Insect Lore Butterfly Activities

1. Create an observation journal and record the daily changes in your caterpillars' growth and behavior. Samples:
   - What does a caterpillar look like?
   - How much have your caterpillars grown?
   - Are your caterpillars spinning silk?
   - How many legs does a caterpillar have?
   - How many times did your caterpillars shed their exoskeletons?
   - How long did it take for your caterpillars to change into chrysalides?
   - How long is the chrysalis stage?
   - What happens when a butterfly emerges from the chrysalis?

2. Is a butterfly an insect? Observe your butterflies closely. A creature is an insect if it has:
   - 3 body segments:
     1) Head - containing the eyes, proboscis and antennae
     2) Thorax - where the legs and wings attach
     3) Abdomen - containing the digestive system and other organs
   - 6 legs
   - An exoskeleton - a tough covering on the outside of the insect's body
3. How many words can you make using the letters in the word, METAMORPHOSIS?

4. Pretend you are a caterpillar or a butterfly and write a story about your day.

5. Create an acrostic poem using the beginning letters of the word, BUTTERFLY.

6. Plant a butterfly garden in a sunny spot at home or near your classroom. Butterflies are likely to visit if you plant milkweeds, dill, parsley, verbenas, purple coneflower, sunflowers, hollyhocks, asters and snapdragons.

7. Teach students that metamorphosis always occurs in a specific order (sequencing).
   - Observe the stages of growth in the butterfly house.
   - Read books about metamorphosis with students
   - Create flash cards exhibiting each stage of metamorphosis.
   - Ask students to put the cards in order and to describe what happens during each stage.
Insect Lore Butterfly FAQs

How long is the Painted Lady Butterfly life cycle?
Approximately 3 weeks. Females lay eggs 5-7 days after emerging from the chrysalis. The eggs hatch after three days. Caterpillars emerge from the eggs and eat for 10-12 days before forming chrysalides. Adult butterflies emerge from the chrysalides in 7-10 days.

What does the word “larva” mean?
“Larva” is another word for caterpillar.

Can I remove the lid of the cup and touch my caterpillars?
No. Removing the lid could introduce bacteria and mold into the caterpillar environment. Oils and salts from your hands could harm your caterpillars. Do not open the cup until your chrysalides have formed and it is time to move them to your butterfly habitat.

Why are my caterpillars spinning silky webbing?
It is a good sign if you see webbing in your cup of caterpillars. The webbing protects the caterpillars from many dangers. Caterpillars use the webbing to stick to their host plants as the wind can easily blow them off the leaves. Caterpillars also use the silk to pull leaves around themselves to hide from predators that might like to eat them.

What are the little brown balls appearing in my cup of caterpillars?
Those little balls are “frass”, or caterpillar waste. It means your caterpillars are eating and growing.
My caterpillars have attached themselves to the paper under the lid of the cup. How long should I wait before moving them to their butterfly habitat?

When your caterpillars crawl to the top of the cup they are ready to pupate (become chrysalides). Do not disturb the chrysalides for at least 2 days.

What is a “chrysalis”?

A chrysalis is a pupa. When a caterpillar changes into a chrysalis, it is “pupating”. Chrysalides are always bare. A cocoon does not surround them.

What do I do once my chrysalides have formed?

Remove the lid of the cup. Carefully take out the paper disk with your chrysalides attached. Pin or tape the paper disk with your chrysalides to the lower inside wall of the habitat. Your chrysalides should hang down in a natural position.

A chrysalis fell to the bottom of the culture cup. What should I do?

Gently scoop your chrysalis with a spoon and lay it on a piece of paper towel on the floor of your Butterfly Habitat. It will emerge there safely.

How long will my butterflies live?

Adult butterflies typically live for 2-4 weeks during the warm parts of the year. During that time they will feed, mate, lay eggs and begin the amazing butterfly like cycle, or metamorphosis all over again.
What To Do

Care For Your Caterpillars

1. Your cup of caterpillars have all the food and moisture they need to grow into Painted Lady Butterflies.
2. Always handle your cup of caterpillars gently and be sure to keep your caterpillars in the cup they arrive in. This cup will be their home for the next 10-12 days.
3. Keep your cup upright, indoors and away from direct sunlight or drafts. Direct sunlight can cause moisture to form in the cup. This moisture can cause your caterpillars to sicken and die.
4. Maintain a room temperature of 68-75 degrees Fahrenheit.
5. Keep the lid on the cup and do not add any food or water.

Watch Your Caterpillars Become Chrysalides

Your caterpillars will eat and grow for approximately 10-12 days before changing into chrysalides. During that time they will shed their exoskeletons 4 times. When they have finished growing, your caterpillars will climb to the top of the cup. There they will hang from the paper disk in a “j” shape under the lid. They will shed once more after they have attached themselves to the lid of the cup, just before they pupate (become chrysalides).
- Do not disturb the caterpillars for at least 2 days in order to allow them to safely harden into chrysalides.
- Prepare your butterfly habitat.
- A chrysalis may look like it is resting, but an amazing transformation is taking place inside. The caterpillar parts are liquefying and re-arranging to become the cells, tissues and organs of a butterfly.
Move Your Chrysalides to the Butterfly Habitat

After about 2 days, your chrysalides will be fully formed. Now you may gently move them to their butterfly habitat.

- Open the cup and take out the paper disk with the chrysalides attached.
- Remove any silk strands and frass from the paper disk and the chrysalides. This is a very important step. If the silk and frass is not removed, the butterflies may become entangled in the silk when they emerge from their chrysalides.
- Pin the paper disk with the chrysalides attached to the lower inside of the butterfly habitat (approximately two inches above the floor of the habitat).
- Keep your butterfly habitat in a safe place.
- If a chrysalis falls off the paper disk, lay the chrysalis on a napkin or paper towel at the bottom of the habitat.
- Look carefully. Can you see the outline of a butterfly's wings beneath the surface of a chrysalis?

Feed Your Butterflies

7-10 days after the formation of your chrysalides, your Painted Lady Butterflies will emerge. It is very important that you do not disturb your butterflies while they are expanding and drying their wings. After a butterfly emerges from the chrysalis, it expels a red liquid, called meconium. This is the leftover part of the caterpillar that was not needed to make the butterfly. Next, your butterflies will be hungry once their wings have fully expanded and hardened.

- Mix 2 teaspoons of sugar into 1 cup of water. Stir.
• You may, if you like, place fresh flowers on the bottom of your habitat.
• Sprinkle the sugar water, or nectar, on the flowers daily with the pipette included.
• Or, soak a tissue with the sugar water and place the tissue on a paper plate at the bottom of the habitat.
• Do not leave an open container of sugar water in the habitat. Your butterflies may fall into it and drown.
• Butterflies also enjoy fresh slices of orange or watermelon. Did you know butterflies taste with their tongues (proboscises) and feet?

Set Them Free!

The Adult Painted Lady Butterfly has a life span of 2–4 weeks. After you have watched, studied and shared the wonder of your butterflies, it is time to let them go!
• Release your butterflies within a week after they have emerged from their chrysalides.
• Be sure temperatures are above 55 degrees Fahrenheit
• Open the habitat carefully. Patiently wait for the butterflies to fly away.
• Do not shake the habitat.
• Or, carefully and quietly allow the butterflies to crawl onto your hand and fly away.