



EDUCATION FUND EXPO · CURRICULUM PACKET

Butterflies In The Classroom

A hands-on workshop guide for teaching life cycles, observation, and wonder

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Goals and Objectives

The **Butterflies in the Classroom** project provides students with an authentic, hands-on learning experience by observing the complete life cycle of the monarch butterfly within a safe classroom habitat. Through caring for milkweed plants and watching caterpillars develop into chrysalises and emerge as butterflies, students will make meaningful connections between science, literacy, art, and environmental conservation.

Goals

- Provide students with a firsthand understanding of the monarch butterfly life cycle through direct observation and inquiry-based learning.
- Foster curiosity about the relationships between butterflies, milkweed, and other native plants within Florida's ecosystems.
- Promote environmental stewardship by helping students recognize the vital role pollinators play in agriculture, biodiversity, and food production.
- Integrate science concepts with reading, writing, and creative arts to support cross-curricular learning.

Learning Objectives

Through participation in this curriculum, students will be able to:

- Identify and describe the four stages of the monarch butterfly life cycle: egg, caterpillar (larva), chrysalis (pupa), and adult butterfly.
- Explain the relationship between monarch butterflies and milkweed as a host plant.
- Describe the role of pollinators in supporting healthy ecosystems, agriculture, and food systems.
- Recognize the importance of native plants and conservation efforts in protecting butterfly populations, particularly in Florida.
- Record observations, ask questions, and communicate scientific findings through journals, discussions, drawings, and other classroom activities.
- Demonstrate an appreciation for living organisms by practicing responsible care and observation of classroom butterflies.

Florida Standards Alignment

Standards	HOW THE STANDARD CONNECTS TO THE BUTTERFLY PROJECT
SC.2.L.16.1 — Observe and describe major stages in the life cycles of plants and animals, including butterflies.	Students observe and describe the four stages of the monarch life cycle: egg, caterpillar, chrysalis, and adult butterfly.
SC.3.L.17.1 — Describe how animals and plants respond to changing seasons.	Students explore how seasonal changes influence monarch migration, reproduction, milkweed availability, and the timing of the classroom investigation.
SC.4.L.16.1 — Identify processes of sexual reproduction in flowering plants, including pollination, fertilization, seed dispersal, and germination.	Students investigate the role of butterflies and other pollinators in pollination and plant reproduction.
SC.5.L.15.1 — Describe how environmental changes may give some individuals an advantage in surviving and reproducing.	Students explore how habitat, milkweed availability, environmental conditions, and conservation efforts affect monarch survival.
MA.2.M.1.1- MA.3M.1.1- MA.4.M.1.1 Estimate and measure the length of an object to the nearest inch, foot, yard, centimeter or meter by selecting and using an appropriate tool.	Measure growth, collect data, create graphs, analyze patterns, and make predictions
ELA.2.C.4- ELA.3.C.4.1- ELA.4.C.4.1- ELA.5.C.4.1 Researching	Record observations, conduct research, write explanations, use evidence, and present findings
VA.2.C.1- VA.3.C.1.1- VA.4.C.1.1 - VA.5.C.1.1 Express themeselves in art	Create scientific illustrations, diagrams, comics, posters, infographics, and habitat designs

Course Outline/ Overview

Butterflies in the Classroom is a hands-on, interdisciplinary learning unit that allows students to experience the complete life cycle of the monarch butterfly through direct observation and inquiry-based learning. As students care for milkweed plants and observe caterpillars transform into butterflies, they develop scientific knowledge while strengthening literacy, critical thinking, creativity, and environmental awareness.

Designed for elementary classrooms, this curriculum combines science investigations, reading and writing activities, art projects, STEM connections, and reflection opportunities that encourage students to ask questions, make observations, collect data, and communicate their learning.

Throughout the unit, students will:

- Observe each stage of the monarch butterfly life cycle in real time.
- Investigate the relationship between monarch butterflies and milkweed.
- Explore the importance of pollinators and native plants within Florida's ecosystems.
- Record scientific observations using journals, diagrams, and classroom discussions.
- Participate in hands-on activities that integrate science, literacy, math, art, and environmental stewardship.
- Develop respect for living organisms through responsible care and observation.

The lessons are designed to be flexible and can be taught as a complete unit or incorporated into existing science instruction. Activities may be adapted for whole-group, small-group, learning centers, or enrichment settings.

What's Included

- Monarch butterfly life cycle lessons
- Printable student resources
- Step By Step Implementation Guide
- Enrichment Activities
- Grant & Community Based Organizations

By the end of the unit, students will have gained a deeper understanding of life cycles, ecosystems, pollination, and conservation while developing the curiosity and observation skills that are essential to scientific inquiry.

Lesson Plans

<table>
<tr><td colspan="2">Lesson 1| Meet the Monarch</td></tr>
<tr><td colspan="2">Grades 2nd-5th | 40-45 MIN| Science· ELA· Art</td></tr>
<tr><td colspan="2">Essential Question
How do monarch butterflies change throughout their life cycle?</td></tr>
<tr><td>Learning Target
Students will be able to:
• Identify the four stages of the monarch life cycle.
• Record scientific observations.
• Generate questions using evidence.</td><td>Big Idea
Students observe living caterpillars and discover that all living things grow and change through predictable stages.</td></tr>
<tr><td colspan="2">Standards
SC.2.L.16.1- ELA.2.C.4- ELA.3.C.4.1- ELA.4.C.4.1- ELA.5.C.4.1
VA.2.C.1- VA.3.C.1.1- VA.4.C.1.1- VA.5.C.1.1</td></tr>
<tr><td>Engage | 5 MIN
• Display Milkweed plant with caterpillars w/o introducing the lesson.
• Ask open ended questions. I.E. What do you notice?</td><td>Explore |15 MIN
Students rotate through the observation station.</td></tr>
<tr><td>Explain| 10 MIN
• Introduce the monarch butterfly lifecycle using visuals.</td><td>Elaborate| 10 MIN
• Students create a life cycle foldable.</td></tr>
<tr><td>Evaluate/ Exit Ticket |5 MIN
• I learned…
• I still wonder…</td><td>Materials
• Enclosure
• Milkweed
• Journals/ Construction paper
• Magnifying glass
• Pencil/ Colors</td></tr>
<tr><td colspan="2">Differentiation

Gifted Learners: Butterfly & Dragon Fly Venn Diagram- Independent Research
ESOL Learners: Picture vocabulary cards, partner discussions, sentence frames.
ESE Learners: Sentence starters, matching activity, partner discussions.</td></tr>
</table>

Lesson 2| Monarchs & Milkweed

Grades 2nd-5th | 40-45 MIN| Science· ELA· Art

Essential Question
Why do Monarch Butterflies Need Milkweed to Survive?

Learning Target
Students will be able to:

- Identify a milkweed plant.
- Explain why monarch caterpillars need milkweed.
- Can make careful observation & scientific drawings.

Big Idea

Monarch butterflies depend on milkweed throughout their life cycle. By exploring the unique relationship between monarchs and milkweed, students discover how plants and animals depend on one another for survival.

Standards
LAFS.2.SL.1.1 / LAFS.3.SL.1.1
VA.2.C.1.1 / VA.3.C.1.1

Engage | 5 MIN
Tell students:
"Today, you are plant scientists. Your job is to carefully observe milkweed and look for clues about why it is important to monarch butterflies."

- Teacher led Observation with prompts

Explore 15 MIN

- Students rotate through the observation station.

Explain | 10 MIN

- Gather students for a class discussion.
- Reveal the answer to the opening question:
- Create an anchor chart with the class ideas.

Elaborate | 10 MIN

- **Milkweed Matters Poster**
- Drawing and a one sentence explanation.

Evaluate / Exit Ticket | 5 MIN

- Teacher Observation
- As students work, circulate throughout the classroom and ask open ended questions:
- Why is milkweed important?
- In journal answer: One way people can help Monarch butterflies is by…

Materials

- Live milkweed plant(s)
- Butterfly enclosure with monarch caterpillars
- Magnifying glasses (optional)
- Butterfly Observation Journals
- Colored pencils/pencils
- Anchor chart titled **"Why Milkweed Matters"**

Differentiation

Gifted Learners: Independent research on another butterfly species to determine if they have the same host plant.
ESOL Learners: Labeled Diagrams, Teacher-guided observation sheet, and home language support if available.
ESE Learners: Labeled Diagrams, Teacher-guided observation sheet.

Lesson 3| Measuring Butterfly Growth

Grades 2nd-5th | 40-45 MIN| Science· ELA· Art

Essential Question
How do scientists collect data?

Learning Target
Students will be able to:

- Identify a milkweed plant.
- Explain why monarch caterpillars need milkweed.
- Can make careful observation & scientific drawings.

Big Idea

Scientists use measurements and data to understand changes in the natural world.

Standards
LAFS.2.SL.1.1 / LAFS.3.SL.1.1
VA.2.C.1.1 / VA.3.C.1.1

Engage | 5 MIN
Display a picture of a monarch caterpillar and milkweed plant.
Ask:
"Scientists don't just look—they measure. Why do you think measuring helps scientists understand living things?"

- Allow students to share responses.

Guide discussion:
"Scientists collect data because measurements help them track changes over time. Today, you will become butterfly scientists!"

Explore 15 MIN
Students work as scientists collecting growth data.

- **Step 1: Observe**
- **Step 2: Measure**
- **Step 3: Record Data**

Explain | 10 MIN
"Scientists don't stop after collecting data. They organize information so they can see patterns."
Students create a graph: Bar or Line

I.E. Each milk weed plant size or caterpillar length over time.

Elaborate | 10 MIN
Class Discussion.
Ask:

- "What measurement changed the most?"
- "What do you predict will happen next?"

Evaluate / Exit Ticket | 5 MIN Students answer: • **"What patterns do you notice?"** Exit Ticket: • Today I discovered that scientists collect data by _____. • One measurement I collected was _____. • One question I still have is _____.	**Materials** • Live caterpillar • Rulers • Science journals/observation sheets • Graph paper • Pencils • Colored pencils

Differentiation

Gifted Learners: Students can make predictions and calculate averages.
ESOL Learners: You can provide Visual measurement vocabulary cards, partner discussions and Vocabulary Practice: "The caterpillar is ____ centimeters long.".
ESE Learners: You can provide pre-marked rulers, partner support, teacher guided collection, and sentence frames.

Lesson 4| Pollinators at Work

Grades 2nd-5th | 40-45 MIN| Science· ELA· Art

Essential Question
Why are butterflies important?

Learning Target
I can explain how butterflies help plants.

Success Criteria:

- I can explain what pollination is.
- I can describe how butterflies help flowers.
- I can create a visual model showing the pollination process.
- I can share my ideas using scientific vocabulary.

Big Idea
Butterflies are important members of ecosystems because they help plants reproduce and support life on Earth.

Standards
LAFS.2.SL.1.1 / LAFS.3.SL.1.1
VA.2.C.1.1 / VA.3.C.1.1

Engage | 5 MIN
Display different fruit pictures.
Example (Apples, bananas)
Ask:
"What does this have to do with butterflies?"
Allow students to make predictions.
Guide students:
"Many foods we eat exist because pollinators help plants make seeds and fruit. Today, we are investigating the important job butterflies do in nature."

Explore 10 MIN
Mini Lesson: Butterfly Pollination
Explain:
"Flowers cannot move around on their own. They need helpers called pollinators. Butterflies are one type of pollinator."
Teach the process:
Step 1:

- A butterfly lands on a flower to drink nectar.

Step 2:

- Pollen sticks to the butterfly's body.

Step 3:

- The butterfly visits another flower.

Step 4:
The pollen moves to the new flower.
Step 5:

- The plant produces seeds.

Step 6:

- New plants grow.

- Explain how many native plants like milkweed in Florida depends on pollinators like butterflies.

<table>
<tr>
<td>Explain | 10 MIN

Students choose to show learning via a comic strip or flow map.</td>
<td>Elaborate | 10 MIN

DISCUSSION QUESTIONS
Ask:
“Why can't flowers pollinate themselves?”
“What might happen if butterflies disappeared?”
“How do butterflies help humans?”
“Why should we protect pollinators?”</td>
</tr>
<tr>
<td>Evaluate / Exit Ticket | 10 MIN

Gallery Walk
Students display their comic strips or flow maps.
During the gallery walk, students leave feedback:
One thing I learned…
One question I have…
One connection I noticed…</td>
<td>Materials

Flower samples or pictures
Picture Fruit examples
Butterfly images
Comic strip template
Flow map template
Coloring materials</td>
</tr>
<tr>
<td colspan="2">Differentiation

Gifted Learners: Pollinator conservation project independent research. Choose one endangered pollinator. Share findings via a mini poster, report, or announcement in Canva.
ESOL Learners: You can use picture vocabulary cards, and word walls.
ESE Learners: You can provide sequencing cards and sentence frames.</td>
</tr>
</table>

Lesson 5| Becoming Butterfly Scientists	
Grades 2nd-5th | 60-90 MIN| Science • Mathematics • Visual Arts • Speaking & Listening • Environmental Science	
Essential Question How can we protect monarch butterflies?	
Learning Target **I can communicate what I learned about monarch butterflies and explain ways to protect them.** **Success Criteria:** • I can use scientific vocabulary to explain butterfly concepts. • I can organize information clearly. • I can create a product that teaches others. • I can share my learning with an audience.	**Big Idea** Butterfly scientists do more than observe—they use knowledge to make a difference.
Standards LAFS.2.SL.1.1 / LAFS.3.SL.1.1 VA.2.C.1.1 / VA.3.C.1.1	
Engage | 5 MIN Display a picture of a monarch butterfly habitat. **Ask:** "If monarch butterflies could talk, what would they ask humans to do to help them survive?" Allow students to share ideas. **Introduce the challenge:** "Today, you are becoming butterfly scientists. Scientists study problems and communicate solutions. Your mission is to teach others how we can protect monarch butterflies."	**Explore 30-40 MIN** Butterfly Scientist Choice Board Students choose one way to communicate their learning.

<table>
<tr><td>Explain | 15-20 MIN

Scientist Presentations

Students share their projects.</td><td>Elaborate | 10 MIN

Design a Monarch Butterfly Habitat

“Design a butterfly habitat for our school that would support monarch butterflies.”</td></tr>
<tr><td>Evaluate / Exit Ticket | 10 MIN
• Post-Test</td><td>Materials
• Recycled Shoe boxes
• Index cards
• Posters
• Construction paper
• Brown paper bags
• Googly Eyes
• Pipe Cleaners
• Posters</td></tr>
<tr><td colspan="2">Differentiation

Gifted Learners: Students can design a butterfly garden.
ESOL Learners: Teacher conferencing and word banks.
ESE Learners: Partner presentations and sentence frames.</td></tr>
</table>

Step By Step Implementation Guide

Step 1: Determine Your Project Timeline

Recommended Season: Spring
Suggested Implementation Window: March–April
Spring is recommended because monarch butterflies are actively searching for milkweed plants, laying eggs, and beginning new generations.
During this time, students may observe the complete lifecycle.

Teacher Tip:
Order plants and prepare materials before launching the project to ensure students have the opportunity to observe the complete butterfly life cycle. Specifically order the plants the day before students are to engage with the material.

Step 2: Purchase Materials

Gather materials needed for your classroom butterfly investigation.
Suggested Materials:
Milkweed Plants
Butterfly Enclosure/Habitat
Magnifying Glasses
Student Observation Journals
Rulers
Graph Paper
Science Recording Materials
Digital Camera
Anchor Charts

Recommended Resources:
Milkweed Plants

- Purchased from local garden centers such as Lowe's during spring butterfly season.

Step 3: Set Up Butterfly Observation Enclosure

Create a classroom science station before introducing students to the investigation.
Butterfly Habitat Setup:
☐ Place enclosure in a safe classroom location
☐ Add milkweed plants as a food source
☐ Provide proper ventilation
☐ Create observation expectations
☐ Prepare student science journals

Step 4: Prepare & Implement Lessons

Review each lesson before beginning the investigation.
*Prior to the start of this projects students should be given a pre-test.

Curriculum Sequence

Lesson 1: Meet the Monarch (Engage)
🦋 Explore the butterfly life cycle

Lesson 2: Monarchs & Milkweed (Explore)
🌱 Investigate the relationship between monarchs and their host plant

Lesson 3: Measuring Butterfly Growth (Explain)
📊 Collect and analyze scientific data

Lesson 4: Pollinators at Work (Elaborate)
🌸 Explore how butterflies support ecosystems

Lesson 5: Becoming Butterfly Scientists (Evaluate)
🌎 Communicate learning and create conservation solutions

Teacher Success Tips

Encourage student questions and curiosity.
Allow students to document unexpected discoveries.
Use observations as authentic science opportunities.
Connect learning to conservation and environmental responsibility.

Final Project Goal

Students will answer:
"How can we protect monarch butterflies?"
Through research, creativity, and scientific communication, students become **young scientists and conservation advocates.**

Resource List

BUTTERFLIES IN THE CLASSROOM

RESOURCE GUIDE

Explore ·Observe· Investigate· Create

Read & Explore

- The Very Hungry Caterpillar
- Monarch Butterfly by Gail Gibbons

Watch & Investigate

- Life Cycle Website
- The Very Hungry Caterpillar Animated Film

Materials • (4) Milkweed Plants $8.99 each • Butterfly Enclosure $ 29.99 • Magnifying Glasses $21.59 • Journals $56.35 • Rulers $6.99 • Graph Paper $14.99 • Digital Camera $39.98 • Easel Pad $ 29.99 • 11 x14 Poster $17.91 • Construction Paper $11.19 • Index Cards $5.41 • Printer Paper $9.99 • Brown Paper Bags $8.99 • Googly Eyes $4.99 • Total $292.32	**Go Beyond The Classroom** • Butterfly World Field Trip • Mini Grant • Adapter Grant • Learn about 4-H • Pollination Video • Comic Strip Template • Flow Map • 2nd Grade Choice Board • 3rd Grade Choice Board • 4TH Grade Choice Board • 5TH Grade Choice Board • Work Sample 1 • Work Sample 2 • Work Sample 3 • Monarchs and Milkweed Pre/Post Test