



# Metamorphosis

Science, Reading, Art

Grade Levels: K-4

Activity Time: 20-30 minutes per activity

Maximum Number of Participants: 25

**Purpose: Students will learn all the stages of metamorphosis of both a butterfly and a frog. (TEKS K.2.A, 1.2.A, 1.10.A, 1.10.D, 2.2.A)**

<u>Material Set Up:</u>	10-15 minutes
<u>Introduction and Demonstration:</u>	10 minutes
<u>Activity:</u>	20 minutes

## Objectives

Students will:

- Explore the concept of metamorphosis
- Measure length and width

## Materials

Materials for the Introduction:

- The Hungry Caterpillar by Eric Carle

Materials Included for the Activity:

### Activity 1

- Plates (30)
- Spiral Pasta (30)
- Shell Pasta (30)
- Bow-tie pasta (30)
- Beans (90)

### Activity 2

- Green Construction paper (30 sheets)
- Red Construction paper (2)

### Activity 3

- Frog templates (on flash drive)
- Brads (90)
- Hole punch (1)

Materials not Included:

- Glue or glue stick
- Pencils, crayons, or markers
- Scissors
- Rulers



## Preparation and Space Requirements

### Preparation:

- Lay materials out on a flat surface.

### Grouping:

- Children can work in small groups by age or ability to complete the 1<sup>st</sup> activity.
- Linking their completed chains together requires the students to work together, which encourages sharing, teamwork, and togetherness.
- Students will work individually for the 2<sup>nd</sup> and 3<sup>rd</sup> activity.

## Introduction

- Pass out the The Very Hungry Caterpillar to each group of students for them to read.

### Activity 1:

- 1.) Have students cut out 4 leaves from a piece of green construction paper.
- 2.) Give students each 3 beans, 1 spiral pasta, 1 shell pasta, and 1 bowtie pasta.
- 3.) Have students glue the pasta and beans to the leaves and then glue the leaves to the plate in the following order
  - 1.) Eggs = beans
  - 2.) Caterpillar (Larva) = spiral
  - 3.) Chrysalis (Pupa) (Cocoon) = shell
  - 4.) Butterfly = bowtie
- 4.) Next label the steps on the plate as listed above.
- 5.) Have students draw arrows to represent the caterpillars metamorphosis into the butterfly (there will be an arrow from the eggs to the caterpillar, the caterpillar to the chrysalis, and the chrysalis to the butterfly)
- 6.) The students now have a completed life cycle of a caterpillar/butterfly

### Activity 2:

- 1.) Pass out the green construction paper and turn it like a rectangle, short sides on the left/right and long sides on the top/bottom. Have students measure the width (about 11 inches) of the paper using the ruler and draw a line every 1-inch using a pencil. (The lines should run from the top to the bottom of the page in 1-inch intervals.)
- 2.) Students can now cut strips where they measured.
- 3.) Have the students loop a strip into a circle and glue the ends together. Repeat this step with 2 more strips by linking them through the previous one to make a chain.
- 4.) Students can draw or create their caterpillar faces.

### Activity 3:

- 1.) Have your students cut out their frogs from the provided template.
- 2.) Next punch holes in the body of the frog for the legs and tail to attach to.
- 3.) Using brads attach each leg and the tail so that the body lies on top.
- 4.) Swing all legs and the tail under the body for the egg stage.
- 5.) Leave the legs in and the tail out for the tadpole stage.
- 6.) Leave in the back set of legs in and swing out the front set of legs and the tail for the tadpole with legs stage.
- 7.) Pull out all sets of legs and the tail for the young frog stage.

## Activity



8.) Last swing the tail back under the body and pull out all sets of legs for the final stage, the frog!

- Paper strips can be cut ahead of time.
  - Students can make their own individual chain.
- 
- Video of activity