Life Cycle of a Butterfly

Level: 1
Project GLAD Unit

Written by:
Sarah (Sally) Dueweke,
Jessica Vigil

Spokane Public Schools
I. UNIT THEME—
   Animals and insects go through life cycles, some life cycles are complete while others are incomplete.

II. FOCUS/MOTIVATION
   - Cognitive Content Dictionary with Signal Word
   - Observation Chart
   - Inquiry chart
   - Picture file
   - Realia
   - Poetry/chants
   - Teacher made Big Books
   - Read Alouds

III. CONCEPTS (ESSENTIAL UNDERSTANDINGS/ENDURING UNDERSTANDING)
   That animals and insects have a predictable life cycle, go through a metamorphosis and have an essential part of life on earth.

IV. LANGUAGE ARTS SKILLS: READING/WRITING/ORAL LANGUAGE (SPEAKING/LISTENING)
   STANDARDS
### CONTENT STANDARDS LIFE SCIENCES (WA)

- **Living things have needs:**
  - Plants have basic needs: water, nutrients, light, air
  - People have basic needs: food, clothing, shelter
  - Animals have basic needs: food and shelter
  - Plants have life cycles
  - People and animals have life cycles
  - Plants have structures that work together (system)
  - Plants reproduce in different ways.

- **Investigation and Experiment:**
  - observe, compare, and describe changes using evidence to support
  - identify the parts of plants and describe how the parts go together (system)
  - draw pictures that correctly portray features
  - record observations
  - bar graph of plant growth

#### Physical Science

<table>
<thead>
<tr>
<th>1.1.1</th>
<th>Understand simple properties of common natural and manufactured materials and objects.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• (K) Identify and describe a property of an object.</td>
</tr>
<tr>
<td></td>
<td>• (K) Sort common materials and objects using a simple property (e.g., texture, color, size, shape).</td>
</tr>
<tr>
<td></td>
<td>• (2) Sort common objects by multiple simple properties (e.g., texture and color; size and shape).</td>
</tr>
<tr>
<td></td>
<td>• (2) Identify and describe the differences between common natural and manufactured materials and objects using properties.</td>
</tr>
</tbody>
</table>

#### Earth Science

<table>
<thead>
<tr>
<th>1.1.5</th>
<th>Understand physical properties of Earth materials.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• (K) Sort rocks based on size, shape, and other physical properties (e.g., color, texture).</td>
</tr>
<tr>
<td></td>
<td>• (2) Explain how some Earth materials are used by living things (e.g., water and soil for growing plants).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1.1.6</th>
<th>Understand characteristics of living organisms.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• (K) Identify observable characteristics of living organisms (e.g., spiders have eight legs; birds have feathers; plants have roots, stems, leaves, seeds, flowers).</td>
</tr>
<tr>
<td></td>
<td>• (2) Observe and describe characteristics of living organisms (e.g., spiders have eight legs; birds have feathers; plants have roots, stems, leaves, seeds, flowers).</td>
</tr>
</tbody>
</table>
| 1.2.1 | Understand that things are made of parts that go together.  
  | (K) Identify the parts of objects, organisms, and materials (e.g., toys with moving parts, plants, animals, soils).  
  | (1) Describe how the parts of objects, organisms, and materials go together.  
  | (2) Construct simple devices to do common tasks using common materials and explain how the parts depend on each other (e.g., cardboard, wood, clay, rubber bands). |

**Systems**

| 1.2.3 | Know that common materials are made of smaller parts.  
  | (1) Sort objects based on component parts (e.g., toys with wheels).  
  | (2) Show that people use magnifiers to observe things they cannot see with their eyes. |

**Living Systems**

| 1.2.6 | Know that living things are made of small parts.  
  | (K) Observe and show how living things look different under a magnifier.  
  | (2) Observe and identify the parts of an object seen under a magnifier.  
  | (2) Illustrate or draw the small parts that make up the whole living thing. |

| 1.3.8 | Know that most living things need food, water and air.  
  | (1) Observe and record that most living things need food, water, and air.  
  | (1) Observe and record or demonstrate that plants need light. |

| 1.3.10 | Know that plants and animals need a place to live.  
  | (1) Observe and show how organisms live in specific places (e.g., fish live in a pond).  
  | (1) Describe how animals depend on plants or other animals for food.  
  | (1) Describe how animals depend on plants or other animals for shelter. |

**Investigating**

| 2.1.1 | Understand how to ask a question about objects, organisms, and events in the environment.  
  | (K, 1, 2) Wonder and ask questions about objects, organisms, and events based on observations of the natural world. |

| 2.1.2 | Understand how to plan and conduct simple investigations following all safety rules.  
  | (1, 2) Make observations and record characteristics or properties.  
  | (2) Make predictions of the results of an investigation.  
  | (2) Plan and conduct an observational investigation that collects information about characteristics or properties.  
  | (2) Collect data using simple equipment and tools that extend the senses (e.g., magnifiers, rulers, balances, scales, and thermometers).  
  | (K, 1, 2) Follow all safety rules during investigations. |
### 2.1.5 Understand how to record and report investigations, results, and explanations.
- (K, 1, 2) Report observations of simple investigations using drawings and simple sentences.
- (1, 2) Describe and/or draw the materials used in the investigation (e.g., numbers, shapes, colors).
- (K,1, 2) Report safety procedures used during the investigation.
- (2) Report the process used and results of the investigation (e.g., verbal, visual, written, and/or mathematical formats).

### Nature of Science

#### 2.2.1 Understand that all scientific observations are reported accurately even when the observations contradict expectations.
- (K, 1, 2) Record what is observed and explain how it was done accurately and honestly.
- (1, 2) Keep records and explain that the records have not been changed even when they did not match initial expectations.

#### 2.2.2 Understand that observations and measurement are used by scientists to describe the world.
- (K, 1, 2) Raise questions about the natural world and seek answers by making careful observations and trying things out.
- (1, 2) Make observations and measurements about natural phenomena.

#### 2.2.5 Know that ideas in science change as new scientific evidence arises.
- (1, 2) Tell how scientific inquiry results in facts, unexpected findings, ideas, evidence, and explanations.

### Science, Technology and Society

#### 3.2.2 Know that people have invented tools for everyday life.
- (K, 1, 2) Describe ways in which common tools help people in their everyday life.

#### 3.2.3 Know how knowledge and skills of science, mathematics, and technology are used in common occupations.
- (1) Tell at least one way that science, mathematics, or technology is used by a person in a job.

#### 3.2.4 Understand how humans depend on the natural environment.
- (K, 1, 2) Describe what humans obtain from their environment (e.g., a school garden yields vegetables; a sheep yields wool, which is used to make sweaters).
- (1, 2) Describe what organisms obtain from their environment (e.g., a school plant needs water and sunlight).
V. **ELD Standards**

**ELD Listening/Speaking Standards – Grades K-5 Washington State**

**Beginning –**
- Very limited understanding of English
- Learns to distinguish and produce English phonemes
- Uses words, gestures, and actions
- Practices repetitive social greetings
- Imitates verbalizations of others to communicate:
  - Basic needs
  - Participate in discussions and activities
  - Respond to simple directions

**Advanced Beginning -**
- Uses words and/or phrases
- Uses appropriate social greetings
- Participates in social discussions on familiar topics and in academic discussions
- Develops correct word order in phrases
- Begins to use content-related vocabulary
- Retells simple stories and identifies the main points

**Intermediate -**
- Uses simple sentences with inconsistent use of syntax, tense, plurals, and subject/verb agreement
- Tells a story, informs, explains, entertains, and participates in social and academic discussions
- Begins to use root words, affixes, and cognates to determine the meaning of new words

**Advanced -**
- Uses descriptive sentences with common grammatical forms with some errors
- Participates in academic and social discussions using appropriate ways of speaking based on audience and subject matter
- Tells a story, informs, explains, entertains, and persuades
- Uses simple figurative language and idiomatic expressions in discussions
- Uses root words, affixes, and cognates to determine the meaning of new words

**Transitional -**
- Speaks clearly and comprehensibly using standard English grammatical forms with random errors
- Applies content-related vocabulary in a variety of contexts and situations
- Gives oral presentations

**ELD Reading Standards – Grades 3-5 Washington State**

**Beginning –**
Project GLAD
Life Cycle of a Butterfly (1)
Idea Pages

- Expresses self using words, drawings, gestures, and actions:
  - Sequences simple text
  - Answers literal questions
  - Makes simple predictions

- Aware of familiar sounds
- Recognizes and produces rhyming words containing familiar sounds
- Uses and comprehends highly contextualized vocabulary
- Follows simple written directions (e.g., color, cut, glue)
- Reads sight words
- Begins to understand concepts of print

Advanced Beginning –
- Expresses self using words and/or phrases to identify:
  - Characters
  - Setting
  - Main idea and details
  - Compare and contrast
  - Cause and effect

- Aware of familiar and unfamiliar sounds
- Employs word-meaning strategies
- Applies inflectional endings to words
- Increases sight-word and content-area vocabulary
- Distinguishes between genres
- Reads highly contextualized text composed of simple sentences
- Applies concepts of print

Intermediate –
- Expresses self using simple sentences
- Produces unfamiliar sounds
- Decodes word patterns
- Employs word-meaning strategies
- Begins to read familiar text fluently
- Increases vocabulary through reading across content areas
- Uses text features to:
  - Gain meaning
  - Monitor for comprehension
  - Describe images from text
  - Connects text to prior knowledge

- Distinguishes between:
  - Fiction/non-fiction
  - Fact/opinion
Project GLAD  
Life Cycle of a Butterfly (1)  
Idea Pages

- Fantasy/reality
  - Infers and makes generalizations from text
  - Reads text at student’s reading level across content areas

Advanced –
  - Expresses self using descriptive sentences
    - Identifies theme
    - Recognizes literary devices
    - Compares and contrasts

- Uses a variety of strategies to monitor comprehension
- Recognizes phonemes within multi-syllabic words
- Uses word parts to determine word meanings
- Reads with increasing fluency
- Independently confirms word meanings
- Uses a variety of resources for research
- Transitional –
  - Adjusts reading rate as needed
  - Uses specialized vocabulary, uses multiple meaning words appropriately
  -Analyses literary elements
  - Uses comprehension and questioning strategies, summarizes text, analyzes and applies persuasive devices
  -Explains cause and effect, citing evidence from text
  -Develops research skills
  -Folllows increasingly complex written directions
  -Comprehends grade level text

ELD Writing Standards – Grades K-5 Washington State

Beginning –
  - Draws, labels
  - Writes familiar words and sight words
  - Writes to name, describe, or complete a list
  - Begins to use invented spelling, capital letters, participates in group editing
  - Audience may be self, teacher, or known person
  - Sequences pictures to assist with organization
  - Uses graphic organizers to convey main ideas and details
  - Participates in group writing process

Advanced Beginning –
  - Writes unfamiliar words and phrases
  - Begins to write based on a model or frame
  - Demonstrates inconsistent use of:
    - Capitals
Project GLAD
Life Cycle of a Butterfly (1)
Idea Pages

- Punctuation
- Correct spelling
- Participates in group brainstorming
- Writes rough draft and revises

**Intermediate –**
- Writes simple sentences
- Demonstrates increasing control of:
  - Capitals
  - Punctuation
  - Correct spelling
  - Word order
  - Subject/verb agreement
- Develops own voice in writing
- Distinguishes between writing for different audiences and purposes
- Uses basic transitions
- Writes individually and in a group process
- Writes rough draft independently

**Advanced –**
- Uses descriptive sentences
- Writes for a variety of audiences and purposes
- Uses grade level conventions inconsistently
- Refines voice in writing
- Uses a topic sentence and supporting details
- Follows the five step writing process (with assistance in editing and revising)

**Transitional –**
- Uses specialized vocabulary across content areas
- Uses standard grammar and conventions with lapses characteristic of ELL students

**VI. VOCABULARY**

<table>
<thead>
<tr>
<th>Metamorphosis</th>
<th>Molt</th>
<th>Segment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thorax</td>
<td>Prolegs</td>
<td>Abdomen</td>
</tr>
<tr>
<td>Bristles</td>
<td>Frass</td>
<td>Silk</td>
</tr>
<tr>
<td>Exoskeleton</td>
<td>Spinneret</td>
<td>Antenna</td>
</tr>
<tr>
<td>Proboscis</td>
<td>j-shape</td>
<td>Meconium</td>
</tr>
<tr>
<td>Wings</td>
<td>Life cycle</td>
<td>Bristle</td>
</tr>
<tr>
<td>Caterpillar</td>
<td>Chrysalis</td>
<td>Larva</td>
</tr>
<tr>
<td>Mouth</td>
<td>True legs</td>
<td>Pupa</td>
</tr>
<tr>
<td>Silk button</td>
<td>Spiracles</td>
<td>Creamaster</td>
</tr>
<tr>
<td>Manures</td>
<td>predator</td>
<td>nocturnal</td>
</tr>
<tr>
<td>Omnivores</td>
<td>Structure</td>
<td>Function</td>
</tr>
<tr>
<td>Decaying</td>
<td>Substance</td>
<td>hibernate</td>
</tr>
</tbody>
</table>
VII. RESOURCES AND MATERIALS/Literature Fiction and Non Fiction
A Very Hungry Caterpillar, Eric Carle
How to Hide a Caterpillar, Ruth Keller
Monarch Butterfly, Gail Gibbons
Butterfly Alphabet Book, Jerry Pallota
The Butterfly Book, Kirsten Hamilton
The Caterpillar to Butterfly, Deborah Heiligman
Butterfly Story, Anca Hariton
Amazing Butterflies and Moths, John Still
I Wish I Were a Butterfly, James Howe
A new Butterfly, Pamela Hickman
Magic School Bus, Butterfly and the Bog Beast, Nancy Krulik

RESOURCES AND MATERIALS/Teacher
http://www.learnnc.org/lessons/AnneAllen5232002579
Science Kits
Hide a Butterfly-teachers guide
TCR2372 Butterflies Thematic Unit

RESOURCES AND MATERIALS/Technology
http://www.earthsbirthday.org/butterflies/bflys/activitykit/2.html
http://www.ivyhall.district96.k12.il.us/4TH/KKHP/1INSECTS/paintedlady.html
http://www.naturepark.com/pladyinf.htm

RESOURCES AND MATERIALS/Community
Manito Park, South Hill, Spokane, WA
Victoria Butterfly Gardens, Victoria, BC
Tropical Butterfly House, Pacific Science Center, Seattle

District Materials
Foss science kits
I. FOCUS/MOTIVATION
- Cognitive Content Dictionary
- Big Book
- Realia/Discovery Table
- Picture File cards
- Observation Charts
- Inquiry charts
- Super Scientist Awards
- Poetry
  --chants
  --booklets

II. INPUT
- Graphic Organizer
  --Cradle of Life
- Pictorial
  --Adult Butterfly focus with life cycle
- Narrative
- Read Aloud
- 10/2 lecture with primary language

III. GUIDED ORAL PRACTICE
- T-Graph for Social Skills (cooperation)/ Team Points
- Process Grid
- Sentence Patterning Chart
- Exploration report
- Personal interaction
- Mind Maps
- Picture Files-Observe, Classify, Categorize, Label
- Poetry/Chants
- Expert Groups
- Team Tasks

IV. Reading/Writing Activities

A. TOTAL CLASS MODELING
- Co-op strip paragraph with responding, revising, editing
Project GLAD
Life Cycle of a Butterfly (1)
UNIT PLANNING PAGES

- Found poetry
- Story Map-Narrative
- Group frames
- Model strip book
- Poetry Frames and Flip chant
- DRTA
- Listen and Sketch

B. SMALL GROUP PRACTICE: Anything modeled whole class
- Ear-to-ear reading
- Expert Groups
- Team Tasks
- Flexible Group Reading: Leveled/Heterogeneous
  --At or Above with Clunkers and Links with SQ3R
  --ELD Group Frame
  --Struggling Readers with Co-op Strip
- ELD Preview/Review
- Focused Reading

C. INDIVIDUAL
- Reading log
- Learning Logs
- Interactive Journal
- Diagrams and Sketches
- Reading/Writing choice
- Required writing
- Poetry Booklet
- Focused Reading with Cognitive Content Dictionary
- All team tasks taken to individual tasks

D. WRITERS WORKSHOP
- Mini Lesson
- Write
- Author’s Chair
- Conference
- Publish
V. EXTENDED ACTIVITIES FOR INTEGRATION
- Poetry/chants
- Songs
- Video’s/DVD’s
- Making Big Books
- Field Trips
- Art
- Science Explorations

VI. CLOSURE/EVALUATION
- Process all charts
- Process all inquiry charts
- Student-generated test
- Big book-student made
- District assessment
- Explorer party
- Guest speaker
- Home/ School Connection
- Team Exploration
- --teacher/student rubric
- Personal Exploration
- --teacher/student rubric
- Letter to Parents
Day 1

FOCUS AND MOTIVATION

- Super Scientist Awards -3 standards
- Cognitive Content Dictionary (CCD) with signal word
- Observation Charts
- Inquiry Chart
- Big Book
- Form Teams-pass out portfolio’s

INPUT

- Graphic Organizers: Cradle of Life
  --Learning Log
  --ELD Review
  --10/2 with primary language

GUIDED ORAL LANGUAGE

- Chants/Poetry
- Picture file cards
  --Free exploration
  --Classify/categorize: list, group, label
  --Exploration report
- T-Graph for Social Skills-Team Points
- Pictorial: Adult Butterfly
  --Learning Log
  --ELD Review
  --10/2 with primary language

READING/Writing

- Interactive Journal
- Writers Workshop
  --Mini Lesson
  --Write
  --Author’s Chair

CLOSURE

- Home-School Connection
- Process Charts
Day 2

Focus and Motivation
- Super Scientist Awards /3 standards
- Cognitive Content Dictionary with signal word
- Process Home School Connections
- Realia
- Review Input with word cards
- Poetry Chants: highlight, sketch, add picture file cards

Input
- Narrative Input Chart
  -- Learning Log
- Read Aloud

Guided Oral Language
- Chants/Poetry

Reading/Writing
- Expert Groups
  -- Team Tasks
- Writers Workshop
  -- Mini Lesson
  -- Write
  -- Author’s Chair

Closure
- Home-School Connection
- Journals
Day 3

FOCUS AND MOTIVATION
- Super Scientist Awards
- Cognitive Content Dictionary with signal word
- Process Home School Connection
- Review Narrative input with word cards and conversation bubbles

INPUT
- Read Aloud

GUIDED ORAL LANGUAGE
- Sentence Patterning Chart (Farmer-in-the-Dell)
  --Reading game
  --Trade game
  --Flip chant
- Poetry/Chants
- Mind Map
- Process Grid

READING/WRITING
- Expert Groups
  --Team Tasks
- Co-op Strip Paragraph
  --respond, revise, edit
- Writer’s Workshop
  --Mini Lesson
  --Write
  --Authors Chair

CLOSURE
- Home-School Connection
- Process Inquiry Chart
- Journals
Day 4

FOCUS AND MOTIVATION
- Super Scientist Awards
- Cognitive Content Dictionary with stumper word, student selected
- Process Home School Connection
- Review Narrative with story map

GUIDED ORAL LANGUAGE
Chants/Poetry

READING/Writing
- Model Strip Book
- Flexible Reading Groups
  --ELD Group Frame-Narrative Retell
  --At or Above –Clunkers and Links with SQ3R
- Team Tasks
  --Oral Evaluation
  --Team Share

CLOSURE
- Process Charts
- Journals
- Home/School Connection
Day 5

FOCUS AND MOTIVATION

- Super Scientist Awards
- Cognitive Content Dictionary with Stumper Word, Student-selected vocabulary
- Process Home School Connection
- Read Aloud

READING/WRITING

- Flexible Group Reading
  --Struggling/Emergent readers with Co-op Strip Paragraph
- Team Tasks
  --Written Evaluation
  --Team Presentations
- Ear to Ear Reading with poetry booklet
- DRTA
- Listen and Sketch
- Found Poetry
- Focused Reading with personal CCD
- Writer’s Workshop

CLOSURE

- Personal Explorations
- Process all charts, inquiry chart
- Evaluate week-What helped you learn?
- Letter home

EXTENSION

- Art
LIFE CYCLE OF A BUTTERFLY

POETRY BOOKLET

Name: _____________________________________________
Butterflies Here and There
by Jessica Vigil

Butterflies here, butterflies there
Butterflies, butterflies everywhere

Colorful butterflies searching
Beautiful butterflies flying
Hungry butterflies sipping
And spotted butterflies emerging

Butterflies on a flower
Butterflies around the sky
Butterflies in the trees
And butterflies on me

Butterflies here, butterflies there
Butterflies, butterflies everywhere
Butterflies! Butterflies! Butterflies!
Insects
(Tune: Head, Shoulders, Knees and Toes)

Head, Thorax, Abdomen… Abdomen
Head, Thorax, Abdomen…Abdomen
6 legs 2 Antennae
And Compound Eyes
Don't forget the ones with wings…
Ones with wings!
Life Cycle of the Butterfly
(Tune: Up on the Housetop)

First comes the butterfly that lays an egg,
Out comes the caterpillar with many legs.
Oh, see the caterpillar’s metamorphosis,
Inside its cozy chrysalis.
Oh, oh, oh, look and see,
Oh, oh, oh, look and see…
Out of the chrysalis, my, oh my!
Out comes a pretty butterfly!
I’M A LITTLE INSECT EGG
(to the tune of “I’m a Little Piece of Tin”)
by Shannon Brown

I’m a little insect egg,
Watch me hatch, please don’t beg.
I will be a larva soon,
Think I’ll wiggle out by noon.
   I’m an egg.
   I’m an egg.
   I’m an E-G-G, egg!

I eat and eat so much each day,
Soon I’ll be a pupa they say.
Then I’ll be so very quiet,
No need to feed me, I’m on a diet.
   I was an egg.
   I was an egg.
   I was an E-G-G, egg!

Something’s happening to me inside,
My shape is changing, eyes open wide.
3 body parts with 6 legs, it’s true,
Antennae, wings, and an exoskeleton too.
   I was an egg.
   I was an egg.
   I was an E-G-G, egg!
I'm A Little Caterpillar
By Connie Graham and Bekki Sherwood
Tune: I'm a little Tea Pot

I'm a little caterpillar, from an egg on a limb.
I ate every malva leaf.
I filled up to the brim.
As I got bigger, my skin got tight.
I shed my exoskeleton, I was molting, that's right.

I'm a little caterpillar, with spiracles to breathe.
Bristles on my back,
So the birds will leave.
Ten prolegs, six true to help me crawl.
Sixteen legs we have in all.

I'm a big caterpillar, fat and round.
I made a silk button,
So I won't fall down.
Attached to a leaf, I spin and spin
I'm a chrysalis, so no one can come in.

Now I am a pupa, what's happening inside?
I feel my body changing,
"Metamorphosis", I cried!
I wiggle and wiggle to set myself free.
I'm a beautiful butterfly, as you can see.
Life Cycle Bugaloo
By Jessica Vigil
Adapted by Sarah Dueweke and Jaki Shrauger

I'm a butterfly and I'm here to say
I go through a life cycle and that's o.k.!

Egg, larva, pupa, and adult butterfly too.
Doing the life-cycle Bugaloo!

First I'm an egg, Then I'm a larva,
I hang into a J-shape, A pupa I become,
Then a butterfly, a chrysalis no more!

Egg, larva, pupa, and adult butterfly too.
Doing the life-cycle Bugaloo!
**Are you a butterfly? Yes, Indeed!**  
By Sarah (Sally) Dueweke

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are you an egg?</td>
<td>Yes, indeed</td>
</tr>
<tr>
<td>Are you an egg?</td>
<td>Yes, indeed</td>
</tr>
<tr>
<td>How do you know?</td>
<td>I'm round and pale green</td>
</tr>
<tr>
<td>How do you know?</td>
<td>I'm attached to a leaf.</td>
</tr>
<tr>
<td>Are you a larva?</td>
<td>Yes, indeed</td>
</tr>
<tr>
<td>Are you a larva?</td>
<td>Yes, indeed</td>
</tr>
<tr>
<td>How do you know?</td>
<td>I have yellow-green and white stripes</td>
</tr>
<tr>
<td>Tell me some more?</td>
<td>All I want to do is eat</td>
</tr>
<tr>
<td>Are you in a J-shape?</td>
<td>Yes, indeed</td>
</tr>
<tr>
<td>Are you in a J-shape?</td>
<td>Yes, indeed</td>
</tr>
<tr>
<td>How do you know?</td>
<td>I'm upside down</td>
</tr>
<tr>
<td>Oh, tell me some more?</td>
<td>I shed my fuzzy skin</td>
</tr>
<tr>
<td>Are you a pupa?</td>
<td>Yes, indeed</td>
</tr>
<tr>
<td>Are you a pupa?</td>
<td>Yes, indeed</td>
</tr>
<tr>
<td>How do you know?</td>
<td>Pupa stage in a chrysalis</td>
</tr>
<tr>
<td>Wow, do tell me more?</td>
<td>I am not eating any more</td>
</tr>
<tr>
<td>What are you doing?</td>
<td>I think I am changing</td>
</tr>
<tr>
<td>How do you know?</td>
<td>My body feels funny</td>
</tr>
<tr>
<td>What do you know?</td>
<td>It's called metamorph</td>
</tr>
<tr>
<td>Try that again.</td>
<td>Metamorphosis!</td>
</tr>
<tr>
<td>Are you an adult butterfly?</td>
<td>Yes, indeed</td>
</tr>
<tr>
<td>Are you an adult butterfly?</td>
<td>Yes, indeed</td>
</tr>
<tr>
<td>How do you know?</td>
<td>I'm as big as a stickie note</td>
</tr>
<tr>
<td>How do you know?</td>
<td>I am colorful with wings</td>
</tr>
<tr>
<td>Are you hungry again?</td>
<td>Yes, indeed</td>
</tr>
<tr>
<td>Are you hungry again?</td>
<td>Yes, indeed</td>
</tr>
<tr>
<td>What do you eat?</td>
<td>Nectar</td>
</tr>
<tr>
<td>How do you eat?</td>
<td>With a proboscis</td>
</tr>
<tr>
<td>Are you an adult butterfly?</td>
<td>Yes, in deed</td>
</tr>
<tr>
<td>Are you an adult butterfly?</td>
<td>Yes, in deed</td>
</tr>
<tr>
<td>How do you know?</td>
<td>I can fly</td>
</tr>
<tr>
<td>How do you know?</td>
<td>I laid an egg</td>
</tr>
</tbody>
</table>
I Know a Painted Lady

I know a painted lady,
   a pretty painted lady,
   a pretty painted lady,
With a curly, coiled proboscis.

And two sets of wings,
   hindwings and forewings,
   an abdomen and thorax,
And six thin legs.

I know a painted lady,
   a pretty painted lady,
   a pretty painted lady,
Who flutters in the garden.

By Cheryl Fisher
   Christy Hoefer
   Judy Toneri
Painted Lady-
sung to the tune of My Bonnie Lies Over the Ocean

A butterfly laid eggs on some thistle,
Then silently fluttered away.
Soon out came a caterpillar
That ate and ate thistle all day.

Painted-lady,
Your wings are black, brown, orange and white.
Painted-lady,
You are such a beautiful sight.

The caterpillar ate lots of thistle,
Then hung upside down like a J.
There soon was a chrysalis hanging
Metamorphosis was on its way!

Painted-lady,
Your wings are black, brown, orange and white.
Painted-lady,
You are such a beautiful sight.

The chrysalis hung there so pretty
For many bright sunny days.
Then out came a pretty butterfly
That pumped up its wings right away.

Painted-lady,
Your wings are black, brown, orange and white.
Painted-lady,
You are such a beautiful sight.
THE INSECT BUGALOO

I'm an entomologist and I'm here to say,  
"I'm going to teach you about insects today."

Starting with an egg,  
The cycle does begin;  
Then the larva hatches  
And the eating has no end!

Head, thorax, abdomen too,  
Doin' the insect bugaloo!

The larva gets so big,  
The next stage happens fast.  
The pupa looks quiet,  
But this stage doesn't last.

Head, thorax, abdomen too,  
Doin' the insect bugaloo!

The adult emerges;  
It lays eggs and then,  
We start the whole cycle  
All over again!

Head, thorax, abdomen too,  
Doin' the insect bugaloo.

By Shannon Brown
Home School Connection

Students Name____________________

Tell someone in your family about the 6 Kingdoms or Cradle of Life. Then sketch a picture of a living thing from a kingdom that you feel is most interesting to you.

Parents Name______________________
Home School Connections

Tell someone in your family about the 6 Kingdoms or Cradle of Life. Then sketch a picture of a living thing from a kingdom that you feel is most interesting to you.

Diga a alguien en su familia de Los Seis Renios de animals. Entonces dibuja una cosa vivente que es mas importante en el reino para ud.
Home School Connections

Tell someone in your family about the 6 Kingdoms or Cradle of Life. Then sketch a picture of a living thing in the kingdom that you feel is most interesting to you.

Hãy nói với gia đình bạn về sau bác của đôi sống hay là cái nơi của cuộc sống. Sau đó hãy vẽ ra đôi sống nào có ý nghĩa nhất.

Students Name ___________________________ Parents Name ___________________________
Home School Connection

Students Name____________________

Tell a family member about the World Map. Then sketch the continent where you were born.

Parents Name____________________

Project GLAD Level 1
Spokane Public Schools
Jessica Vigil, Sarah Dueweke
Tell a family member about the World Map. Then sketch the continent where you were born.

Diga a alguien en su familia de la mapa del mundo. Entonces dibuja el continente en cual ud nacio.

Student Name______________________

Parent Name_______________________
Tell a family member about the World Map. Then sketch the continent that you were born on.

Hãy nói với gia đình bạn về bạn đỡ thế giới. Hãy vẽ ra nơi bạn sinh ra ở châu nào.

Students Name_________________________ Parents Name_________________________
Home School Connections

Students Name____________________

Sketch a picture of the Painted Lady Butterfly for a family member, labeling your sketch.

Parents Name__________________________
Home School Connections

Sketch a picture of the Adult Painted Lady Butterfly for a family member, labeling your sketch.

**Dibuja una pintada de la mariposa para alguien en su familia.**
**Catalogar su dibujo.**

Student Name_________________________

Parent Name________________________
Sketch a picture of the Adult Painted Lady Butterfly for a family member, labeling your sketch.

Vẽ ra hình ảnh một người lớn hóa hình con bướm cho gia đình, nhớ ký tên.

Students Name_________________________ Parents Name_________________________
Home School Connections

Students Name__________________

Tell a family member about the story “The Caterpillar and the Polliwog”. Sketch or in words tell what happened to the caterpillar in the story.

Parents Name____________________

Project GLAD Level 1
Spokane Public Schools
Jessica Vigil, Sarah Dueweke
Home School Connections

Tell a family member about the story “The Caterpillar and the Polliwog”. Sketch or in words tell what happened to the caterpillar in the story.

Cuentale una persona en su familia del cuento “La cuncuna y el renacuajo.” Con palabras or un dibujo diga que paso con la cuncuna.

Student Name_________________________
Parent Name_________________________

Project GLAD Level 1
Spokane Public Schools
Jessica Vigil, Sarah Dueweke
Tell a family member about the story "The Caterpillar and the Polliwog". Sketch or in words tell what happened to the caterpillar in the story.

Hãy kể gia đình bạn nghe về câu chuyện "con bướm và con sấu nhỏ." Hãy vẽ hoặc viết ra về con sấu tro thành cảnh bướm trong câu chuyện trên.

Students Name_________________________ Parents Name_________________________
### Process Grid: **Painted Lady Butterfly**

<table>
<thead>
<tr>
<th>Life Cycle/Type of Metamorphosis</th>
<th>Food/diet</th>
<th>Predator/Enemy</th>
<th>Habitat</th>
<th>Interesting facts</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Butterfly</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Egg                              | Nectar-from thistle, mallow, malva | birds | gardens | -knobs at end of antennae  
                                  |          | rats          | -meadows | -fly in daytime     |
| Caterpillar (Larva)              |           | toads          |         |                   |
| Chrysalis (Pupa)                 |           | lizards        |         |                   |
| Adult                            |           |                |         |                   |
| • Complete                       |           |                |         |                   |
| **Moth**                         |           |                |         |                   |
| Egg                              | nectar-from most flowers | birds | gardens | -wings (structure) are flat when resting for camouflage (function)  
                                  |          | bats          | -meadows | -feathery antennae   |
| Larva                            |           | spiders        |         |                   |
| Cocoon (pupa)                    |           |                |         |                   |
| Adult                            |           |                |         |                   |
| • complete                       |           |                |         |                   |
| **House Fly**                    |           |                |         |                   |
| Egg                              | Wet, decaying matter | man | garbage | -pads on feet (structure) to be able to walk on walls (function)  
                                  |          | birds         | -stays w/in 1-2 miles where born | -walks on ceilings/glue   |
| Larva                            |          | reptiles       |         |                   |
| Pupa                             |          | amphibians     |         |                   |
| Adult                            |          |                |         |                   |
| • Complete                       |          |                |         |                   |
| **Cricket**                      |           |                |         |                   |
| Egg                              | omnivores | birds | under rocks | -spiracles (structure) used for breathing (function)  
                                  |          | insects       | logs     | -female does not have a song   |
| Nymph (Larva)                    | other insects | spiders |         |                   |
| Adult                            | plants   |               |         |                   |
| • Incomplete                    |          | rodents        |         |                   |
| **Lady Bug**                     |           |                |         |                   |
| Egg                              | omnivores | other insects | gardens | -two pairs of wings (structure), one for protection and other for flying (function)  
                                  |          | aphids-40 to 75 in a day | trees | -type of beetle  
                                  |          |               | -shrubs | -born black     |
| Larva                            |           | praying mantis |         |                   |
| Pupa                             |           | spiders        |         |                   |
| Adult                            |           | birds          |         |                   |
| • Complete                       |           |                |         |                   |

- Many facts specific to each species.
Painted Lady Butterfly

A Big Book by
Jessica Vigil
Life Cycle of a Butterfly—Level 1
Spokane Public Schools
The important thing about butterflies is that they have a predictable life cycle, and they are an essential part of life on earth.

**The Egg**

- During its short life, the female butterfly lays many eggs which ensures that a small number of these eggs will survive.
- Painted Lady caterpillars (larvae) hatch from these eggs in about 3 to 5 days.

But, the important thing about butterflies is that they have a predictable life cycle, and they are an essential part of life on earth.
The important thing about butterflies is that they have a predictable life cycle, and they are an essential part of life on earth.

The larva

- The caterpillar is the larval stage of the butterfly.
- It eats continually for 5 to 10 days, growing all the time, before it pupates.
- The fully grown caterpillar is up to 1.25 inches (3cm) long.
- It builds a silky, webbed nest as it feeds.

But, the important thing about butterflies is that they have a predictable life cycle, and they are an essential part of life on earth.
The important thing about butterflies is that they have a predictable life cycle, and they are an essential part of life on earth.

**The J-shape**

- After time, the larva realizes it’s time to climb to the top of twig, spin a little knob of silk the twig, and attach its hind end firmly to the knob.
- The larva hangs head down in a J-shape, pupation is only a few hours away.
- The larva (caterpillar) will molt, as the fuzzy outer skin splits near the head to reveal the smooth, curiously molded pupa enclosed in its chrysalis.
- As the pupa writhes (wiggles) around, the skin is pushed up and off the body until it is a crunchy little nub pressed up against the twig.

But, the important thing about butterflies is that they have a predictable life cycle, and they are an essential part of life on earth.
The important thing about butterflies is that they have a predictable life cycle, and they are an essential part of life on earth.

**The Pupa**

- The pupa is the stage in a butterfly’s life when it is encased in a chrysalis and undergoes metamorphosis.
- It does not eat during this stage.
- The creamaster is a support hook (or a cluster of small hooks) at the abdominal (hind) end of the pupa.

But, the important thing about butterflies is that they have a predictable life cycle, and they are an essential part of life on earth.
The important thing about butterflies is that they have a predictable life cycle, and they are an essential part of life on earth.

**The Adult**

- An adult butterfly emerges full-grown from the chrysalis, often losing reddish meconium fluid.
- When the adult emerges, its wings are wrinkled and wet, but the abdomen is bloated with fluid.
- The butterfly pumps some of this fluid into the wings through veins to inflate them.
- The main purpose of the adult stage is to mate and reproduce.

But, the important thing about butterflies is that they have a predictable life cycle, and they are an essential part of life on earth.
Name___________________

Moth
Expert Group

Life Cycle/ Type of Metamorphosis

Moths have a complete life cycle. This means it has 4 stages: egg, to larva, pupa, and adult. The pupa stage also has another name which is cocoon.

Food/Diet

Moths are like butterflies in that they drink nectar, from most flowers, with a proboscis.
**Predator/Enemy**

Moths have enemies or predators. Some enemies are birds, bats and spiders.

**Habitat**

Moths live in gardens and meadows because this is where they can find their food.

**Interesting Facts**

An important structure or characteristic of a moth is the wings, which lay flat when not flying. The function or purpose for this would be camouflage.
Life Cycle/ Type of Metamorphosis

Scientists call cricket life cycles incomplete. This means it does not have 4 stages. Crickets go from egg, to larva, to adult. The larva stage is also known as a nymph.

Food/Diet

The food or diet is the same for the larva (nymph) and adult. Crickets are omnivores because they eat other insects as well as plant.
**Predator/Enemy**

Cricket enemies or predators are birds, other insects such as spiders, reptiles like frogs and small rodents.

**Habitat**

The habitats of a cricket need to be dark. Crickets are nocturnal (come out at night). Crickets can be found under rocks and logs.

**Interesting Facts**

Crickets have spiracles as a structure just like a butterfly's caterpillar. The spiracles function is for breathing.
Life Cycle/ Type of Metamorphosis
House flies have a complete life cycle. This means it has 4 stages: egg, to larva, pupa, and adult. Flies stay within 1-2 miles from where they were born.

Food/Diet
House flies do not chew or bite but suck up food, through their proboscis, after they have spit on it. They must have liquid food. They eat wet, decaying things and pet waste (poop).
**Predator/Enemy**

House flies have enemies or predators. Humans do not like flies in their house therefore, they try to destroy them. Birds, reptiles and amphibians eat house flies.

**Habitat**

Flies live around wherever they were born. Usually this is by garbage.

**Interesting Facts**

On their feet they have a structure called pads, which contain a sticky substance, like glue. Its function or purpose allows flies to walk or land on almost anything.
Name___________________

Ladybug
Expert Group

Life Cycle/ Type of Metamorphosis
Ladybugs have a complete life cycle. This means it has 4 stages: egg, larva, pupa and adult. They are also known as lady beetle.

Food/Diet
Ladybugs are omnivores because they eat plants and insects. Their main diet consists of aphids, 40-75 in a day.
**Predator/Enemy**

Other insects like praying mantis, and spiders are their enemies. Birds also are a predator of the ladybug.

**Habitat**

Ladybugs live around gardens, trees, shrubs and flower. They hibernate in large groups during winter.

**Interesting Facts**

An important structure for a ladybug is two pairs of wings. The top wings function is for protection while the other is for flying.
Caterpillar and the Polliwog

By Jack Kent

1. Caterpillars aren’t like other folks. As ducks and hippopotamuses and you and I get older, we get bigger. Especially hippopotamuses.

2. But not caterpillars. They turn into butterflies. Turning into something else like that is not a thing anybody can do.

3. Down by the pond there lives a caterpillar who was very proud of being different. She bragged to her friends. “When I grow up, I’m going to turn into something else.” she told the snail. “That nice,” said the snail who really didn’t care one way or the other.

4.”When I grow up, I’m going to turn into something else.” she told the turtle. “I don’t blame you”, said the turtle, who didn’t much like wiggly things.

5. “When I grow up, I’m going to turn into something else.” she told the polliwog. “What fun!” said the polliwog “What are going to turn into?” But the caterpillar hurried on her way looking for someone else to tell her secret to.

6. I wish I could turn into something else when I grow up!” said the polliwog. “You will” said the fish. “All polliwogs do.” “What am I going to turn into?” the polliwog asked. But the fish saw a tasty bug and dashed after it.

7.” When I grow up” said the caterpillar, who had circled the pond and was going around for the second time, “when I grow up,” she told the Polliwog again, “I am going to turn into something else.” “So am I said the Polliwog. “You!” the caterpillar was so surprised she almost fell into the pond. “The fish said so,” the polliwog told her. “Fish know things. They go to school.”
8. The caterpillar was upset. “I thought only caterpillars could do it,”
She said rather sadly. “What are we going to turn into?” the polliwog asked. “Well, I am going to
turn into a butterfly!” said the caterpillar. “Then I guess I will too!” the polliwog said happily.
“What fun! Let’s do it together!”

9. “All right,” the caterpillar agreed, although she would rather have done it
alone. “But I get to go first!” The polliwog didn’t mind. He wasn’t at all sure how it was done,
“I’ll watch you,” he said. So when the time came, the caterpillar started to spin a cocoon. “This
is the tricky part,” she said.

10. The polliwog watched as the caterpillar spun. Soon only her head was uncovered. “Now I
have to close the lid,” she said. “And when I come out, I’ll be a butterfly.” “Go Ahead!” the
polliwog said excitedly. “I want to see you do it!” “It will take a while,” the caterpillar warned.
She started spinning again and was soon out of sight in the cocoon.

11. For a long time nothing happened. But the polliwog was patient. He watched and watched and
watched,

12. for days and days

13. and days.

14. At last there was activity in the cocoon. The end of it opened and, very slowly, the caterpillar
climbed out. Only she wasn’t a caterpillar anymore. She was a butterfly! A beautiful yellow
butterfly.

15. The polliwog was so excited he hopped up and down with delight! He hopped up and down
like a frog! “I was so busy watching you,” he said, “I didn’t notice what was happening to me!”

16. You’re a very handsome frog,” the butterfly said, as she flew off to
try her new wings. But the frog was puzzled. I thought I was going to be
a butterfly,” he said.

17. A caterpillar wiggled by. “When I grow up, he said proudly to
the frog, “I am going to turn into something else!” But the frog
wasn’t listening. He was admiring his reflection in the water. “I am, you know, a handsome frog! He
said.