

# Classroom VIDEO

Teacher's Notes

## Butterflies Primary



Grades: 4-6

Duration: 18 mins

### Introduction

Butterflies have always been wonderful symbols of beauty, flitting through our lives. They have incredible colours, striking patterns and exotic shapes. Unlike humans, who end up looking like their grandparents, butterflies look completely different when they are young, and they are particularly "gross" during the chrysalis stage ! But no matter how gross or, beautiful, this wonderfully filmed video, will offer your students, an amazing insight, into the lives of butterflies!

Although the life cycle of a butterfly is one of the most intriguing of all life cycles on the planet, and it is filled with danger and complications, it is an easy life cycle for students to study and understand. It has four separate, and very different stages - The Egg Stage; The Caterpillar Stage; The Chrysalis Stage and the Butterfly Stage.

With the added extras of stunning time lapse photography, visual cues and explanations written specifically for students, this video brings to life, all aspects of the butterfly life cycle.

These Teachers Notes offer you an overview of the information contained in the video, in terms of what your students can learn from the video. They also contain over thirty activities to try with your students, covering all four stages of the butterfly life cycle, in a variety of curriculum areas.

### Pre-Video Activities to try:

As a class, have students identify what they already know about butterflies. Record these responses.

From the listed responses, have students identify, what they would like to know more about.

Finally, have students identify what is not on the list about butterflies, that they would like to learn.

Provide an assortment of books about butterflies (factual and non factual) for students to peruse prior to the watching the video.

As a class, have students identify what they already know about life cycles. Record these responses.

From the listed responses, have students identify, what they would like to know more about.

Finally, have students identify what is not on the list about life cycles, that they would like to learn.

Discuss with the class - comparisons - What are they ? Why are they used ? Indicate that there are quite a few comparisons in the video. Have students try to identify the comparisons in the video.

### The Egg Stage:

In this section of the video, your students will learn:

the female butterfly must find a suitable place to lay her eggs, and uses special feelers on her legs and body, to find the right kind of plant. She does this because caterpillars are very fussy eaters !

the female butterfly lays many eggs - sometimes up to 1000.  
 that the eggs are often taken by ants and other insects as food, so by laying so many eggs, the female butterfly is making sure that some of them will not be eaten, and go on to become caterpillars.  
 that eggs may be laid in clumps, on their own or in a line.  
 that the eggs take about 1 week to hatch, and the caterpillar that pops out, is about the size of a freckle !

### **Activities To Try - Egg Stage:**

English - Have a class discussion about butterflies, and the fact that they lay eggs. Have students identify other egg laying animals and insects. Provide students with a range of information texts which may help them investigate this.

English - Discuss how ants and other insects like to eat butterfly eggs. Introduce the word "predator" and explain. Have students identify any other "predators" they may know about.

Maths - Investigate the number 1000. Use centicubes and count. Students will see that even if they can't count out 1000 centicubes, there are certainly A LOT of eggs !

Maths - Investigate size. How big is a freckle ? Can students identify anything else that is this small ? Discuss and record answers.

HSIE / Science - Look for evidence of butterflies in your local area or playground. Have students examine leaves for eggs with magnifying glasses. Did you find any evidence of butterfly eggs ?

### **The Caterpillar Stage:**

In this section of the video, your students will learn:

that caterpillars are amazing eating machines ! They eat and eat, and grow and grow. If a human baby grew as much as a caterpillar, it would be the size of an elephant in just a couple of weeks !

a caterpillar has great jaws for slicing through leaves - a bit like its own set of steak knives.  
 that caterpillars grow so much and so fast, they can actually pop their skins ! To stop this from happening, they have to get a new and roomier one.

that the caterpillar sheds his tight skin about 5 times, until they find the perfect fit!

that caterpillars have six legs, but they also have some other special helper legs, called prolegs. These are not real legs, but suckers with tiny hooks, that help them cling to twigs and leaves.

some caterpillars use bright colours and an ugly appearance to ward off predators, whilst others, blend in with their surroundings (camouflaged).

### **Activities To Try - Caterpillar Stage:**

English - Have students look up the definitions of predator and camouflage. Using this, and the information from the video, have students write a factual explanation of the strategies used by caterpillars for survival.

English - Have students expand on the above, by researching strategies used by other animals and insects for survival.

Science - Have students label a caterpillar, using the correct terminology, and highlighting the prolegs.

English - Read "The Very Hungry Caterpillar" by Eric Carle. Have students take particular note of the way the book is presented (i.e.. with the holes in the food). Have students make their own caterpillar / butterfly / insect book for a younger student. Students may wish to use the same idea as Eric Carle, or develop their own for the presentation of the story.

### **The Chrysalis Stage:**

In this section of the video, your students will learn:

that chrysalises come in many shapes and colours.

that during this stage, the caterpillar is finally becoming a butterfly.

life for a chrysalis is just a lot of hanging around, and can best be compared to circus performer who swings about on ropes high above our heads ! It's a very dangerous time for the caterpillar inside.

you can make out the stomach or abdomen, wings and head of the butterfly in the chrysalis, if you look very closely.

that after several weeks, the butterfly is finally ready to emerge.

### **Activities To Try - Chrysalis Stage:**

Art - Have students create a chrysalis, from which a butterfly emerges. The following site has an easy to follow plan, and excellent examples of the finished art work: <http://www.hhmi.org/coolscience/butterfly/index.html>

Art - Have students make a paper mache chrysalis. Use chicken wire (which can be made into a multitude of shapes) as a base. Research the different shapes and colours of chrysalises, and design and paint accordingly.

English - Have students compare the activities of a chrysalis to a circus performer. What are the similarities and differences. Record student responses.

English - Have students write a poem, about what it might be like inside a chrysalis.

Brainstorm a list of words for students to include in their writing.

English - Have students research further, and write an explanation about the chrysalis stage. Students may wish to investigate the differences and / or similarities between a chrysalis and a cocoon.

### **The Butterfly Stage:**

In this final section of the video, your students will learn:

Even though the butterfly has emerged, it is still in danger. Its body has to go through even more changes, and it still cannot fly. The butterfly's wings need to fill with blood, which is a bit like blowing up a balloon! The butterfly's curly feeding tube, which was in two parts, must join together. Butterflies need high energy fuel to fly so far and fast, and use their feeding tube like a straw to drink nectar from flowers. When finished, the tube curls up like a spring. Nectar is not the best diet for butterflies, and pretty soon, their wings get all tatty. The amazing patterns and beautiful colours of butterflies make them an easy meal for a spider and other animals, like birds. Butterflies only live for a few weeks, and so that is why when you see a butterfly, it is always moving so fast and all over the place. Male butterflies look for a mate, so that the life story of the butterfly can start all over again. Male butterflies must mate with the female, so that the eggs may be fertilized.

This process is called courtship, and lasts about 30 minutes.

### **Activities To Try - Butterfly Stage:**

Maths - The butterfly life cycle contains quite a few aspects relating to maths. Have students investigate symmetry - What is it? Where else in the natural world is it found? Have students investigate time - make a list of things that take more than, less than, and about 30 minutes. Record the findings. Have students investigate shapes and polygons - are the shapes on butterflies regular

or irregular? What shapes are they? Record the findings. Have students investigate patterns. Are the patterns on butterflies repeating patterns or irregular? Where else might patterns like these exist? What function do they play? Have students look at fractions and percentages - What fraction or percentage of the life cycle is the egg stage? The caterpillar stage? The chrysalis stage? The butterfly stage?

Art - Have students use a variety of media to create butterflies. Have students pay particular attention to colours and patterns.

Science - Have students label a diagram of a butterfly.

HSIE / English - Have students research a butterfly of their choice, and present it to the class as an information report and / or as a speech.

English - Have students write a narrative, where the main character is a butterfly.

### **Post-Video & Life Cycle Activities:**

HSIE / Science - Labelling a Life Cycle. Many websites and BLM books offer work sheets for this purpose or alternatively, you could make your own.

English - Dictionary Work. Have students look up words from the video or your discussions, and use them in writing a poem or explanation. Words to consider might be: predator, camouflage, courtship, scent, fertilization, tatty, flit, flirt, prolegs etc.

Art - Drawing or Painting the Butterfly Life Cycle. Have students interpret the butterfly life cycle for themselves, by painting or drawing the stages.

Art - Have students draw the life cycle of the butterfly in comic strip form.

Art - Have students create a diorama of the butterfly life cycle. Students can use real twigs, and a variety of readily available materials to do this.

English - Have students examine and read movie reviews from a local newspaper or magazine. Then have students write a movie review for this video. Have them give a star rating out of five.

Go back and review the students responses to the pre-video questions. Have students add to these with their new found knowledge. Have students identify the comparisons they found in the video. Students may like to illustrate these comparisons.

HSIE - Using the new knowledge on comparisons, have students bring in family photos (self, parents, grandparents). Compare the photos - Who do you look like? Who did you get your eyes; teeth; hair; chin; nose from? This may link up with a unit on Families or Family History.

Science - Having learned about the life cycle of the butterfly, students may like to investigate life cycles of other creatures. They may also like to investigate other cycles in our world, for example, the water cycle.

**Websites you might like to visit:**

<http://www.earthsbirthday.org/butterflies/activitykit/unit2-g.html> \*\*\*

<http://www.units.muohio.edu/dragonfly/cycle/index.html> \*\*

<http://www.yesnet.yk.ca/schools/jackhulland/projects/butterflies/> \*\*

<http://www.billybear4kids.com/butterfly/flutter-fun.html> \*\*\*\*

[http://www.tooter4kids.com/LifeCycle/Butterfly\\_Life\\_Cycle.htm](http://www.tooter4kids.com/LifeCycle/Butterfly_Life_Cycle.htm) \*\*\*\*\*

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# The Butterfly Lifecycle

