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Monarch Outdoor Lifecycle Kit Instructional Guide

Kit Contents

- Heavy-Duty 15" x 15" x 30" Outdoor Lifecycle Enclosure
- Live milkweed plant
- Monarch caterpillars
- 10" plant saucer
- Plastic paintbrush & spoon
- Carol Pasternak's book, "How to Raise Monarch Butterflies"

Additional Materials Needed

- Brick, or similarly heavy object to weigh down the Enclosure
- 15" x 15" rubber tile or outdoor carpet/mat to protect the bottom of the Enclosure

Enclosure Location

- Choose an outdoor location that will provide approximately 6 hours of sunlight
- Ensure the Enclosure is accessible for watering, observation, and care

Seasonal Timing

- To successfully rear a generation of Monarch butterflies, your caterpillars need to begin their remaining lifecycle stages prior to August 15th

Set-up Instructions

1. Thoroughly water your milkweed plant with water, until the entire plant is soaked
2. Unfold your Enclosure until it stands upright
3. Set the Enclosure on the outdoor mat and place a brick inside near the back to help prevent the Enclosure from being blown over by strong wind gusts
4. Place the 10" plant saucer in the Enclosure in front of the brick
5. Place your potted milkweed on top of the plant saucer
6. Using your paintbrush, guide each caterpillar onto the plastic spoon
 - i. Transfer your caterpillars on the top of the milkweed plant near the center of a leaf cluster; Use your paintbrush to move the caterpillar onto the milkweed
7. Position the milkweed towards the front of the Enclosure and ensure the plant is touching one or more of the sides of the Enclosure
 - a. PRECAUTION: Milkweed sap can be very irritating to the skin and eyes so please be careful when handling the plant, and thoroughly wash your hands after touching the leaves
8. Zip-up the Enclosure

Care Instructions

- Your Enclosure provides crucial protection for your Monarchs during all lifecycle stages. Always keep the milkweed plant inside the Enclosure
- During severe weather conditions, it might be necessary to move your Enclosure inside to protect it from high winds. Your milkweed plant needs direct sunlight to thrive, so return your Enclosure to the outside location as soon as possible
- Water your milkweed plant when soil is somewhat dry to the touch; Always pour water into the plant saucer, not directly onto the plant, ¼ inch of water in plant saucer will be sufficient
- Your milkweed plant should provide sustenance for a pre-determined number of caterpillars. You will be surprised by how much the caterpillars eat as they prepare to enter the chrysalis stage! If you observe the caterpillars getting larger without adequate milkweed as a food source, please contact MonarchZones@gmail.com for guidance
- Occasionally, your milkweed plant can become infested with small orange/yellow bugs (aphids). If this happens, crush the bugs with your fingers, then wash your hands immediately because milkweed can be toxic to the skin.
- When conducting your morning and afternoon observations of your Enclosure, closely inspect for any predator or other insect concerns. If found, remove concerns promptly. If you have any questions regarding insect control, please contact MonarchZones@gmail.com for additional guidance
- Remember, your caterpillars will molt or shed it's skin every 2-3 days. When this happens, the caterpillar may climb over to the side of the enclosure and remain motionless. Please, do not disturb the caterpillar during this process. It will molt/shed it's skin, then move back onto milkweed plant
- When your caterpillar is ready to pupate (from the chrysalis), it will climb to a upper position in the Enclosure or higher leaf, spin a button of silk and assume a "J" position. This is a critical stage during the Monarch's transformation. Please do not touch the Enclosure or move it during this stage
- If for some reason your chrysalis falls from the upper position to the floor, place the chrysalis on a paper towel, positioning the chrysalis bottom near the enclosure interior. Once the Monarch ecloses (emerges), it will naturally climb to a higher point, to dry it's wings
- As each butterfly ecloses (emerges), it is important that you do not touch the hanging butterfly or move the Enclosure. Over the next 24 hours, they will strengthen their wings to prepare for life as a new butterfly. If the butterfly falls from its hanging position, carefully move it back to the chrysalis or a high position
- Releasing your butterflies – Weather permitting, you can release your butterflies 24 hours after they emerge from their chrysalis. It is best to release your butterflies within 72 hours. If you aren't able to release them in the wild within that timeframe, soak a small section of a sponge in Gatorade and place it in the Enclosure as a temporary food source
- Lifecycle Stages - Please refer to Carol Pasternak's book, "How to Raise Monarch Butterflies", for a complete explanation of the miraculous transformation

Cleaning Instructions

Proper cleaning of your Enclosure is critical to ensure a healthy environment is available for your future generations of Monarch butterflies! Please follow these steps after releasing your Monarchs

1. Empty your Enclosure
 - a. Move your Enclosure to a place where you can safely remove all of the remaining pupa chrysalis, casings and frass, thoroughly vacuum the interior
 - b. Fold your Enclosure and secure it with the circular strap included with your kit
2. Cleaning Stage
 - a. Fill your sink with warm water and add a drop of mild dishwasher detergent
 - b. Swish the Enclosure around in the soapy water
 - c. Remove the oval strap and allow the Enclosure to pop open
 - d. With a sponge, clean the entire Enclosure, inside and out
 - e. Fill a rinse sink with clean, warm water and thoroughly rinse your Enclosure
3. Disinfecting Stage
 - a. Place your Enclosure in the sink and fill with COLD water; Measure water by the gallon and completely cover your Enclosure
 - b. Once your Enclosure is covered with water, add 1 Tablespoon of bleach per gallon
 - c. Gently swish the Enclosure around without splashing
 - d. Allow the Enclosure to soak for maximum of 5 minutes; After soaking, carefully remove the Enclosure from the bleach water
4. Rinsing Stage
 - a. Drain the disinfecting sink, rinse, then refill with cold water
 - b. Place the Enclosure in the fresh cold water, allowing it to soak for 5 minutes; After 5 minutes, remove the Enclosure from the sink
5. Drying Stage
 - a. Remove the circular strap, hang or place in a sunny location to dry
 - b. Lubricate the entire zipper with a zipper lubricant found online or at your local hardware store. Something as simple as Lip Balm will work too
6. Re-Use/Storage
 - a. Continue to use your Enclosure for raising Monarch Butterflies, or fold up, securing with the circular strap, putting it away for the season

Milkweed Care – After Rearing

- Once you have reared your generation of butterflies, cut back the remaining plant to 6-8 inches and plant in your yard to support future generations of wild butterflies

Raising a 2nd Generation of Monarch Butterflies

- Please do not attempt to rear another generation of butterflies on the milkweed provided with your Outdoor Lifecycle Kit. You will need a fresh milkweed plant and caterpillars. If you are interested in rearing another generation within the same season, please contact Monarch Research at monarchzones@gmail.com for guidance

Additional Resources

- Watch Monarch Research's recorded webinar, "Introduction to Monarch Rearing", at monarchresearch.org/monarchs
- Carol Pasternak's book is an excellent educational resource on Monarch Butterflies
- Contact the Monarch Research team at monarchzones@gmail.com