakers
- sunscreen
- water bottle
- WINGS forms
- digital camera (optional)
- close-focusing binoculars (optional)
- notebook for journal or field book



### Things to remember

**Be aware** of stinging insects and plants that can irritate your skin.

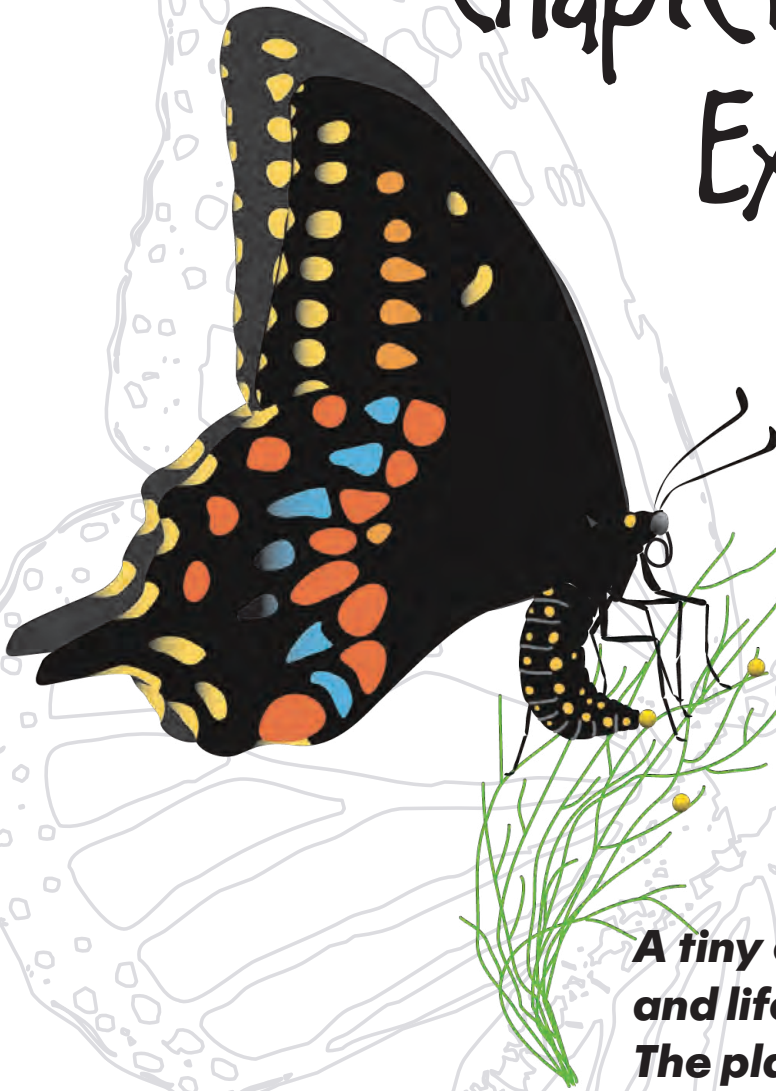
**Be careful** around roadsides, which can be good places to watch butterflies.

**Be observant.** Scientists collect important information about animals by watching them. In WINGS, you learn how to watch butterflies without interfering with them.



# Chapter 1

## Explore



***A tiny egg is laid with care  
and life inside it thrives.  
The plant is just what's needed  
for larvae to survive.***

***The adventure is out there  
just waiting for you.  
All the things that you can learn  
depend on what you do.***



Activity **1**

# Explore your world

**Activity**

Use your senses to explore and observe.

**Science Connection**

**Observing**—Scientists use their five senses to learn about the world.

**Stewardship Quest**

Enjoying the world around you involves using all your senses. Encourage your family to explore with you.

The outdoors hums with activity. We often don't take time to notice just how much goes on around us. For example, have you ever sat quietly outdoors, closed your eyes and really paid attention to what you hear? Or closely examined a leaf or rock to see and feel the detail? Or watched insects visit flowers?

In "Explore your world," you use your five senses to experience familiar things in new ways. The closer you get to something, the more you discover. Observation is a basic investigative skill scientists use to study things. As simple as observation sounds, it has led to many discoveries. Where will your senses lead you?

Turn the page and explore your world.



**What do you see, smell and hear?**

# Let's Go!



Find a spot outdoors where you can explore with your senses. The purpose is to have fun looking at the world in different ways. Don't rush! If you hurry, you might miss something exciting.

Put on your walking shoes. Wear sunscreen and a hat to protect you from the sun. Take your magnifying lens. Grab a bottle of water before you go outside.

First, use your eyes.  
What do you see?

List or draw some of the things you see.

Pick one thing. Look closely to see as much detail as possible.



Describe or draw what you see.

## Magnifying lens tips

Hold the lens close to the object, not your eyes.  
Move the lens up and down to focus.

Find a plant with an insect on it.

Describe or draw what the plant looks like.  
Include colors, shapes, size and textures.