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Malinda Brown, Emily Doyle

Lesson One

Subject Area: **Science - Life cycle of the Butterfly**

Grade Level: **K -2 (Focus on K and 2)**

Lesson Objective:

- Identify the first two stages of the life cycle
- Discuss the importance of environment
- Observe the caterpillars

Duration: 50 minutes

Grouping: Whole group, Independent, and groups of 2

Standards Correlation*:*

Grade: K and 2

Standards:

Science:

Standards: K-1: The student will demonstrate an understanding of scientific inquiry, including the processes, skills, and mathematical thinking necessary t conduct a simple scientific investigation.

Standard 2-2: The student will demonstrate an understanding of the needs and characteristics of animals as they interact in their own distinct environments. (Life Science)

Math

K. Counting and Cardinality: Count to tell the number of objects.
K. Counting and Cardinality: Compare numbers.
K. Measurement and Data: Describe and compare measureable attributes.

ELA

K. Speaking and Listening: Comprehension and Collaboration
K. Reading Literature: Range of Reading and Level of Text Complexity

Indicators:

Science:

K-1.3 Predict and explain information or events based on observation or previous experience.

2-1.3 Represent and communicate simple data and explanations through drawings, tables, pictographs, bar graphs, and oral and written language.

2-1.4 Infer explanations regarding scientific observations and experiences.

2-1.3 Represent and communicate simple data and explanations through drawings, tables, pictographs, bar graphs, and oral and written language.

2-1.5 Infer explanations regarding scientific observations and experiences.

Math:

K.CC.B.4a When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.

K.CC.B.4b Understand that the last number said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.

K.CC.B.4c Understand that each successive number name refers to a quantity that is one larger.

K.CC.C.6. Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.

K.CC.C.7 Compare two numbers between 1 and 10 presented as written numerals.

K.MD.A.1 Describe measureable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.

K.MD.B.3 Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.

2.OA.2 Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers. (See standard 1.OA.6 for a list of mental strategies.)

2.OA.3 Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2s; write an equation to express an even number as a sum of two equal addends.

ELA:

K.SL.1 Participate in collaborative conversations with diverse partners about kindergarten topics

and texts with peers and adults in small and larger groups.

K.SL.1b Continue a conversation through multiple exchanges.

K.SL.2 Confirm understanding of a text real aloud or information presented orally tor through other media by asking and answering questions about key details and requesting clarification if something is not understood.

K.SL.3 Ask and answer questions in order to seek help, get information, or clarify something that is not understood.

K.RL.10 Actively engage in group reading activities with purpose and understanding.

2.SL. 2 Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.

2. KD. 1 Ask and answer such questions as *who, what, where, when, why,* and *how* to demonstrate understanding of key details in a text.

Materials*:* pipe cleaners in a zigzag shape to resemble a caterpillar, live caterpillars, cups to put the caterpillars in, caterpillar food, *The Very Hungry Caterpillar* book, printed ticket-out-the-door questions, (students need journals and writing utensil), Chart Paper for Graph

Engage	Engage the students by sending them on a caterpillar hunt outside. Teachers will have caterpillars made of pipe cleaners of different colors hidden in an area outside (making sure some are located in a camouflaged area). Elicit prior knowledge by asking the following questions: • Talk to the class about the term, :camouflage", • What did you observe when searching and finding the caterpillars on our hunt? • How do the caterpillars use their environment?
Explore	**Prior to class:** Teachers will have live caterpillars and split them into even cups so that each table has a cup with caterpillars. Then, place a cup on each table in the classroom for the kids to observe. **Fieldwork:** Student tables should be in groups of 2 or 3 when observing. Have students observe the caterpillars on their own. Ask the question: *What are some ways to observe besides just using our eyes?* Have students record and draw a picture of what they see. Give students a variety of books to read about caterpillars while they wait for all groups to finish up their observations.

Explain	Discuss results of the observations of the caterpillars. During this time make sure to use the following terns: observe, egg, and caterpillar. Some questions you can use are: • What are different ways we can observe? (In this experience: eyes and nose. In other experiences: all senses) • What did you observe today? (egg) What do you think will happen to this egg?
Elaborate	Read "The Very Hungry Caterpillar" book aloud to the class. **This should be like a book walk, questions of who, when, how, inferences, etc. should be used.** Have the students go back to their tables and work in groups of 2 or 3 and infer why you chose to read that book. Lead the class in making a graph on chart paper that show the results of the colors of caterpillars found on our camouflage caterpillar hunt and discuss information found on the graph.
Evaluate	Ticket out the door. Example questions: • What is the first stage of the caterpillar life cycle? • What is the second stage of the caterpillar life cycle? • Name one characteristic you observed about caterpillars

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Subject Area: **Science - Life cycle of the Butterfly**

Grade Level: **K -2 (Focus 2)**

Lesson Objective:

- Identify the steps of the life cycle
- Discuss animals that go through the life cycle
- Observe a caterpillar
- Determine the difference between simple and complete metamorphosis

Duration: 45 minutes

Grouping: Whole group, Independent

Standards Correlation:

Grade: 2
Standards:

Science:

Standard 2-2: The student will demonstrate an understanding of the needs and characteristics of animals as they interact in their own distinct environments. (Life Science)

Writing:

Standard 2-5 The student will write for a variety of purposes and audiences.

Indicators:

Science:

2-1.3 Represent and communicate simple data and explanations through drawings, tables, pictographs, bar graphs, and oral and written language.

Math:

2.OA.2 Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers. (See standard 1.OA.6 for a list of mental strategies.)

2.OA.3 Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2s; write an equation to express an even number as a sum of two equal addends.

ELA:

2.SL. 2 Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.

2. KD. 1 Ask and answer such questions as *who, what, where, when, why,* and *how* to demonstrate understanding of key details in a text.

Materials: Science Journal, writing utensil, computer for life cycle video, butterfly, butterfly net to live in, power point (found in power point folder), *Where Butterflies Grow* book, butterfly life cycle pieces kit

Engage	Engage the students by 1. Giving the students time to answer the following writing prompt in their science journal: -Explain everything you know about a butterfly. 2. Showing them a video on the life cycle. • Unitedstreaming.com has a video called *Animal Life Cycles.* This video shows different categories of animals (second grade standard) and the different stages of the life cycle for numerous animals. Elicit prior knowledge by asking the following questions: - What did you recognize about the life cycle that you already knew? - Does anyone know what the first stage of the life cycle might be?
Explore	**Prior to class:** Have caterpillars place in their new environment in the caterpillar net home. **Fieldwork:** Prompt students with the question: *Why do you think the caterpillar has a new environment to live in?* Have students work at their desks in groups of 2 or 3 and observe the caterpillars. Students should record in both writing and a picture. They need to include the day (Day 1, Day 2, etc.) and the number of caterpillars (this is just incase any might die throughout the life cycle). Give students a variety of books to read about the life cycle while they wait for all groups to finish up their observations.
Explain	Use the power point slides 5 – 9 to review background knowledge of the butterfly life cycle as well as introduce new names for the phases of the butterfly life cycle. As a class, observe and discuss the way the caterpillars look today.

	During this time make sure to review the following terms: observe, pupa, life cycle, develop, and characteristics. Some questions you can use are: 1. What are different ways we can observe? (In this experience: eyes and nose. In other experiences: all senses) 2. What did you observe today? (caterpillar) 3. What observations did you make about the caterpillars? (size might be one option and will be worked on tomorrow in class!)
Elaborate	Read "Where Butterflies Grow" by Joanne Ryder. Ask questions as reading to help students review information they learned during the lesson today. Make a graphic organizer on the board to show the outline of the life cycle.
Evaluate	Separate students into groups of 2 or 3. Hand each group of students a life cycle kit. Have the students work together to put the butterfly life cycle pieces in the correct order and label the new names they learned for each phase.

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Lesson 3

Subject Area: **Science- Life Cycle of the Butterfly**

Grade Level: **K - 2**

Lesson Objective(s):

- Explain the four steps of the life cycle of a butterfly
- Discuss the changes that happen during its life cycle
- Describe the importance of a habitat

Duration: 60 minutes

Grouping: Whole group and Independent

Standards Correlation*:*

Grade: K and 2
Standards:

Science:

Standard K-2: The student will demonstrate an understanding of the characteristics of organisms.

Standard 2-2: The student will demonstrate an understanding of the needs and characteristics of animals as they interact in their own distinct environments. (Life Science)

Writing:

Standard K-1: Use a combination of drawing, dictating, & writing to compose opinion pieces in which they tell a reader of the topic or the name of the book they are writing about & state an opinion or preference about the topic or book.

Standard K-2: Use a combination of drawing, dictating, & writing to compose informative/explanatory texts in which they name what they are writing about & supply some information about the topic.

Standard K-3: Use a combination of drawing, dictating, & writing to narrate a single event or several loosely linked events, tell about the events in the order in which they occurred, & provide a reaction to what happened.

Standard 2-5: The student will write for a variety of purposes & audiences.
Indicators:

Science:

K-1.3 Predict & explain information or events based on observation or previous experience.

K-2.5 Recognize that all organisms go through stages of growth & change called life cycles.

2-1.1 Carry out simple scientific investigations to answer questions about familiar objects & events.

2-1.3 Represent & communicate simple data & explanations through drawings, tables, pictographs, bar graphs, & oral & written language.

Math:

K.OA.A.1 Represent addition & subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.

K.OA.A.2 Solve addition & subtraction word problems, & add & subtract within 10, e.g., by using objects or drawing to represent the problem.

K-OA.A.5 Fluently add & subtract within 5.

2.OA.2 Fluently add & subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers. (See standard 1.OA.6 for a list of mental strategies.)

2.OA.3 Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2s; write an equation to express an even number as a sum of two equal addends.

ELA:

K.SL.2 Confirm understanding of a text read aloud or information presented orally or through other media by asking & answering questions about key details & requesting clarification if something is not understood.

K.SL.3 Ask & answer questions in order to seek help, get information, or clarify something that is not understood.

2.SL.2 Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.

2. KD. 1 Ask and answer such questions as *who, what, where, when, why,* and *how* to demonstrate understanding of key details in a text.

Materials*:* Read-aloud, "*Waiting For Wings",* paper plates, marshmallows, gummy worms, tootsie rolls, pretzels, glue, art supplies, Butterfly writing copies, exit slips for 2nd grade

Engage	Engage the students by reading to them the book, "Waiting for Wings" by *Lois Eblert*. Be sure to ask questions to challenge the students to use prior knowledge. Elicit prior knowledge by asking the following questions: 1. What animals do you know that go through the life cycle? 2. How does a butterfly change through its life cycle? 3. What are the stages of the life cycle?
Explore	**Prior to class:** Teacher will have all materials out to create an example of the butterfly life cycle on a paper plate. Materials will include: paper plates, marshmallows, gummy worms, tootsie rolls, & pretzels. **Fieldwork:** Teacher will demonstrate for the students how to draw two lines on their plates in the shape of a "+". Afterwards, students will divide their paper plate into quarters. Teacher will instruct students by beginning in stage one. The teacher will use prompting questions throughout the lesson: • "What is the first stage of a butterfly?" • "Which material do you think we would use for the first stage?" • Repeat these question during each of the stage of the project. Teacher will model her plate for the students to see. Have each one of the students create their own plate & label each stage: • Stage one: marshmallows (egg) • Stage two: gummy warms (caterpillar/ larva) • Stage three: tootsie rolls (chrysalis/cocoon/pupa) • Stage four: pretzel (butterfly/adult) At the end, each student should have a complete life cycle example to take home & review.
Explain	Discuss ways to remember the four stages of the life cycle. During this time make sure to review the following terms: observe, life cycle, develop, characteristics, compare, metamorphosis, & change. Some questions you can use are: 1. What are some characteristics of caterpillars? 2. When something repeats itself over & over what do we call it? 3. Compare stage one from stage two in the life cycle.
Elaborate	Have students complete the Butterfly Writing Activity. These are the sheets where students will write about the butterflies habitat & diet

	(observed so far & two facts on each wing). This template can be found under the *ELA & Writing* folder.
Evaluate	Have students complete an exit slip question before they leave. Kindergarten students will orally answer these questions: 1. What are the first two stages of the butterfly life cycle? 2. What are the last two stages of the butterfly life cycle? 3. What comes after the egg stage of the butterfly life cycle? 4. Why is the environment important to an animal?

Name: _____ Date: _____

Choose One of the Following to Answer:

1. What are the first two stages of the butterfly life cycle?
2. What are the last two stages of the butterfly life cycle?

3. What comes after the egg stage of the butterfly life cycle? How do you remember?
4. Why is the environment important to an animal?

_____ Answer _____

_____

Name: _____ Date: _____

Choose One of the Following to Answer:

1. What are the first two stages of the butterfly life cycle?
2. What are the last two stages of the butterfly life cycle?
3. What comes after the egg stage of the butterfly life cycle? How do you remember?
4. Why is the environment important to an animal?

_____ Answer _____

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Lesson 4

Subject Area: **Science - Life cycle of the Butterfly**

Grade Level: **K - 2 (Focus K and 2)**

Lesson Objective:

- Name and/or Explain the Steps of the Life Cycle
- Observe a Caterpillar

Duration: 1 hour

Grouping: Whole group, Independent, and groups of 2

Standards Correlation:

Grade: K and 2

Standards:

Science:

Standard K-2: The student will demonstrate an understanding of the characteristics of organisms. (Life Science)

Standard 2-2: The student will demonstrate an understanding of the needs & characteristics of animals as they interact in their own distinct environments. (Life Science)

Indicators:

Science:

K-1.3 Predict & explain information or events based on observation or previous experience.

K-1.4 Compare objects by using nonstandard units of measurement.

K-2.5 Recognize that all organisms go through stages of growth & change called life cycles.

2-1.3 Represent & communicate simple data & explanations through drawings, tables, pictographs, bar graphs, & oral and written language.

Math:

K.MD.A.2 Directly compare two objects with a measurable attribute in common, to see which

object has “more of”/”less of” the attribute, & describe the difference.

K.OA.A.1 Represent addition & subtraction with objects, fingers, mental images, drawing, sounds, acting out situations, verbal explanations, expressions, or equations.

K.OA.A.3 Decompose numbers less than or equal to 10 into pairs in pairs in more than one way, eg., by using objects or drawings, & record each decomposition by a drawing or equation.

2.MD.4 Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.

2.OA.2 Fluently add & subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers. (See standard 1.OA.6 for a list of mental strategies.)

2.OA.3 Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2s; write an equation to express an even number as a sum of two equal addends.

ELA:

L.K.1d. Understand & use question words (interrogatives) (e.g., who, what, where, when, why, how)

L.K.6 Use words & phrases acquires through conversations, reading & being read to, & responding to texts.

SL.K.2. Confirm understanding of a text read aloud or information presented orally or through other media by asking & answering questions about key details & representing clarification if something is not understood.

SL.K.5. Add drawing or other visual displays to descriptions as desire to provide additional detail.

2. KD. 1 Ask & answer such questions as *who, what, where, when, why,* and *how* to demonstrate understanding of key details in a text.

Social Studies:

K-5.4 Recognize natural features of the environment, including mountains & bodies of water through pictures, literature, & models.

2-2.2 Recognize characteristics of the local regions, including its geographic features & natural resources. (G, E)

Materials: DVD, Computer, Promethean Board, 4-Piece Life Cycle of a Butterfly manipulatives, Pipe Cleaners cut into Different Sizes, Science Journals, Scissors, Butterfly Cutouts, Art Supplies, Butterfly Books, Butterfly Puzzles and Life Cycle Puzzles, Migration Map Pictures (social studies folder), and "*Jake and the Migration of the Monarch Butterfly"* book

Engage	Engage the students by having different colored and different sized pipe cleaners on the table. Students will be making comparisons between these "caterpillars." Give an example: The blue caterpillar is smaller than the red caterpillar. Have students work in groups to explore the caterpillars and make connections using "shorter, smaller, longer, etc. Elicit prior knowledge by asking the following questions: **K & 2nd**: 1. What are some characteristics of a caterpillar? 2. What do caterpillars look like? **2nd** : 3. What are two comparisons between a butterfly's life cycle and any animal's life cycle? 4. Where have you heard the word migrate before?
Explore	**Prior** to class have four stations set up within the classroom. Label the four stations by life cycle stage rather than numbers: **K** … (Egg, Caterpillar, Chrysalis, Butterfly) **2nd Grade** … (Egg, Larva, Pupa, Adult). • Students are to create a **camouflaged** butterfly to hide in the room. They will need crayons, markers, butterfly cut-out . • Students will have a chance to read butterfly books and books about many animals that go through the life cycle, both fiction and nonfiction. • Students will work together playing the Life Cycle of a Butterfly Sorting Games and Puzzles. • Students will use crayons, paper, and any art supplies. **Fieldwork:** Explain the four stations – • At the **egg station**, student will use a butterfly cut-out and art supplies to camouflage their butterfly to be hidden in the room. The butterflies will be used at the end of the class lesson. • At the **caterpillar/larva station** … K: Students will choose books from the collection of butterfly books to read and explore independently. 2nd Grade: Students will spend time reading with partners reading about animals of the life cycle.

	• At the **chrysalis/pupa station**, students can use the puzzles or games to help them review the life cycle of a butterfly. • At the **butterfly/adult station**, students are to create a drawing using any art supplies to demonstrate the life cycle of a butterfly with labels. Bring the students back together and allow them a few minutes to observe the caterpillars and make connections to compare and contrast them like the engaging activity.
Explain	Discuss comparisons made when observing the caterpillars. During this time, make sure the teachers reviews the following terms with the students: **K**: Life Cycle of Butterfly. Compare, Characteristics, Develop, Change, and Observe **2nd**: Observe, Pupa, Life Cycle, Develop, Characteristics, Compare, and Change. Some questions you can use are: **K**: 1. What characteristics did you notice when observing caterpillars? 2. How can you compare the caterpillars to each other. **2nd**: 1. What are some characteristics of caterpillars? 2. What life cycle stage is the caterpillar in? 3. How can you compare some caterpillars?
Elaborate	**K:** Watch the DVD, The Very Hungry Cat**e**rpillar on the Promethean Board. Discuss the similarities and differences in the book and the DVD. **2nd Grade:** Show the students different categories of butterflies by using the butterfly chart (located in the *social studies* folder). Show students that the common monarch butterfly migration path using the pictures provided. Read "Jake and the Migration of the Monarch Butterfly."
Evaluate	**K:** Have students name the 4 stages in the Life Cycle of a Butterfly or put 4 plastic pieces of the Life Cycle in Order. **2nd:** Have the students' research and report on a map the travels that their ancestors took to this country. What path of migration did your ancestors take?

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Subject Area: **Science - Symmetrical Butterflies with Shapes**

Grade Level: **K -2 (Focus on K and 2)**

Lesson Objective:

- Demonstrate symmetry using shapes
- Observe characteristics of the fourth stage of the life cycle (Adult Butterfly)

Duration: 40 minutes

Grouping: Whole group, Independent, and groups of 2

- Differentiating will be carried out in this lesson by mixed leveled grouping.

Standards Correlation:

Grade: K and 2

Standards:

ELA-Literacy

K.SL.K.1: Participate in collaborative conversations with diverse partners about kindergarten topics and texts with peers and adults in small and larger groups.

K.L.K.1: Demonstrate command of the conventions of English grammar and usage when writing and speaking.

K.L.K.6: Use words and phrases acquired through conversations, reading and being read to, and responding to texts.

2.SL. 2: Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.

Science

K-2: The student will demonstrate an understanding of the characteristics of organisms. (Life Science)

2-1:The student will demonstrate an understanding of scientific inquiry, including the processes, skills, and mathematical thinking necessary to conduct a simple scientific investigation.

Math

K.G.1: Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres).

K.G.2: Analyze, compare, create, and compose shapes.

2.G.1: Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. *Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.

Indicators:

ELA-Literacy

K.SL. K.1b Continue a conversation through multiple exchanges.

K.L.K.1f Produce and expand complete sentences in shared language activities.

Science

K-2.4 Compare individual examples of a particular type of plant or animal to determine that there are differences among individuals.

K-2.5 Recognize that all organisms go through stages of growth and change called life cycles.

2-1.1 Carry out simple scientific investigations to answer questions about familiar objects and events.

2-1.3 Represent and communicate simple data and explanations through drawings, tables, pictographs, bar graphs, and oral and written language.

Math

K.G.1 Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to.

K.G.5 Model shapes in the world by building shapes from components and drawing shapes.

K.G.6 Compare simple shapes to form larger shapes.

Materials: Promethean Board, Pictures of Butterflies, Read Aloud Books, Attribute Shapes, Blank Butterfly Shape, Butterfly Symmetry Worksheet, Art supplies

Engage	Engage the students using the website below on the promethean

	board. http://boowakwala.uptoten.com/kids/boowakwala-adventures-butterfly-butterflycolor.html Have the butterfly on the board and have the students predict what will happen to the other side of the butterfly. Elicit prior knowledge by asking the following question: --How would you describe a butterfly that you've previously seen?
Explore/Explain	**Prior** to class, teachers will collect pictures of different types of butterflies that show symmetry for the children to use. **Fieldwork**: *Explore - Activity One:* Observe pictures of butterflies and discuss with your group. *Explain* – As a class, discuss the color patterns seen in the butterfly pictures (symmetry). *Explore - Activity Two:* Use attribute shapes to create a butterfly. *Explain* – Have students share with each other their symmetrical butterfly. Have volunteers come and complete the promethean board butterfly.
Elaborate	• Kindergarten teacher will read the book, *A Book of Colors Butterfly, Butterfly,* by Patr Horacek. • Second grade teacher will read the book, *From Caterpillar to Butterfly,* by Gerald Legg. Second Grade - Have students work in groups to make a list of other objects that can be symmetrical.
Evaluate	Students can work with a partner to complete the "*Butterfly Symmetry"* worksheet. • Kindergarten will be given two pictures of half of butterflies. The students are required to copy the butterfly wings to make it symmetrical. • Second grade will be given four pictures of half of butterflies. The students are required to copy the butterfly wings to make it symmetrical. Then they are required to tally the number of each shape that are in the pictures.

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Lesson 6

Subject Area: **Science - Life cycle of the Butterfly**

Grade Level: **K -2 (Focus on K and 2)**

Lesson Objective:

- Identify the steps of the life cycle

Duration: 60 minutes

Grouping: Whole group

Standards Correlation:

Grade: K and 2

Standards:

Science:

Standard 2: The student will demonstrate an understanding of characteristics of organisms.

Standard 2-2: The student will demonstrate an understanding of the needs and characteristics of animals as they interact in their own distinct environments. (Life Science)

Standard 2-2: The student will demonstrate an understanding of the needs and characteristics of animals as they interact in their own distinct environments. (Life Science)

Indicators:

Science:

K-2.1 Recognize what organisms need to stay alive (including air, water, food, & shelter).

K-2.5 Recognize that all organisms fo through stages of growth & change called life cycles.

2-1.1 Carry out simple scientific investigations to answer questions about familiar objects and events.

2-1.3 Represent and communicate simple data and explanations through drawings, tables, pictographs, bar graphs, and oral and written language.

2-1.6 Infer explanations regarding scientific observations and experiences.

2-2.5 Illustrate the various life cycles of animals (including birth and the stages of development).

Math:

K.MD.B.3 Classify objects into given categories; count the numbers of objects in each category & sort the categories by count.

2.OA.2 Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers. (See standard 1.OA.6 for a list of mental strategies.)

2.OA.3 Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2s; write an equation to express an even number as a sum of two equal addends.

ELA:

RL.K.5 Recognize common types of texts (e.g., storybooks, poems).

RI.K.3 Without prompting & support, describe the connection between two individuals, events, ideas, or pieces of information in a text.

RI.K.10 Actively engage in group reading activities with purpose & understanding.

SL.K.1 Participate in collaborative conversations with diverse partners about kindergarten topics & texts with peers & adults in small & large groups.

SL.K.1b Continue a conversation through multiple exchanges.

SK.K.6 Speak audibly & express thoughts, feelings, & ideas clearly.

2.SL. 2 Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.

Materials: Butterfly Puppets, Copies of "The Ensy Weensy Spider", Books for partner reading, *ticket out the door*s

Engage	Engage the students by singing the song, *The Fuzzy Caterpillar,* sung to

	the tune of "The Ensy Weensy Spider: The fuzzy caterpillar Curled upon a leaf, Spun her little chrysalis And then fell asleep. While she was sleeping, She dreamed that she could fly, And later when she woke up She was a butterfly! Elicit prior knowledge by asking the following questions: 1. What do you remember learning in kindergarten about the life cycle? 2. What did you learn so far this year about butterflies? 3. What stage of the life cycle did you find the most fascinating?
	Prior to class have students prepared to put on a play using props. Puppets can be used for this play. **Fieldwork**: Kindergarten students will put on a play for the second grade. These students will help second graders review prior knowledge. Second grade will put on a play for the Kindergarteners to help them build on the knowledge they already know & will learn in the future. This play can easily be repeated with props for another animal that changes or goes through metamorphosis such as a frog!
Explain	Have students discuss the performances with a buddy from a different grade (a kindergarten student should be matched with a second grade student). During this time have students review the following questions. This should allow students to review vocabulary such as but not limited to: egg, caterpillar, larva, chrysalis, pupa, adult, butterfly, cycle, develop. • What are the four steps to the butterfly life cycle? • What new words did you learn today or what words were you reminded of? • Can other animals follow the same steps to the life cycle?
Elaborate	While the students are matched up with a partner from the opposite grade, have a kindergartener read a book to the second grader & reverse the situation. Books should be appropriate for each student. Books should be about butterflies or animals that go through the life cycle.

Evaluate	Ticket out the door. Example questions: **K & 2nd Grade**: • What animal other than a butterfly changes form during their life cycle? • What is the second stage of the caterpillar life cycle? **2nd Grade**: • Name the two different names for the second stage of the butterfly life cycle. • Name the two different names for the third stage of the butterfly life cycle.

Lesson 7
Malinda Brown & Emily Doyle

Subject Area: Writing in Science

Grade Level: Second Grade

Lesson Objective: Students will illustrate and express their growth of information on butterflies.

Duration: 1 hour

Grouping: Whole Group, Independent

Grade: Second Grade

Standards Correlation:

Standard:

Science

Standard 2-2: The student will demonstrate an understanding of the needs and characteristics of animals as they interact in their own distinct environments. (Life Science)

Writing

Standard 2-5 The student will write for a variety of purposes and audiences.

Indicators:

ELA:
2.SL. 2 Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.

2. KD. 1 Ask and answer such questions as *who, what, where, when, why,* and *how* to demonstrate understanding of key details in a text.

Science:

2-1.3 Represent and communicate simple data and explanations through drawings, tables, pictographs, bar graphs, and oral and written language.

2-1.7 Infer explanations regarding scientific observations and experiences.

Materials*:* Promethean Board, Read aloud Book, "My-Oh My Butterfly" by Dr. Seuss, Science Journals, Crayons, Previous writings to revise, pencils

Engage	"Second Graders, we are going to start science off with an illustration. What does an illustrator do? (Draws pictures). Today you will draw a picture for me. Change one characteristic or property of a butterfly and draw a picture. For example, you can change the shape, color, size of your butterfly. **Elicit**: Ask children questions such as: • Why might butterflies not be the color pink? • Why might butterflies not be 20 feet tall? • Why might butterflies fly and not crawl?
Explore	**Prior to Class:** Have the promethean board set up on a writing program. **Fieldwork:** Give each student a minute to explain his or her picture to the class. We will be using ideas of the students to create a fictional story. For example, you might write a story with the class about how the world would be different if caterpillars were 20 feet tall and pink.
Explain	Discuss results of the properties that butterflies have, and why their properties are important. Review some questions from the beginning of the day. This section should help review many of the vocabulary words from the unit plan. • Why might butterflies not be the color pink? • Why might butterflies not be 20 feet tall? • Why might butterflies fly and not crawl?
Elaborate	Read "My-Oh My Butterfly" by Doctor Seuss to the class. This should be a like a book walk, ask questions, infer, and reason. This book is fictional by the properties of the butterflies, but is non-fictional because it reviews the complete metamorphosis of a butterfly.
Evaluate	Take out your writing "What do you know about life cycles?" from the beginning of the unit. Please revise and add information of all that you learned throughout the week about life cycles and how animals change. Use any new vocabulary that you might have learned. Illustrate pictures to help explain your writing.

Ticket- out- the – door:

Name one characteristic you observed about caterpillars.

What animal other than a butterfly changes form during their life cycle?

Name the two different names for the second stage of the butterfly life cycle.

Name the two different names for the third stage of the butterfly life cycle.

What is the first stage of the butterfly life cycle?

What is the second stage of the butterfly life cycle?