

# Butterflies

Erik Runquist  
2016-09-08– v1.0

## Session Goals:

1. To engage market-goers to get up-close and personal with butterflies.
2. To learn more about the biology of these insects.
3. Communicate with visitors what they can do to support native populations.

## Activities

### Activity #1 – Match Game – Caterpillars and Butterflies

#### Desired Learning outcomes:

1. To acquaint people with the fact that butterflies have determinant life stages
2. Allow people to see how different caterpillars look from their adult form
3. Expose some of the strategies that caterpillars use to avoid predation

#### Materials:

- a. Blackboard or other magnetized surface, matching butterfly/caterpillar picture flash cards with strip magnets on the back, hint sheet, kids caterpillar making supplies (popsicle sticks, fuzz balls, glue, googly eyes)

#### Lesson:

The person is invited to match the caterpillar and butterfly while reading the sheet. Facilitator helps and asks/answers questions though out the process. Kids are then invited to make their own caterpillar by gluing fuzzy balls to popsicle sticks.

### Activity #2 – Why do butterflies have different wing patterns game

#### Desired Learning outcomes:

1. Help market-goers learn about different survival strategies butterflies employ using patterns on their wings.

#### Materials:

1. Flip-up cards with picture of butterfly on front and explanation of strategy on the inside.
2. “Design your own wing” activity sheets for kids

#### Lesson:

Market-goers are invited to guess what strategy a butterfly might be using and flip-up the card to see if they were correct.



### Activity #3 – Identify native butterflies

Desired Learning outcomes:

1. Familiarize market-goers with many types of native butterflies that can be found in their backyards in MN.

Materials:

1. Selection of live butterflies, identification sheets.

Lesson:

The market-goer looks at the butterflies and tries to identify the species with the help of the hand-out and facilitator. Good conversations can ensue about what can be done to support native butterfly populations in their own backyard.

### Activity #4 – Microscope of wing scales

Desired Learning outcomes:

1. Teach that butterfly wing patterns are actually composed of many small scales.

Materials:

1. Pinned specimens, dissecting scope

Lesson:

Market-goer looks through scope to see wing scales. Can talk about butterfly anatomy and what those patterns mean for butterflies.

### Optional Handouts

Butterfly activity sheet:

<https://drive.google.com/open?id=0BzRAtpf660kgbGp5MGtUQ3JmMG8>

Wings color and shape examples:

<https://drive.google.com/drive/folders/0BzRAtpf660kgN1g3UHNwLUFJdHM?usp=sharing>

Match the Caterpillar hints:

<https://drive.google.com/file/d/0BzRAtpf660kgbkQ3NDBOdTFoSjg/view?usp=sharing>

Event signs:

<https://drive.google.com/file/d/0BzRAtpf660kgWTNvVlphQlRWQoo/view?usp=sharing>



**Recommended age range**  
3 and up.

**Trivia**

1. **What do Monarch caterpillars eat?**



- a. Monarch caterpillars can only eat milkweeds. When we lose milkweeds, we lose Monarchs. Plant milkweeds (and other pesticides free native plants!) to help Monarchs and other pollinators! Learn more about how you can help through the [Monarch Joint Venture](#) and [Plant For Pollinators](#).

2. **What does Lepidoptera mean?**



- a. Lepidoptera means "scaled (Lepid-) wings (-ptera)". Butterflies and moths are insects whose wings are covered in scales. The scales overlap on the wings like shingles on a roof. Each scale is a different color, which produces the complex patterns found in the Lepidoptera.

3. **What are butterfly tails used for?**



- a. The back side of the wings of some butterflies have long "tails". Examples of butterflies with tails are swallowtails and hairstreaks. The tails are thought to be protection from predators. Many tailed butterflies have bright colors or spots near the tails, which make the wings look like a "false head". A predator may attack the false head, leaving the butterfly to escape with the real head unharmed!

**4. What is aposematism?**



- a. Aposematism is "warning coloration". Many butterflies taste bad because the plants that they ate as caterpillars also taste bad. These butterflies "advertise" that they are distasteful with bright colors to warn predators not to eat them. Great examples of aposematic, distasteful butterflies are bright orange Monarchs and Viceroy's.

**5. What do Red Admiral caterpillars eat?**



- a. Be careful! Stinging nettle. While adult butterflies often visit many kinds of flowers for nectar, most depend on completely different caterpillar host plants that do not provide resources to the adults. For example, Minnesota's highly endangered Poweshiek skipperling loves to nectar on Black-eyed Susan, but its caterpillars eat only native prairie grasses.

**6. Where do Regal Fritillaries spend the winter?**





- a. Unlike Monarchs, Painted Ladies, and Red Admirals that migrate south to avoid cold winters, most of Minnesota's ~146 species of butterflies actually live here year-round! Regal Fritillaries caterpillars hatch from the egg in the Fall, and hibernate as *tiny* caterpillars under the snow having not eaten a bite! The caterpillars can only eat violets which will not grow until Spring. Hardy Minnesotans, Regal Fritillaries are also an icon of our disappearing prairie.

**Recommended citation for this lesson plan:**  
Runquist, Erik. 2016. Butterflies. [marketsci.org](http://marketsci.org)

