



Project Exploration creates transformative learning opportunities for youth underrepresented in the sciences –particularly students of color and girls – by equipping them with the skills, practices, and mindset needed for a lifelong pursuit of learning. STEM@Home makes activities around science, technology, engineering, and math accessible and fun to do at home. This STEMbook activity, resources, and more are available at [www.projectexploration.org/stemathome](http://www.projectexploration.org/stemathome).

## In this activity, you will:

learn about the lifecycle of a butterfly. Just like you grow and change, so does a butterfly!



## Supplies Required:

### For diagram

- Paper plate
- Construction paper, assorted colors
- Pipe cleaners, string, clothes pins, or the like
- Coffee stirrer, pencil, wooden dowel, or twig
- Tissue paper, assorted colors

### For puffy paint

- White shaving cream
- Glue
- Flour
- Food coloring
- Ziploc bag
- 1 large bowl
- 4 small bowls
- 1 large spoon

## Video

Learn about the lifecycle stages: <https://tinyurl.com/ya439cyg>

## Overview

All insects undergo metamorphosis – a change in shape and form during development. Some insects go through complete metamorphosis to reach their adult stage. The Monarch butterfly life cycle begins with a group of small white eggs laid on the underside of leaves. The eggs hatch into larva called a caterpillar. Caterpillars spend most of their time eating and grow very fast. Once fully grown, the caterpillar will leave its feeding area in search of a safe place to pupate. The caterpillar will hang upside down in a J-shape for one day then shed its skin for the last time to reveal a chrysalis. Within the chrysalis the caterpillar will undergo the transformation to become a butterfly. The chrysalis will crack open and a butterfly with crumpled wings will emerge.



## Instructions

1. Divide the plate into fourths and label each section with part of the butterfly's life cycle
2. Draw and label each stage using puffy paint  
For the puffy paint:
3. In a large bowl, combine 3 cups of shaving cream, 1 cup of glue, and 1 cup of flour
4. Mix the ingredients well, until gooey
5. Divide the mixture into smaller bowls and add food coloring to each
6. Scoop the puffy paint into baggies and clip the corner of the bag to create a piping bag
7. Use the puffy paint to illustrate the lifecycle of a butterfly!

## Additional Resources

**Think About It!** What do you think is the most important stage of a butterfly's life cycle? What other organisms go through different stages in their lifecycle?

1. Explore a monarch butterfly's life: <https://tinyurl.com/mvuk696>
2. Listen to the story of Charlie the Caterpillar: <https://tinyurl.com/s7dquou>
3. Learn about butterfly traders: <https://tinyurl.com/vn66msa>

## Share It Out

Share your lifecycle with your friends and family! Did you learn anything new from the videos?

**Share on social media:** film yourself talking about what you've learned and share your knowledge with others!

Use the hashtags:

#ButterflyLifecycle  
#ProjectExploration  
#StemAtHome

**Share via PE's website:** Students who complete STEM@home activities and share what they learned with the PE team via our website will earn points which can be traded in for cash prizes at the Explore Store. Your project number is 201. Learn more at [www.projectexploration.org/explore-store](http://www.projectexploration.org/explore-store)

### Join PE's character contest!

Design a STEM character who will lead kids through activities and be featured on our website and in our STEMbooks. Cash prizes will be awarded to the top 3 finalists. Learn more at [www.projectexploration.org/character-contest](http://www.projectexploration.org/character-contest).



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