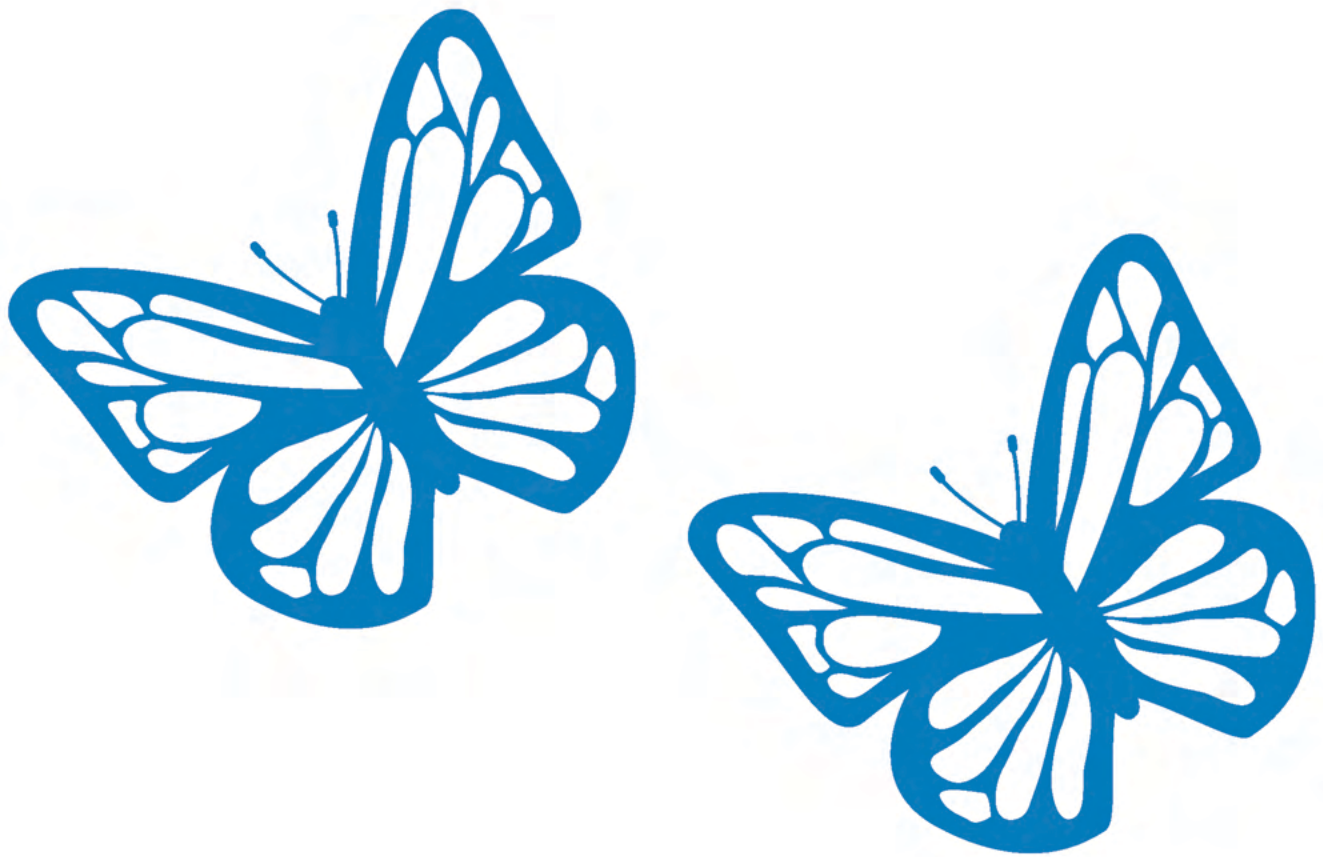


Butterflies & Moths



Wonder Guide & Activity Book
Summer 2020



Fast Butterfly & Moth Facts

- Butterflies and moths are both insects that belong to the order Lepidoptera. They both have six legs, two pairs of wings, a pair of antennae, two eyes, and three body segments (head, thorax, and abdomen).
- Most butterflies and moths eat by through a long, straw-like mouthpart called a proboscis. When they are not eating, they curl it up. When it's time to eat, they uncurl and extend it to drink nectar.
- Butterfly and moth wings are covered in many tiny scales. These scales are what give the wings their gorgeous colors.
- Not only are they beautiful, butterfly and moth patterns are useful. Some coloring and patterns help them camouflage into the plants around them. Others serve as a warning for predators. Still others are used to attract mates.
- Both butterflies and moths go through complete metamorphosis with 4 life stages: egg, larva, pupa, and adult. The larvae of butterflies and moths are called caterpillars. Butterfly pupae can take on interesting shapes and colors and are called chrysalises. Many moth caterpillars will wrap themselves a silk covering before pupating, called a cocoon.
- Butterflies and moths are very similar, but there are a few general ways you can tell them apart. Most butterflies are diurnal (active during the day) while most moths are nocturnal (active during the night). While butterflies have clubbed antennae, moths do not. Moths also tend to have bigger, thicker, and fuzzier bodies than butterflies.



Quick Guides

six common chicago **BUTTERFLIES**



American Lady



Black Swallowtail



Monarch



Red Admiral



Cabbage White



Viceroy

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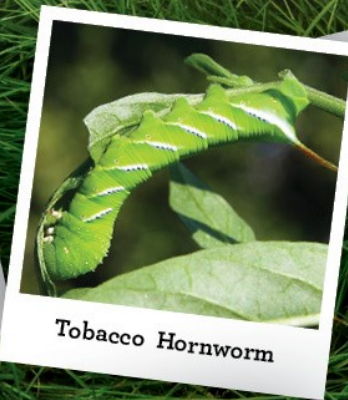
PEGGY NOTEBAERT NATURE MUSEUM

Quick Guides

six common **CATERPILLARS**



Monarch Butterfly



Tobacco Hornworm



Black Swallowtail



Banded Woolly Bear



Yellow Woolly Bear



White-Marked Tussock Moth

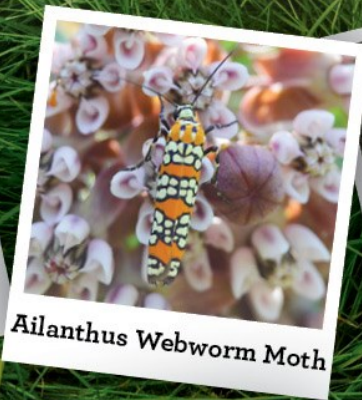
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PEGGY NOTEBAERT NATURE MUSEUM

Quick Guides

six high-flying **CHICAGO MOTHS**



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PEGGY NOTEBAERT NATURE MUSEUM

Quick Guides

six common illinois **SKIPPERS**



Peck's Skipper



Fiery Skipper



Silver-Spotted Skipper



Least Skipper



Tawny Edge Skipper



European Skipper

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PEGGY NOTEBAERT NATURE MUSEUM

Image Investigator

Summary: Students observe an image and create an accompanying story to construct an explanation as to what might be going on in the image.

Grade Range (suggested): K-5

Materials:

- An image or video
- Image Investigator worksheet



ENGAGE

1. Tell students that today we will be looking at an image/video to try to understand what might be happening in it, and uncover the story that it is telling.

PREPARE TO EXPLORE

2. Introduce the image/video you will be looking at. Ask students to look closely at the image for a minute or two or watch the video once or twice.

EXPLORE

3. Once students have had a minute to look at the image or watch the video, ask them “What is going on here?” The goal of this activity is to guide your student’s thinking and understanding as to what is going on in the image/video. Avoid inserting information--let students look closely and reason out their responses, rather than by discussing the facts.
4. Follow up the first question with, “What do you see that makes you say that?” to encourage students to back up their explanation with evidence from the image. This step can be repeated many times, having students build on their own ideas.
5. When a train of thought comes to an end, ask “What more can we find?” to pull out more evidence or to continue to build the explanation.

REFLECT and SHARE

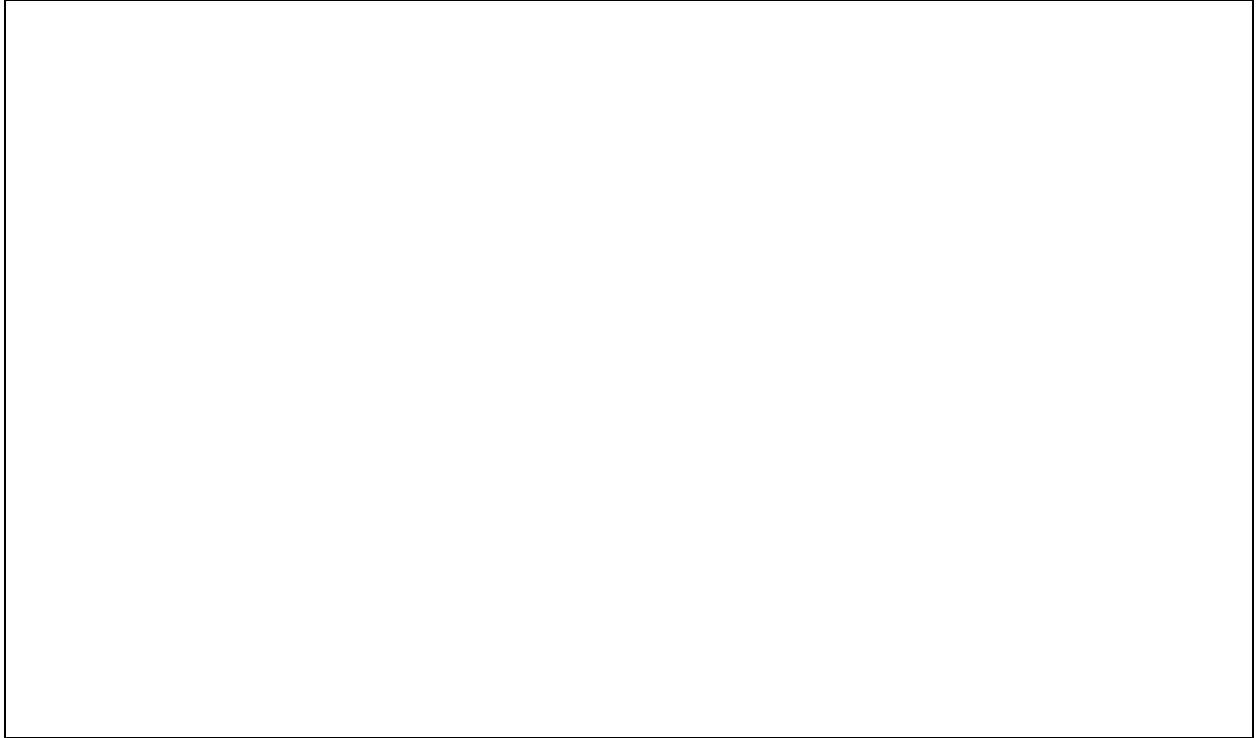
6. Now that your students have thought about the image/video and what might be going on, have them write a story that explains it using the worksheet. They can use words and/or pictures to tell their story.
7. Have students share their story with someone!

Extensions and Variations:

- Use the same graphic organizer, but look at a different image or video. It could be related to any content!
- Take all of the stories your class creates and put them together in a book to share!

Image Investigator

Use words and/or pictures to tell a story about what you observed.



Investigador de imagen

Resumen: Los estudiantes observan una imagen y crean una historia que la acompaña para construir una explicación de lo que podría estar pasando en la imagen.

Rango de grado escolar (sugerido): K-5

Materiales:

- Una imagen o video
- Hoja de trabajo del Investigador de Imágenes



Engranar:

1. Diga a los estudiantes que hoy veremos una imagen / video para tratar de comprender lo que podría estar sucediendo en él y descubrir la historia que está contando.

Preparar para explorar:

2. Presente la imagen / video que estará viendo. Pida a los alumnos que observen detenidamente la imagen durante un minuto o dos o que vean el video una o dos veces.

Explorar:

3. Una vez que los estudiantes hayan tenido un minuto para mirar la imagen o ver el video, pregúnteles "¿Qué está pasando aquí?" El objetivo de esta actividad es guiar el pensamiento y la comprensión de su estudiante sobre lo que está sucediendo en la imagen / video. Evite insertar información: permita que los alumnos observen detenidamente y razonen sus respuestas, en lugar de discutir los hechos.
4. Siga la primera pregunta con: "¿Qué ves que te hace decir eso?" para alentar a los estudiantes a respaldar su explicación con evidencia de la imagen. Este paso puede repetirse muchas veces, haciendo que los estudiantes desarrollen sus propias ideas.
5. Cuando un tren de pensamiento llega a su fin, pregunte "¿Qué más podemos encontrar?" para sacar más evidencia o continuar construyendo la explicación.

Reflexionar y Compartir:

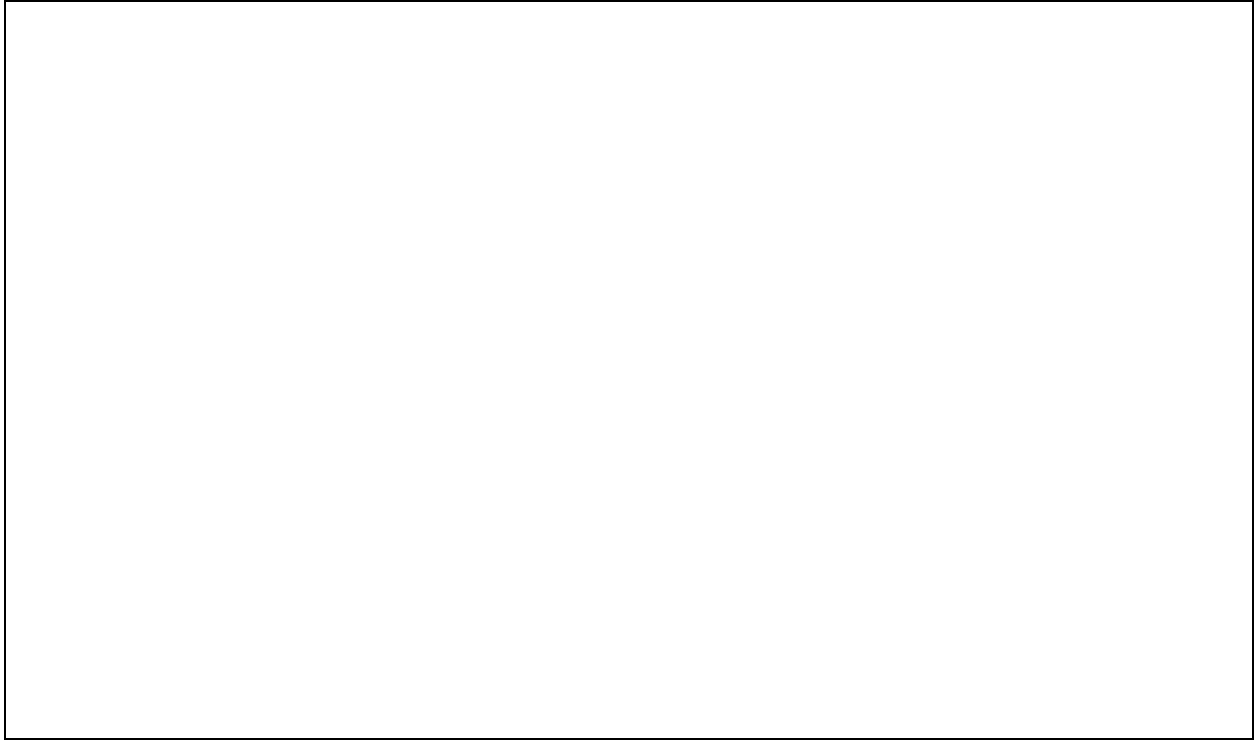
6. Ahora que sus alumnos han pensado en la imagen / video y lo que podría estar pasando, pídale que escriban una historia que lo explique usando la hoja de trabajo. Pueden usar palabras y / o imágenes para contar su historia.
7. ¡Haga que los estudiantes compartan su historia con alguien!

Extensions and Variations:

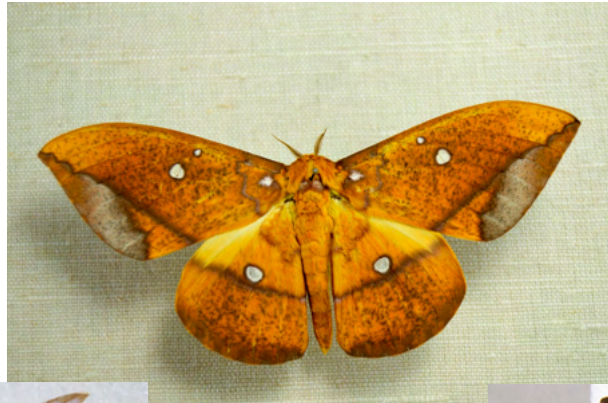
- Utiliza el mismo organizador gráfico, pero mira una imagen o video diferente. ¡Podría estar relacionado con cualquier contenido!
- ¡Tome todas las historias que crea su clase y compártalas en un libro para compartir!

Investigador de imagen:

Use palabras y / o dibujos para contar una historia sobre lo que observó.



Drawing from the Museum's Collections



Draw/Label:

Use pictures and words to show what you notice about **ONE** of the specimens on this page.

Think:

What can you learn about this organism from observing the specimen?

What questions do you have about this specimen?

Dibuja de la Colección del Museo



Dibuja/Etiqueta:

Usa dibujos y palabras para mostrar lo que notas sobre **UN** espécimen en esta página.

Piensa:

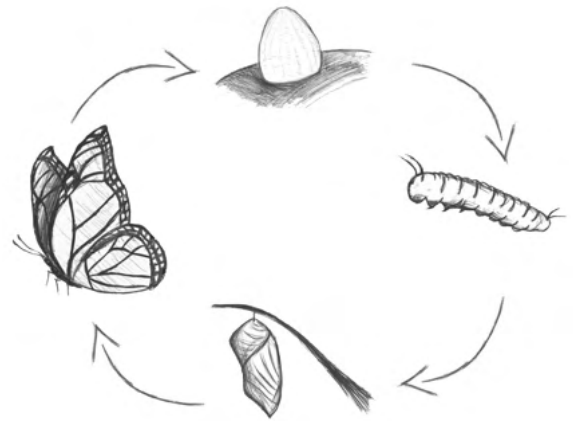
¿Qué puedes aprender sobre este organismo al observar la muestra?

¿Cuáles preguntas tienes sobre este espécimen?

Butterfly Life Cycle Necklace

Supplies:

- 1 piece penne pasta
- 1 piece bowtie pasta
- 1 piece shell pasta
- 1 bead
- Glue or tape
- 3 pieces of pipe cleaner cut into 2 to 3-inch pieces
- 12 inches of string or yarn
- Printed labels



Labels:

Egg	Caterpillar
Chrysalis	Butterfly

Making the Necklace

1. **Egg:** The bead represents a butterfly egg. The egg is laid on a leaf by the mother butterfly. It is very small and hidden to keep it safe from being eaten by another animal.

String the bead onto the necklace string. On the necklace beside the egg, fold the two halves of the appropriate label over the string and glue or tape it in place.

2. **Caterpillar:** The penne pasta represents a caterpillar's body. When the egg hatches, a caterpillar comes out. The caterpillar has sixteen legs (six true legs) and two antennae on its head, which it uses to smell and touch things. The caterpillar eats leaves and grows.

Thread the penne pasta onto the necklace. Then, fold one of the pipe cleaners in half and push the "v" of the bent end into one end of the noodle. Bend the two loose ends to form antennae. On the string beside the caterpillar, glue or tape the appropriate label as you did for the egg.

3. **Chrysalis:** The shell pasta represents a chrysalis. When a caterpillar is done eating and growing, it attaches itself to a leaf or branch and sheds its caterpillar skin, forming the chrysalis. Inside the chrysalis, its body is changing and it is getting ready to become an adult,

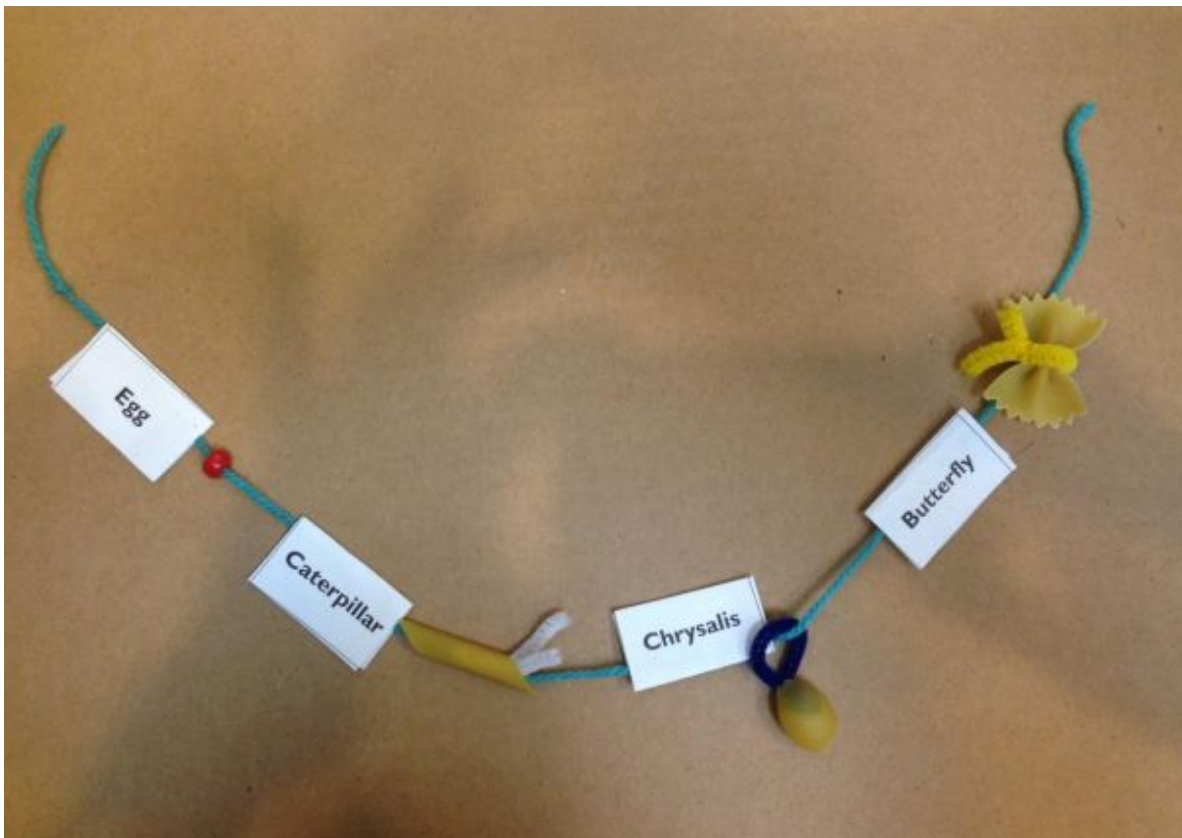
the last stage of its life cycle.

Bend one piece of pipe cleaner into a “u” shape and insert the loose ends into the shell pasta piece, creating a loop on top. Thread the yarn into the top of the shell pasta to string the chrysalis onto the necklace. On the string beside the chrysalis, glue or tape the appropriate label as you did for the egg and caterpillar.

4. Butterfly: The bow-tie pasta represents an adult butterfly. When it is ready, the butterfly breaks out of its chrysalis, waits for its wings to harden, and flies away.

Lay the center of the bow-tie pasta on top of the necklace string (the string should run from the top to the bottom of the bow, down the middle, behind the pasta). Using the remaining pipe cleaner, attach the butterfly to the necklace string by wrapping the center of the bow-tie pasta and the string it’s resting on with the pipe cleaner. Twist the pipe cleaner to secure, and bend its two loose ends forming antennae for the butterfly. On the string beside the butterfly, glue or tape the appropriate label as you did for the egg, caterpillar, and chrysalis.

5. Tie the ends of the necklace string together to complete the life cycle, and wear!



Butterfly Camouflage

Description: Students will learn about camouflage.

Grade Range (suggested): K-2

Materials:

- Paper
- Scissors
- Coloring tool (crayons, pencils, markers)
- Photos

ENGAGE

1. Ask students if they have ever heard of camouflage before. Ask students to share any animals they already know about that use camouflage, or ideas about how camouflage works (a personal definition).

PREPARE TO EXPLORE

2. Show students the photos of the different animals from around Chicago that use camouflage. What do they notice? What helps the animal to blend into their surroundings?

EXPLORE

3. Give students the following instruction:
 - a. Fold a piece of paper in half.
 - b. Create an outline of half a butterfly on the paper, with the body on the fold (see example)
 - c. Cut along the lines, and unfold the butterfly.
 - d. Find a place in your house you would like to camouflage your butterfly.
 - e. Color the butterfly so that it can camouflage.
 - f. Ask someone in your house to look for your butterfly.

REFLECT and SHARE

4. Have students talk to the people who looked for their butterfly about what helped their butterfly to blend in. How could you change your butterfly to make it blend in more?
5. Encourage students to take a nature walk or look out a window to see if they can see animals using camouflage in their neighborhoods.

- 1) Look at the following photos. Talk to someone at home. What do you notice? Are the animals easy to find? What makes them hard to find?







Photo Credit: Larry Smith/[Flickr](#) ([CC by 2.0](#))



Photo Credit: Tom Wilds/[Pexels](#) ([CC0](#))

2. Now create your own camouflaged animal!

<p>a. Fold a piece of paper in half.</p>	
<p>b. Create an outline of a butterfly on the paper with the body on the fold.</p>	
<p>c. Cut along the lines to cut out the butterfly.</p>	
<p>d. Find a place in your house you would like to camouflage your butterfly.</p>	
<p>e. Color the butterfly so that it can camouflage.</p>	
<p>f. Ask someone in your house to look for your butterfly.</p>	

3. Was the butterfly easy to find? Could you change your butterfly to make it blend in more? Repeat if you would like.

1. Mira las siguientes fotos. Habla con alguien en casa. ¿Que notaste? son faciles de encontrar? ¿Qué los hace difíciles de encontrar?

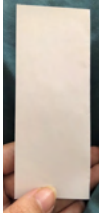





Photo Credit: Larry Smith/[Flickr](#) ([CC by 2.0](#))



Photo Credit: Tom Wilds/[Pexels](#) ([CC0](#))

2. Now create your own camouflaged animal!

g. Dobra un pedazo de papel por la mitad.	
h. Crea un contorno de una mariposa en el papel con el cuerpo en el pliegue.	
i. Corte a lo largo de las líneas para cortar la mariposa.	
j. Encuentre un lugar en su casa donde le gustaría camuflar a su mariposa.	
k. Colorea la mariposa para que pueda camuflarse.	
l. Pídale a alguien en su casa que busque su mariposa.	

3. ¿Fue fácil encontrar la mariposa? ¿Podrías cambiar tu mariposa para que camufle más? Repite si gustas.

Additional Resources

Want to keep learning? Check out these resources!

Explore the butterfly life cycle in more detail! Focus on the monarch life cycle by checking out David M. Schwartz's book, "Life Cycles: Monarch Butterfly."

- Check it out in English: <https://archive.org/details/monarchbutterfly00schw>
- And in Spanish: <https://archive.org/details/lamariposamonarc0000schw>

Heading to the library? Check out some of our favorite Story Time books:

- "Backyard Bugs" by Jill McDonald
- "Ten Little Caterpillars" by Bill Martin Jr.
- "Little Owl's Colors" by Divya Srinivasan

Check out our YouTube channel for videos of local butterflies, butterfly releases in our *Judy Istock Butterfly Haven*, plus butterfly-focused Story Times:

<https://www.youtube.com/peggynnm>

Explore other activities, crafts, and more: naturemuseum.org/stem

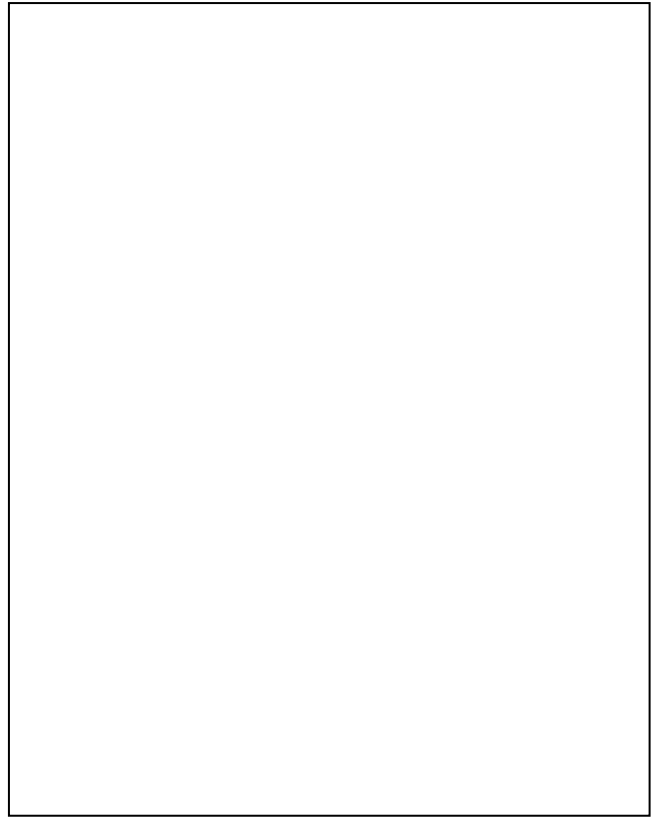


Neighborhood Butterflies & Moths

Butterfly/moth name:

Description (color, size, etc):

Diet:



Habitat (where did you see it):

Behaviors (what was it doing?):

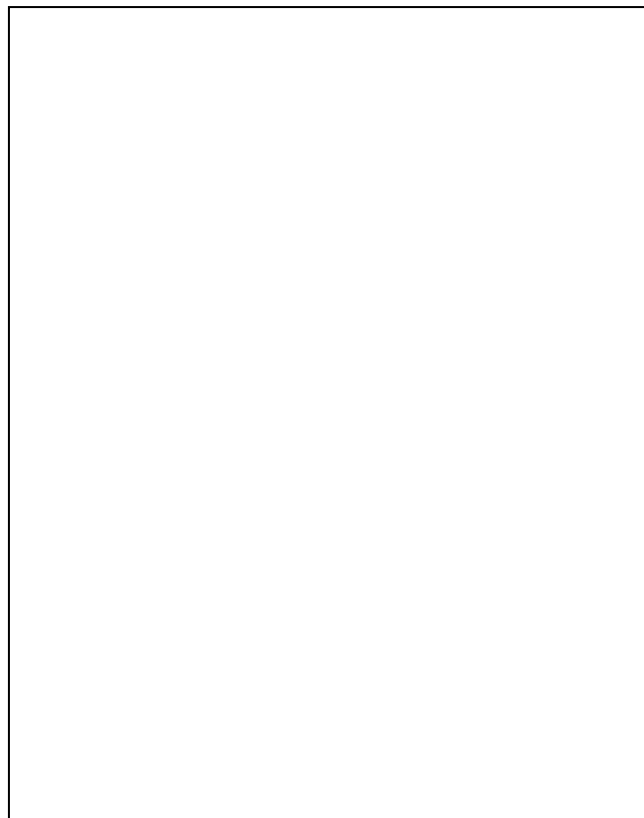
Drawing and research done by: _____

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Drawing and research done by: _____

My Observations

I'm observing_____.

I notice:

(use words and drawings to describe what you're observing)

I wonder:

(write all the questions you have about what you're observing)

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I'm observing_____.

I notice:

(use words and drawings to describe what you're observing)

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Story Time Graphic Organizer

Story Time Book Title: _____

Use words and pictures to share about
a main idea in the story you read.

Describe some adventure or exploration that happened.

How is nature involved in the story?

As you were reading the story, how did you feel?

Does the story give you any ideas in your own life?

After reading the story, what do you wonder?

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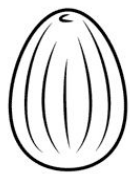
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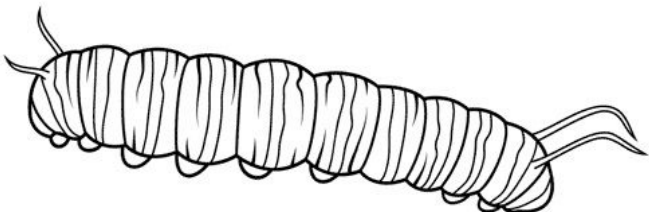
BUTTERFLY LIFE CYCLE

Flip - Flap Book

Name: _____



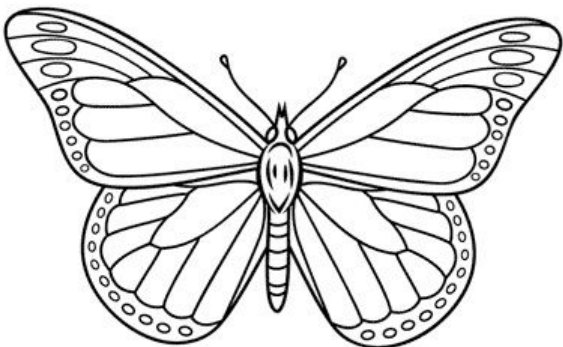
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2



3



4



Art Creative Commons Artsashina

Fold



Word Bank:

LARVA EGG ADULT PUPA

Fold

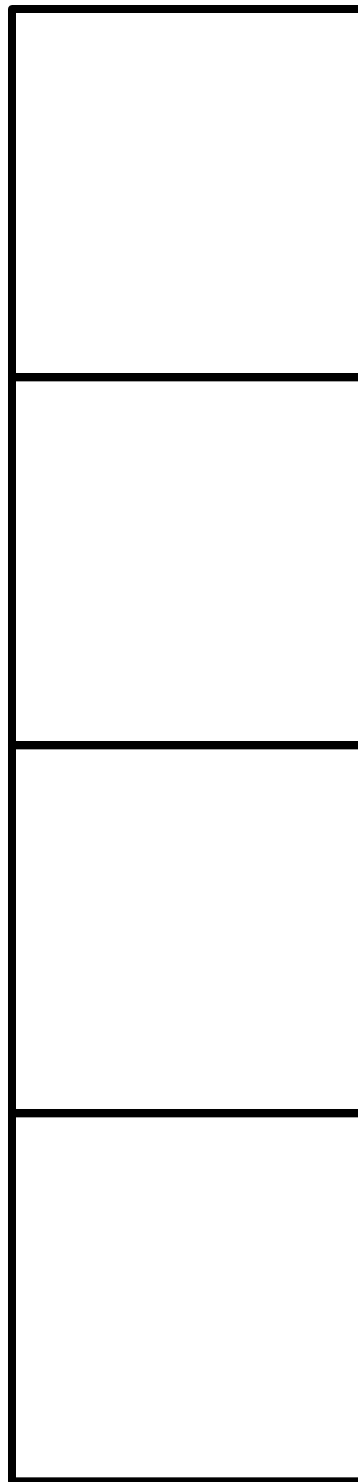


The part of the butterfly life cycle that we tend to see the most. During this stage butterflies have colorful wings for flying. **A**

The very first part of the butterfly life cycle. Butterflies will hatch during this life cycle stage. **B**

The worm-like stage of the butterfly's life cycle – usually seen eating leaves. **C**

This part of the life cycle comes after the caterpillar hangs upside down. The butterfly grows wings during this stage. **D**



MARIPOSA

CICLO DE VIDA

Libro Flip - Flap

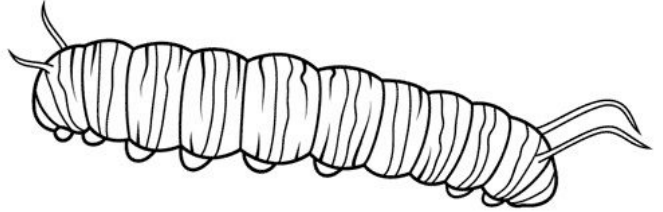
Nombre: _____



1



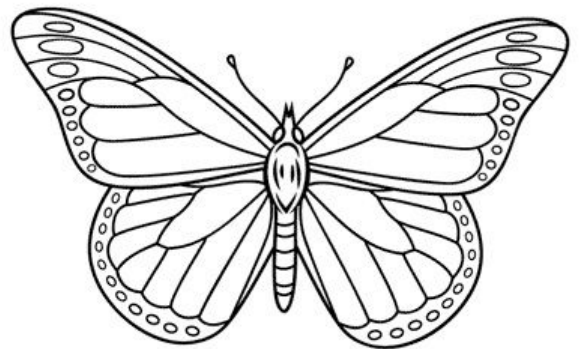
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3



4



Dolba

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NATURE
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Banco de palabras:

LARVA HUEVO ADULTO PUPA

Dobla



La parte del ciclo de vida de la mariposa que tendemos a ver. En esta etapa, las mariposas tienen alas para volar. **A**

La primera parte del ciclo de vida. Las mariposas eclosionan durante esta etapa del ciclo de vida. **B**

La etapa parecida a un gusano del ciclo de vida de la mariposa: generalmente se ve comiendo hojas. **C**

Esta parte del ciclo de vida se produce después de que la oruga cuelga boca abajo. La mariposa crece alas durante esta etapa. **D**