Sheltered Instruction Unit Plan

Life Cycles

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Date: \_\_\_\_\_ Grade: Second Subject: Science Theme: Life Cycle of Living Things

**Georgia Standards:** S2L1. Students will investigate the life cycles of different living organisms. Students will determine the sequence of the life cycle of common animals in your area: a mammal (dog or cat), a bird (chicken), an amphibian (frog), and an insect (butterfly).

Science Content Objectives: Students are expected to know that some organisms undergo metamorphosis during their life cycles through growth and change. Students will identify and understand the life cycle stage of frogs, butterflies, and chickens from birth to adult. Students will be able to describe the changes in organisms, such as frogs and butterflies, as they undergo metamorphosis. Students will work collaboratively as a whole-class, with partners, and independently, to explore their understanding of life cycles using a variety of tools, activities, and resources.

**ELD Language Objectives:** Standard 4- English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.

**Essential Questions:** What is a life cycle? What are the life cycle stages of different organisms?

#### **Key Vocabulary:**

<u>adult</u>- the stage in which an organism is fully developed

amphibian-an animal that can live on both land and in water

butterfly- an adult butterfly

chick-the baby chicken

cocoon- silky case in which some insects live during the pupa stage

chrysalis- a butterfly in the pupa stage, which has a hard outer covering

develop- to grow or reach the next stage in a life cycle

egg- the beginning stage in the life cycle of many organisms

<u>embryo</u>-a chicken in the early stages of growth (tiny white spot on yolk- grows into the chick)

frog- an adult frog without a tail.

froglet- a small frog that is changing from a tadpole to an adult

gills-the area near the head of a fish or water animal used for breathing

hatchling-a young chick that has just hatched from its egg

hen-adult female

incubation-warming the eggs

insect- a small animal that has six legs and a body formed of three parts and that may have wings

larva- the caterpillar or worm-like stage in the life cycle of some insects

life cycle- the stages of change that an organism goes through during its life

metamorphosis- an animal's change from one shape to a totally different shape

<u>nest-</u>the place the hen makes for her eggs using twigs, feathers, bits of hay & leaves <u>organism-</u> a living thing

<u>pupa</u>- an insect in the stage of its life cycle when it changes from a larva to an adult <u>reproduction</u>- the process by which organisms generate others of the same kind rooster-the adult male chicken

shell- the hard outer covering of an egg

<u>tadpole</u>- the stage in which a young frog looks like a fish and lives only in water <u>yolk</u>- the yellow part of the egg that contains food for the embryo

#### **Resources and Materials:**

Materials for making a Frog sensory tub include a small clear plastic tub, plastic leaves, small vase gems or marbles from the floral section, plastic frog life cycle stages, make a small, green foam lily pad, water (see the following website:

http://www.playcreateexplore.org/2012/04/pondlifecycle-of-frog-sensory-binsmall.html)

Life Cycle of a Frog Wheel Activity Sheets, Life Cycle of a Butterfly Wheel Activity Sheets, Unit Vocabulary / Picture Cards, Frog Life Cycle Mini Book, Butterfly Life Cycle Mini Book, Frog Foldable book, Butterfly KWL chart, Frog KWL chart, mini posters of frog and butterfly life cycles, Life Cycle Observation Journals, Books: *Life Cycles* by Peter Riley, *A Butterfly's Life* by Melissa Blackwell Burke, *The Life Cycle of a Frog* by John Williams, *Frogs* by Gail Gibbons, *The Very Hungry Caterpillar by* Eric Carle, Egg incubator and eggs ready to hatch, Guest Speaker, 1 egg for every 2 students, hand sanitizer, popsicle sticks, tape, stapler, card stock, crayons, glue, string, tadpole in fish bowl, parts of egg poster, chicken & egg vocabulary cards, paper towels, hand wipes, magnifying glasses, 'All About Chickens' KWL chart, chick calendar, egg-shaped journal

	SIOP Features	
Preparation  _x Adaptation of Content  _x Links to Background  _x Links to Past Learning  _x Strategies incorporated	Scaffolding _x Modeling _x Guided practice _x Independent practice _x Comprehensible input	Grouping Options _x Whole class _x Small groups _x Partners _x Independent
Integration of Processes  _x Reading _x Writing _x Speaking _x Listening	Application _x Hands-on _x Meaningful _x Linked to objectives _x Promotes engagement	Assessment _x Individual Group _x Written _x Oral

#### **LESSON SEQUENCE:**

Lesson One: The Life Cycle (45 minutes)

Standard: Students will investigate the life cycles of different living organisms.

Objective: In this lesson, students will understand the sequence of the life cycle stages from birth, growth, reproduction, to death.

Materials: *Life Cycles* by Peter Riley and *A Butterfly's Life* by Melissa Blackwell Burke, activity sheet for Life Cycle of A Butterfly wheel printed on card stock and brad fasteners, poster of metamorphosis of butterfly, Butterfly Life Cycle mini book, crayons, stapler

Key Vocabulary:

<u>adult</u>- the stage in which an organism is fully developed butterfly- an adult butterfly

egg- the beginning stage in the life cycle of many organisms

<u>insect</u>- a small animal that has six legs and a body formed of three parts and that may have wings larva- the caterpillar or worm-like stage in the life cycle of some insects

life cycle- the stages of change that an organism goes through during its life

<u>metamorphosis</u>- an animal's change from one shape to a totally different shape organism- a living thing

<u>pupa</u>- an insect in the stage of its life cycle when it changes from a larva to an adult <u>cocoon</u>- silky case in which some insects live during the pupa stage

chrysalis- a butterfly in the pupa stage, which has a hard outer covering

develop- to grow or reach the next stage in a life cycle

reproduction- the process by which organisms generate others of the same kind

#### Activities:

- 1. Tell students that in this unit they will be learning about the life cycle stages that a butterfly, frog, and chicken go through. Complete a KWL chart about life cycles.
- 2. Read the book *Life Cycles* by Peter Riley. After reading, ask students the following: What is a life cycle? (a repetitive process of changes that an organism, a living thing, goes through during its life from birth to death) Show picture cards of different life cycles. What were some of the life cycles that we read in this book?(people, plants, butterflies, amphibians, frogs, reptiles, birds, and mammals) What life cycle stages do all living things have in common? (born, grow, adults, reproduce, die) Draw and label a model on board of these stages as you discuss them.
- 3. Tell students that all living things go through life cycles. All living things are born, grow, reproduce, and die. (refer to listed stages on board) The stages of the life cycle can be different. For example, some living things are born alive live a puppy or a cat. Some living things hatch from an egg. Many living things look like the same at birth as they do as an adult. They are just smaller at birth. Some insects and animals go through a life cycle where they look totally different at birth than they do when they are an adult. This is called metamorphosis.
- 4. Show life cycle video and slide show (8 minutes) for ESOL / ESEP to gain understanding <a href="http://www.youtube.com/watch?v=-pHav-3QZkI">http://www.youtube.com/watch?v=-pHav-3QZkI</a> <a href="http://studyjams.scholastic.com/studyjams/jams/science/animals/animal-life-cycles.htm">http://studyjams.scholastic.com/studyjams/jams/science/animals/animal-life-cycles.htm</a>
- 5. Read *A Butterfly's Life* by Melissa Blackwell Burke whole group. Discuss each stage of a butterfly's life with class. (egg, larva, pupa, adult) Use large magnetic butterfly life cycle picture cards. Place a magnetic picture card on board as you discuss each stage. Show poster of metamorphosis of a butterfly.
- 6. Give each student a copy of the Butterfly Life Cycle mini book. Have them color and assemble the book with staples. As a whole group, teacher will read the book. Partner students (high / low) and have them partner read the book.

Ī		Level 1 Entering	Level 2 Emerging	Level 3	Level 4 Expanding	Level 5 Bridging
L				Developing		
Ī	Reading	Locate life cycle	Find words and	Sequence life	Sequence	Connect
		stages of a butterfly	phrases about life	cycle of a butterfly	information	information about
		pictures and match	cycle of a	sentences from	about life cycles of	life cycle of a
		with words and	butterfly from	illustrated mini	a butterfly from	butterfly with other

p	ohrases (e.g. egg,	illustrated mini	book using graphic	illustrated mini	life cycles
p	oupa, adult, etc.)	book with a	organizers in small	books using	from illustrated
u	using illustrated	partner	groups	graphic organizers	texts using
n	nini book with a			in small groups	graphic organizers
p	partner.				

7. Give each student a "Life Cycle of a Butterfly" activity sheet. Have students write a sentence next to each picture that describes each stage of the life cycle. (Example: First, the butterfly lays an egg on a leaf. Next, the caterpillar is born and it eats and grows. Then, the caterpillar forms a chrysalis around itself while its body changes. Last, it becomes an adult butterfly and it can reproduce again before it dies.)

	Level 1 Entering	Level 2 Emerging	Level 3 Developing	Level 4 Expanding	Level 5 Bridging
Writing	Label activity sheet about life cycle stages of a butterfly using words from word bank (e.g., egg, larva, pupa, adult) with a partner	Produce simple sentences on activity sheet about the life cycle stages of a butterfly on activity sheet using illustrated word bank with a partner	Describe the life cycle stages of a butterfly in sentences on activity sheet using word bank with a partner	Describe in detail the life cycle stages of a butterfly in sentences using life cycle graphic organizer and with a partner	Reproduce stories about the life cycle stages of a butterfly using graphic organizer and in small group

8. Give out vocabulary cards. Students cut out cards. Discuss each vocabulary card. Tell students to use vocabulary cards as study guide for quizzes and tests. (see appendix)

	Level 1 Entering	Level 2 Emerging	Level 3	Level 4 Expanding	Level 5 Bridging
			Developing		
Speaking	Point to and tell	Describe life	Retell life cycle	Tell life cycle	Explain in detail the
	about the life cycle	cycle stages of a	stages of a	stages and tell a	life cycle of a
	of a butterfly using	butterfly (e.g.,	butterfly in order	detail about each	butterfly using
	illustrations from	egg, pupa)	(egg, larva, pupa,	stage of life cycle	technical words and
	vocabulary cards	using illustrated	adult) using	of a butterfly using	using illustrated
	with a partner (e.g.,	vocabulary cards	illustrated	illustrated	vocabulary cards
	"this is adult", "this	with a partner	vocabulary cards	vocabulary cards	with a partner
	is egg", "this is		with a partner	with a partner	
	pupa")				

9. Give out life cycle of a butterfly wheel. Have student color and assemble wheel. Partner students and have them turn wheel and discuss each stage.

	evel 5 Bridging
Developing	
commands to create a life cycle of a butterfly wheel butterfly wheel oral directions to choose & organize butterfly wheel butterfly wheel oral directions to choose & organize butterfly wheel butterfly wheel oral directions to choose & organize butterfly wheel butterfly wheel oral directions to choose & organize wheel a life cycle	low complex specifications ssemble a life le of a butterfly sel in a small

#### 10. Additional Modifications and Ideas If Needed:

	Level 1 Entering	Level 2 Emerging	Level 3	Level 4 Expanding	Level 5 Bridging
			Developing		
Reading	Match life cycle	Find words and	Sequence life	Sequence	Connect
	stages of a butterfly	phrases about life	cycle of a butterfly	information	information about
	pictures with words	cycle of a	sentences from	about life cycles of	life cycle of a
	and phrases (e.g.	butterfly from	illustrated texts	a butterfly from	butterfly with other

	egg, pupa, adult, etc.) with a partner.	illustrated texts with a partner	using graphic organizers in small groups	illustrated texts using graphic organizers in small groups	life cycles from illustrated texts using graphic organizers
Speaking	Point to and tell about the life cycle of a butterfly using illustrations from picture books with a partner (e.g., "this is adult", "this is egg", "this is pupa")	Describe life cycle stages of a butterfly (e.g., egg, pupa) using photos, illustrations, or picture books with a partner	Retell life cycle stages of a butterfly in order (egg, larva, pupa, adult) using photos, illustrations, or picture books with a partner	Tell life cycle stages and tell a detail about each stage of life cycle of a butterfly using photos, illustrations, or picture books with a partner	Explain in detail the life cycle of a butterfly using technical words and using photos, illustrations, or picture books with a partner
Listening	Follow simple oral commands to create a life cycle of a butterfly wheel with a partner (e.g., "pick up adult, glue, etc.")	Follow simple oral directions to locate & choose picture cards used to create a life cycle of a butterfly wheel with a partner	Follow oral directions to choose & organize picture cards to create a life cycle of a butterfly wheel with a partner	Follow detailed oral directions to organize & assemble a life cycle of a butterfly wheel with a partner	Follow complex oral specifications to assemble a life cycle of a butterfly wheel in a small group
Writing	Label drawings about life cycle stages of a butterfly using illustrated word banks (e.g., egg, larva, pupa, adult) and graphic organizers	Produce simple sentences about the life cycle stages of a butterfly using illustrated word banks and graphic organizers	Describe the life cycle stages of a butterfly using illustrated word banks and graphic organizers	Describe in detail the life cycle stages of a butterfly using illustrations and graphic organizers	Reproduce stories about the life cycle stages of a butterfly using illustrations

Lesson 2: The Butterfly Lifecycle (45 minutes)

Standard: Students will investigate the life cycles of different living organisms.

Objective: In this lesson, students will understand the sequence of the life cycle stages from birth, growth, reproduction, to death of a butterfly.

Materials: *The Very Hungry Caterpillar* by Eric Carle, materials to create a model of the butterfly lifecycle: white paper plates, elbow macaroni, pre-cut leaves on green construction paper (2 per student), crayons, white rice, small butterfly clipart / template, copies of mini posters of Butterfly World poem, glue

Key Vocabulary: (review only)

adult- the stage in which an organism is fully developed

butterfly- an adult butterfly

egg- the beginning stage in the life cycle of many organisms

insect- a small animal that has six legs and a body formed of three parts and that may have wings

<u>larva</u>- the caterpillar or worm-like stage in the life cycle of some insects

life cycle- the stages of change that an organism goes through during its life

metamorphosis- an animal's change from one shape to a totally different shape

organism- a living thing

<u>pupa</u>- an insect in the stage of its life cycle when it changes from a larva to an adult <u>cocoon</u>- silky case in which some insects live during the pupa stage <u>chrysalis</u>- a butterfly in the pupa stage, which has a hard outer covering

<u>develop</u>- to grow or reach the next stage in a life cycle <u>reproduction</u>- the process by which organisms generate others of the same kind

#### Activities:

- 1. Complete Butterfly KWL chart whole group.
- 2. Read *The Very Hungry Caterpillar* by Eric Carle
- 3. Connect to previous lesson by using the following interactive powerpoint Metamorphosis interactive powerpoint - Brandi Fishburn (10 minutes)
- 4. Partner Oral Quiz: Students will work with a partner using 2 sets of picture vocabulary cards and play concentration game. Teacher will observe partners. When a student makes a match, the student must read the vocabulary card aloud. For nonreaders or non-English speakers, the proficient reader will read and the other student will echo read. Students must be able to match and either read or echo read each card orally to their partner.
- 5. Review life cycle of a butterfly using giant magnet visuals on board. Tell students that today they are going to make a model of the life cycle of the butterfly.
- 6. Hand out a paper plate to each student. Tell students to use a crayon to divide their paper plate into 4 equal sections. (show example model)
- 7. For the next 4 steps, provide preprinted labels with the words egg, larva, pupa, and adult for ESOL and ESEP students. Ask students: What is the first stage of the butterfly life cycle? (egg) Write "egg" in the first section. Write word on board for students to use as a model. Give each student a leaf cutout and have them draw lines on the leaves to make them look real. Give students several grains of rice and instruct them to glue the grains onto one leaf. Then, glue the leaf with rice onto the eggs section, using crayons, color the background green and add a stem to the leaf.
- 8. Ask students: What is the second stage of the butterfly life cycle? (larva) Write "larva" in the second section. Write the word on board for students to use as a model. Using crayons, students will draw a caterpillar eating a leaf and a background in the larva section.
- 9. Ask students: What is the third stage of the butterfly life cycle? (pupa) Write "pupa" in the third section. Write word on board for students to use as a model. Remind students that the caterpillar's shell is called a Chrysalis. In the pupa section, color the background green. Give students the second leaf and have them draw lines. Then give students 2 elbow macaroni. Have them glue them to leaf. Glue leaf to pupa section.
- 10. Ask students: What is the fourth stage of the butterfly life cycle? (adult) Write "adult" in the fourth section. Write word on board for students to use as a model. Give students the butterfly template and have them color the butterfly symmetrically and cut it out. Have them color the background of the adult section blue. Glue the butterfly onto the plate.
- 11. Dramatic Play: The students will use their bodies to demonstrate what metamorphosis looks like. First, tell them they will become an egg. Have them sit on the floor, grasp their knees, and tuck their head under. Demonstrate the position. Next, tell the students they will change into caterpillars by stretching out on the floor and wriggling. After that, they will stand very still and cross their arms tightly across their chest to look like the chrysalis. Finally, demonstrate how a butterfly gently stretches its wings and begins to flutter. Allow the students to fly around the room as butterflies.



12. Give students a mini poster poem about the life cycle of a butterfly. Have them glue the mini poster to the back of the plate. The teacher will model read the poem first. Then the teacher will read the poem again while the student echo read after her. Next, the students will choral read the poem whole group. After that, the students will be partnered (high / low readers) and partner read the poem repeatedly with expression for at least 4 times to improve fluency. Finally, the students will time each other reading the poem.

	Level 1 Entering	Level 2 Emerging	Level 3 Developing	Level 4 Expanding	Level 5 Bridging
Reading	Repeat butterfly poem words (e.g., egg, caterpillar, chrysalis, butterfly) with a partner.	Find words and phrases about the life cycle of a butterfly from illustrated poem with a partner.	Practice reading phrases about the life cycle of a butterfly from illustrated poem with a partner.	Sequence life cycle of a butterfly sentences from illustrated poem using graphic organizers in small groups	Compare life cycle of a butterfly poem with life cycle vocabulary word cards using a graphic organizer in small groups.
Speaking	Point to and tell about the life cycle of a butterfly using illustrations from poem with a partner (e.g., "this is adult", "this is egg", "this is pupa")	Describe life cycle stages of a butterfly (e.g., egg, pupa) using illustrations from poem with a partner	Retell life cycle stages of a butterfly in order (egg, larva, pupa, adult) using illustrations from poem with a partner	Tell life cycle stages and tell a detail about each stage of life cycle of a butterfly using illustrations from poem with a partner	Explain in detail the life cycle of a butterfly using technical words and using illustrations from poem with a partner
Listening	Follow simple oral commands to create a life cycle of a butterfly model with a partner (e.g., "pick up rice, glue leaf, color, etc.")	Follow simple oral directions to choose correct label & create the life cycle stages of a butterfly on the paper plate with a partner	Follow oral directions to choose & organize labels to create a life cycle of a butterfly model on paper plate with a partner	Follow detailed oral directions to organize & assemble a life cycle of a butterfly model with a partner	Follow complex oral specifications to assemble a life cycle of a butterfly model in a small group
Writing	Label model of life cycle stages of a butterfly using word bank (e.g., egg, larva, pupa, adult) and illustrated life cycle diagram	Produce simple sentences about the life cycle stages of a butterfly using words from butterfly life cycle model	Describe the life cycle stages of a butterfly using illustrated model of butterfly life cycle	Describe in detail the life cycle stages of a butterfly using illustrated model of butterfly life cycle	Compose a story about the life cycle stages of a butterfly using illustrated model of butterfly life cycle

Lesson 3: The Frog Lifecycle (45 minutes)

Standard: Students will investigate the life cycles of different living organisms.

Objective: In this lesson, students will understand the sequence of the life cycle stages from birth, growth, reproduction, to death of a frog.

Materials: From Tadpole to Frog by Wendy Pfeffer, The Life Cycle of a Frog by John Williams, crayons, scissors, glue, Frog template on green construction paper flipbook, additional pages of flip book (egg, tadpole, froglet, frog), Life Cycle of a Frog mini book pages (2 sheets), stapler, glue, small clear plastic tub, plastic leaves, small vase gems or marbles from the floral section, plastic frog life cycle stages, make a small, green foam lily pad, water, live tadpole in fish tank

#### Key Vocabulary:

<u>adult</u>- the stage in which an organism is fully developed <u>amphibian</u>-an animal that can live on both land and in water

egg- the beginning stage in the life cycle of many organisms gills-the area near the head of a fish or water animal used for breathing life cycle- the stages of change that an organism goes through during its life metamorphosis- an animal's change from one shape to a totally different shape organism- a living thing

<u>develop</u>- to grow or reach the next stage in a life cycle

frog- an adult frog without a tail.

<u>froglet</u>- a small frog that is changing from a tadpole to an adult <u>reproduction</u>- the process by which organisms generate others of the same kind <u>tadpole</u>- the stage in which a young frog looks like a fish and lives only in water

#### Activities:

- 1. Tell the students that metamorphosis is when an animal changes from one shape to a totally different shape like the butterfly. Connect to prior learning: Tell the students that other animals also go through metamorphosis. A frog also goes through metamorphosis. Read either *From Tadpole to Frog* by Wendy Pfeffer or *The Life Cycle of a Frog* by John Williams. Both books explain the life cycle of a frog.
- 2. Watch frog life cycle animation: <a href="http://www.youtube.com/watch?v=7NhA9SHunKs">http://www.youtube.com/watch?v=7NhA9SHunKs</a> Show students live tadpole and fish bowl (ongoing activity). Explain that our class will be observing how the tadpole turns into a frog. Then, give students a frog life cycle journal. Have students write detailed sentences describing each stage in the journal as they see the tadpole change. Use transition words (first, next, then, last). They will need time each day to look at the tadpole and journal. (use same journal pages for sensory tubprint 2 sets) ELLs can work with a partner to complete journal.
- 3. Make life cycle of a frog flip book. Give students green construction paper template of frog and have students cut out. Give students additional pages as you ask and answer questions about each stage. Ask: What is the first stage of the frog life cycle? (eggs) What is the next stage of the frog life cycle? (tadpole) How do tadpoles breathe? (gills) What happens as the tadpole changes into a froglet? (they develop back legs and their tail and gills begin to disappear) What is the last stage of the frog life cycle? (the adult frog) How does the adult frog breathe? (lungs) How many legs does the adult frog have? (4) Have students cut out, organize, and glue down stages in order. See picture below.



After students complete flip book, have them partner (high/low) and share facts about each stage using their flip book. (See appendix)

	Level 1 Entering	Level 2 Emerging	Level 3	Level 4 Expanding	Level 5 Bridging
			Developing		
Speaking	Point to and tell	Describe life	Retell life cycle	Tell life cycle	Explain in detail the
	about the life cycle	cycle stages of a	stages of a frog in	stages and tell a	life cycle of a frog
	of a frog using	frog (e.g., egg,	order (egg,	detail about each	using technical
	illustrations from	tadpole, froglet,	tadpole, froglet,	stage of life cycle	words and using
	flip book with a	adult frog)	adult frog) using	of a frog using	illustrated flip book
	partner (e.g., "this	using illustrated	illustrated flip	illustrated flip book	with a partner
	is egg. tadpole.	flip book with a	book with a	with a partner	

	etc.")	partner	partner		
Listening	Follow simple oral	Follow simple	Follow oral	Follow detailed oral	Follow complex
	commands to create	oral directions to	directions to	directions to	oral specifications
	a life cycle of a	locate & choose	choose & organize	organize &	to assemble a life
	frog with a partner	picture cards used	picture cards to	assemble a life	cycle of a frog flip
	(e.g., "pick up	to create a life	create a life cycle	cycle of a frog flip	book in a small
	adult, glue, etc.")	cycle of a frog	of a frog flip book	book with a partner	group
		flip book with a	with a partner		
		partner			

4. Make Life Cycle of a Frog mini book. Have them color and assemble with staples the book. As a whole group, teacher will read the book. Partner students (high / low) and have them partner read the book. (see appendix)

	Level 1 Entering	Level 2 Emerging	Level 3	Level 4 Expanding	Level 5 Bridging
			Developing		
Reading	Locate life cycle stages of a frog pictures and match with words and phrases (e.g. egg, tadpole, froglet, etc.) using illustrated mini book with a partner.	Find words and phrases about life cycle of a frog from illustrated mini book with a partner	Sequence life cycle of a frog sentences from illustrated mini book using graphic organizers in small groups	Sequence information about life cycles of a frog from illustrated mini books using graphic organizers in small groups	Connect information about life cycle of a frog with other life cycles from illustrated texts using graphic organizers

5. Teacher will create ahead of time a frog life cycle sensory tub.

Materials for making a Frog sensory tub include a small clear plastic tub, plastic leaves, small vase gems or marbles from the floral section, plastic frog life cycle stages, make a small, green foam lily pad, water (see the following website:

<a href="http://www.playcreateexplore.org/2012/04/pondlifecycle-of-frog-sensory-binsmall.html">http://www.playcreateexplore.org/2012/04/pondlifecycle-of-frog-sensory-binsmall.html</a>)

Give students the opportunity to visit the sensory tub with a partner. Students will discuss each life cycle stage with their partner. Then, give students a frog life cycle journal. Have students write detailed sentences describing each stage in the journal. Use transition words (first, next, then, last).

ti dilibi	transition words (mist, next, then, rast).						
	Level 1 Entering	Level 2 Emerging	Level 3	Level 4 Expanding	Level 5 Bridging		
			Developing				
Writing	List life cycle words in frog journal (egg, tadpole, froglet, frog) and draw a picture of each stage with a partner	Produce simple sentences in journal about the life cycle stages of a frog using illustrated mini	Describe the life cycle stages of a frog in sentences in journal using illustrated mini book with a partner	Describe in detail the life cycle stages of a frog in sentences using illustrated mini book and with a partner	Reproduce stories about the life cycle stages of a frog using illustrated mini book and in small group		
		book with a partner					

6. Give students illustrated vocabulary cards that correspond to frog life cycle. Read and discuss each card whole group. Tell students that they will use the vocabulary cards as a study guide for test. (see appendix)

Lesson 5: The Chicken Lifecycle (45 minutes)

Standard: Students will investigate the life cycles of different living organisms.

Objective: In this lesson, students will understand the sequence of the life cycle stages from birth, growth, reproduction, to death of a chicken.

Materials: PowerPoint lesson *The Life Cycle of a Chick* by J. Moriconi, Life Cycle of Chick Activity 3-D Model Printables, Card Stock, Glue, Crayons, String, 'All About Chickens' KWL chart (see appendix)

Key Vocabulary:

adult- the stage in which an organism is fully developed

chick-the baby chicken

egg- the beginning stage in the life cycle of many organisms

<u>embryo</u>-a chicken in the early stages of growth (tiny white spot on yolk that will grow into the chick)

hatchling-a young chick that has just hatched from its egg

hen-adult female

incubation-warming the eggs

<u>life cycle</u>- the stages of change that an organism goes through during its life <u>metamorphosis</u>- an animal's change from one shape to a totally different shape <u>nest</u>-the place the hen makes for her eggs using twigs, feathers, bits of hay & leaves <u>organism</u>- a living thing

develop- to grow or reach the next stage in a life cycle

<u>reproduction</u>- the process by which organisms generate others of the same kind <u>rooster</u>-adult male

shell- the hard outer protective covering of an egg

yolk- the yellow part of the egg that contains food for the embryo

#### Activities:

- 1. Hand out 'All About Chickens' KWL chart & complete whole group. ESOL students can work with a partner to complete graphic organizer.
- 2. To introduce the lesson watch *The Life Cycle of a Chick* A PowerPoint Lesson Created by J. Moriconi.



3. Students will create a 3-D chicken life cycle model. Each student will need one set of eggs 1-5. Students will cut these out. Students will then color each stage of the life cycle as you discuss the stage. Then they will cut out the ovals and place them in order from chicken nesting, egg, embryo, hatchling, baby chick. They can begin with any stage in the cycle and write the names underneath each picture. (make pre-made labels for ELL & ESEP students) Students will then glue them to the egg patterns. Then fold each egg in half vertically and glue, staple, or tape the backs together to form a 3-D egg. The egg is meant to hang, so add a string to the top to display the model. You can see how the cycle repeats when it turns.

	Level 1 Entering	Level 2 Emerging	Level 3	Level 4 Expanding	Level 5 Bridging
			Developing		
Speaking	Point to and tell	Describe life	Retell life cycle	Tell life cycle	Explain in detail the
	about the life cycle	cycle stages of a	stages of a chicken	stages and tell a	life cycle of a
	of a chicken using	chicken (e.g.,	in order (e.g., egg,	detail about each	chicken using
	illustrations from	egg, hatchling,	hatchling, adult )	stage of life cycle	technical words and
	model book with a	adult ) using	using illustrated	of a chicken using	using illustrated
	partner (e.g., "this	illustrated model	flip book with a	illustrated model	model book
	is egg, hatchling,	book with a	partner	book with a partner	with a partner
	etc.")	partner			
Listening	Follow simple oral	Follow simple	Follow oral	Follow detailed oral	Follow complex
	commands to create	oral directions to	directions to	directions to	oral specifications
	a life cycle of a	locate & choose	choose & organize	organize &	to assemble a life
	chicken with a	picture cards used	picture cards to	assemble a life	cycle of a chicken
	partner (e.g., "pick	to create a life	create a life cycle	cycle of a chicken	model book in a
	up adult, glue,	cycle of a	of a chicken model	model book with a	small group
	etc.")	chicken model	book with a	partner	
		book with a	partner		
		partner			

Lesson 6: The Lifecycle of a Chicken (2 hours)

Standard: Students will investigate the life cycles of different living organisms.

Objective: In this lesson, students will understand the sequence of the life cycle stages from birth, growth, reproduction, to death of a chicken.

Materials: *Chicks and Chickens* by Gail Gibbons, 1 raw egg for 2 students (partners), plastic plates, soap & water (clean hands after experiment), 3-D Chicken Life Cycle model by Robin Sellers printed on card stock, glue, crayons, string, staples, tape, popsicle sticks, Egg incubator and eggs ready to hatch, Guest Speaker, parts of egg poster, chicken & egg vocabulary cards, paper towels, hand wipes, magnifying glasses, chick calendar, egg-shaped journal

#### Key Vocabulary:

adult- the stage in which an organism is fully developed

chick-the baby chicken

egg- the beginning stage in the life cycle of many organisms

<u>embryo</u>-a chicken in the early stages of growth (tiny white spot on yolk that will grow into the chick)

hatchling-a young chick that has just hatched from its egg

hen-adult female

incubation-warming the eggs

<u>life cycle</u>- the stages of change that an organism goes through during its life

metamorphosis- an animal's change from one shape to a totally different shape

<u>nest</u>-the place the hen makes for her eggs using twigs, feathers, bits of hay & leaves organism- a living thing

develop- to grow or reach the next stage in a life cycle

<u>reproduction</u>- the process by which organisms generate others of the same kind rooster-adult male

shell- the hard outer protective covering of an egg

yolk- the yellow part of the egg that contains food for the embryo

#### Activities:

- 1. Read book *Chicks and Chickens* by Gail Gibbons and discuss with students the chickens life cycle. Show life cycle of a Chicken Poster. Use vocabulary cards as you discuss the Life Cycle Poster & Vocabulary Words. Ask students: What is the first stage of the chicken's lifecycle? (hen roosting) What is the second stage of the chicken's lifecycle? (egg) What is the third stage of the chicken's lifecycle? (embryo) What is the fourth stage of the chicken's lifecycle? (hatchling) What is the fifth stage of the chicken's lifecycle? (baby chick)
- 2. Tell students that today they will dissect an egg. Discuss safe handling of raw eggs. Tell students that chicken eggs could contain bacteria that can cause harm if allowed to multiply. Wash hands thoroughly with soap and water after handling. Clean up any spills with paper towels and wash the area with a disinfectant. Tell the students do not taste or eat any food items in this activity. The food is only used for demonstration purposes. All liquid wastes may be flushed down the sink. Any solid waste can be disposed of in the trash.
- 3. Students observe with magnifying glasses the hardness, color, texture, & tiny pores on the outside of egg. Introduce vocabulary as each part is discussed: shell, pore. Students label egg parts as you point to them on the poster and they observe them. (Students do not need to memorize technical names of parts of egg. Vocabulary cards are for teacher use only. This activity is for hands-on exploration only. Students will not be tested over parts of egg vocabulary.)
- 4. Partners will carefully crack egg so the yolk is not broken onto plastic plate.

  Demonstrate process. Have a few extra eggs for casualties or break the eggs for students. Help students find each part of the egg, using vocabulary cards to discuss the function of each part. Students use popsicle sticks to manipulate egg and locate parts. Show poster. As they dissect, have them label inner parts of egg. (students use poster as model)
- 5. After students complete egg dissection, have them complete egg vocabulary table and draw an illustration of the parts of the egg. Then have them orally tell a different partner about their experience dissecting an egg. They need to explain the steps they followed from the beginning of the activity to the end. You may also have students write about their experience. ELLs and ESEP may work with a partner or small group.

	Level 1 Entering	Level 2 Emerging	Level 3	Level 4 Expanding	Level 5 Bridging
			Developing		
Speaking	Point to and tell about the life cycle of a chicken using illustrations from vocabulary table	Describe life cycle stages of a chicken using illustrated vocabulary table with a partner	Retell life cycle stages of a chicken in order using illustrated vocabulary table with a partner	Tell life cycle stages and tell a detail about each stage of life cycle of a chicken using illustrated vocabulary table with a partner	Explain in detail the life cycle of a chicken using technical words and using illustrated vocabulary table with a partner
Listening	Observe a partner and duplicate actions and simple oral commands to dissect a chicken egg with a partner	Follow simple oral directions to dissect a chicken egg with a partner with a partner	Follow oral directions to dissect a chicken egg with a partner	Follow detailed oral directions to dissect a chicken egg with a partner	Follow complex oral directions from instructor and partner to dissect a chicken egg with a partner

6. The following is an on-going activity-about 21 days. Show students incubator and eggs that are ready to hatch. Guest speaker will tell about incubator and hatching of chicks.

- Allow students to watch and complete calendar journal daily activity with the eggs until they hatch into chicks (takes about 21 days). They will need time each day to look at the eggs and journal each day. (see appendix for calendar chick journal)
- 7. After they hatch, have students write detailed sentences describing each stage in the egg shaped journal as they see the chicks hatch. Use transition words (first, next, then, last) (see appendix for Egg shaped book journal). For ELLs, you may instead want to complete life cycle journal that already explains cycle. It requires students to illustrate only.

	Level 1 Entering	Level 2 Emerging	Level 3	Level 4 Expanding	Level 5 Bridging
			Developing		
Writing	List life cycle words in chick journal (egg, hatchling, chick, adult) and draw a picture of each stage with a partner	Produce simple sentences in journal about the life cycle stages of a frog using illustrated mini book with a	Describe the life cycle stages of a chicken in sentences in journal using illustrated mini book with a partner	Describe in detail the life cycle stages of a chicken in sentences using illustrated mini book and with a partner	Reproduce stories about the life cycle stages of a chicken using illustrated mini book and in small group or partner
		partner			

- 8. After they hatch, students will use Egg shaped book journal to write about the life cycle of a chicken experience. ELLs will work with a partner or small group.
  - \*\*Explain to students that they will take a Life Cycle test tomorrow. Use vocabulary cards, models, mini-books, and journals as a study guide.

Rubric for Models & Journals									
	Circle Specific Animal: Butterfly Frog Chicken								
	Little to no Progress 1	Progressing 2	Meets 3						
Order of Life Cycle Stages	Students demonstrates knowledge of the life cycle but is missing some steps in the order	Student demostrates a knowledge that animals have a life cycle that includes specific stages; (i.e. egg, adult) and some of the steps are in the correct order	Student demostrates a knowledge that animals have a life cycle that includes the specific stages; in the correct order						
Description of Life Cycle Stages	Student demostrates a knowledge that animals have a life cycle that includes stages; but does not include any details	Student demostrates a knowledge that salmon have a life cycle that includes stages; by describing the stages with some details	Student demostrates a knowledge that salmon have a life cycle that includes stages; by describing the stage with complete and vivid details						
Application Use knowledge to write or orally tell about life cycle stages	The student wrote / spoke sentences with many errors that interfere with meaning	The student wrote / spoke sentences with several errors that interfere with meaning	The student wrote / spoke sentences with few errors that interfere with meaning						

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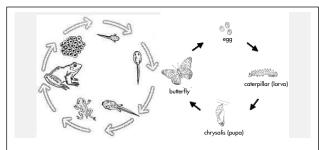
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#### **Appendix**



1. Birth 2.

2. Growth

3. Reproduce

4.Death

## Life Cycle

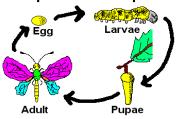
The stages of change that an organism goes through during its life.

All living things go through the stages of the life cycle, even if they go through them in different ways.



Organism a living thing

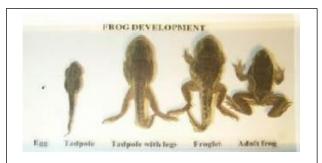
#### **Complete Metamorphosis**



# <u>Metamorphosis</u>

an animal's change from one shape to a totally different shape

Some animals & insects go through the life cycle & don't look the same at the beginning of their life & as adults.



### Develop

to grow or reach the next stage in a life cycle



Reproduction—the process by which organisms generate others of the same kind.



Frog eggs

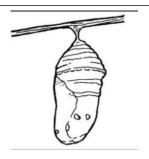
Butterfly eggs

Chicken eggs

### <u>Egg</u>

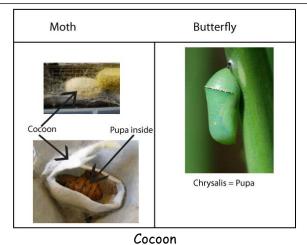
# the beginning stage in the life cycle of many organisms

A frog, butterfly, & chicken begin life as an egg.

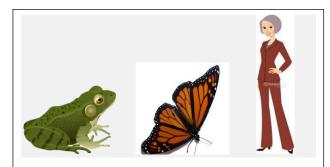


### Pupa

a life cycle stage where a butterfly changes from a larva to an adult. In this stage, it forms a hard outer covering called a chrysalis.

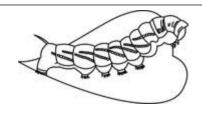


silky case in which some insects live during the pupa stage



# Adult the stage in which an organism is fully developed

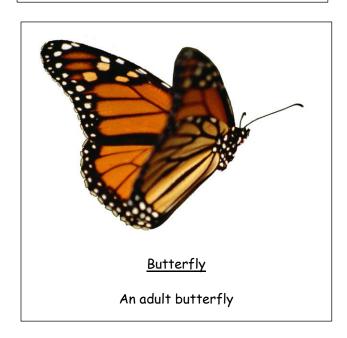
An adult will continue the cycle and reproduce.

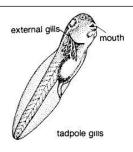


#### <u>Larva</u>

# the caterpillar stage in the life cycle of a butterfly

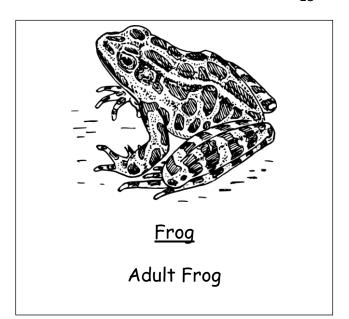
The larva (caterpillar) hatches from an egg and eats leaves or flowers almost constantly. The caterpillar molts (loses its old skin) many times as it grows.





<u>Gills</u>

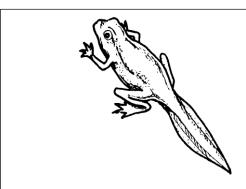
the area near the head of a fish or water animal used for breathing





**Tadpole** 

the stage in which a young frog looks like a fish and lives only in water



Froglet

a small frog that is changing from a tadpole to an adult

Chick



The baby chicken.



Hen

Female

Adult



Rooster

Male

Adult

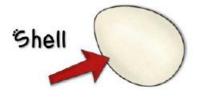




Warming the eggs.



The place the hen makes for her eggs using twigs, feathers, bits of hay & leaves.



The hard outer protective covering of an egg.



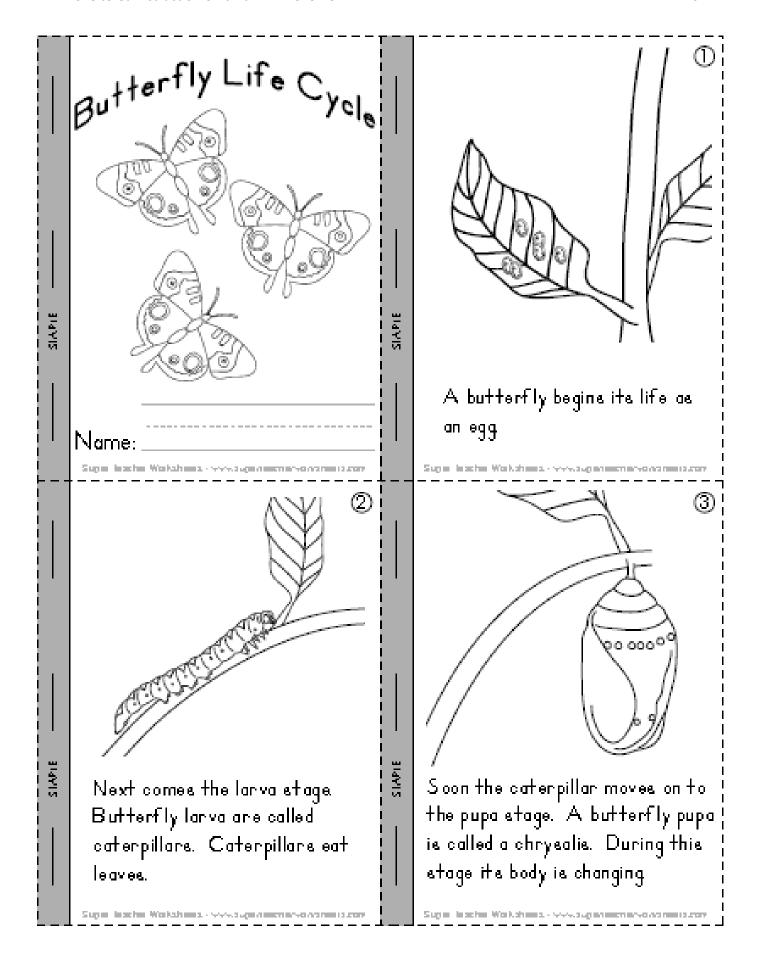
A chicken in the early stages of growth (tiny white spot on yolk that will grow into the chick)

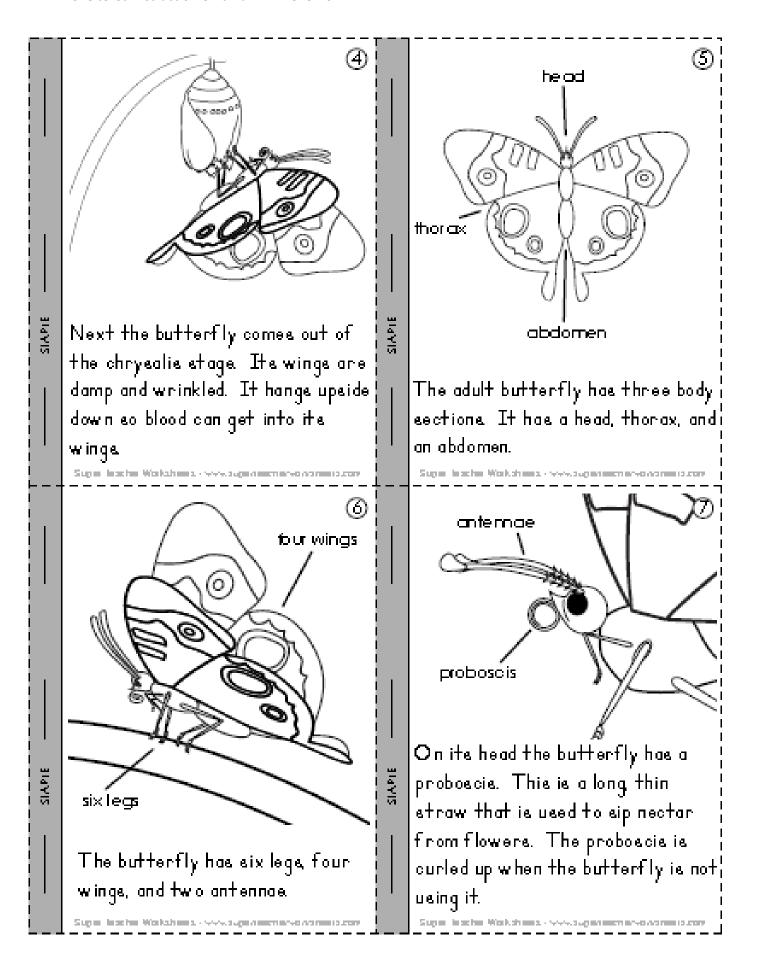


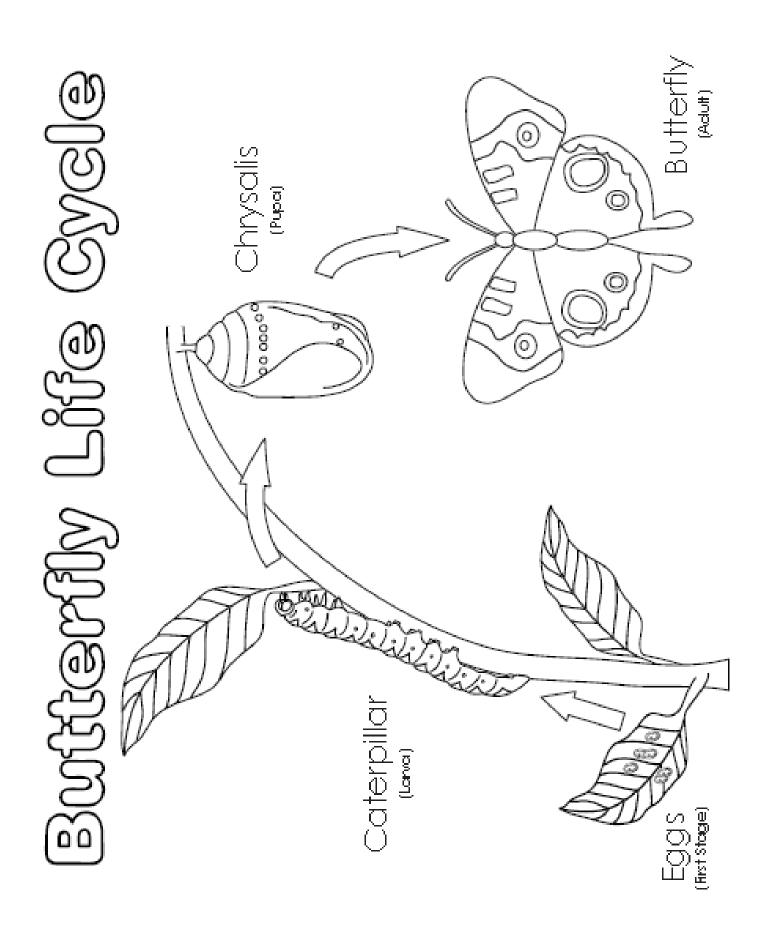
The yellow part of the egg that contains food for the embryo



A young chick that has just hatched from its egg.

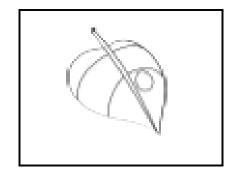




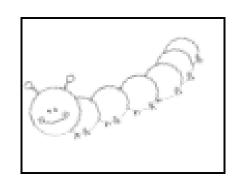


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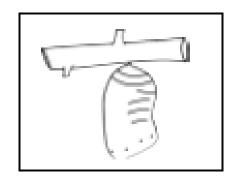
# Life Cycle of a Butterfly



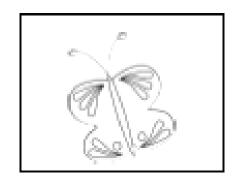
First,			



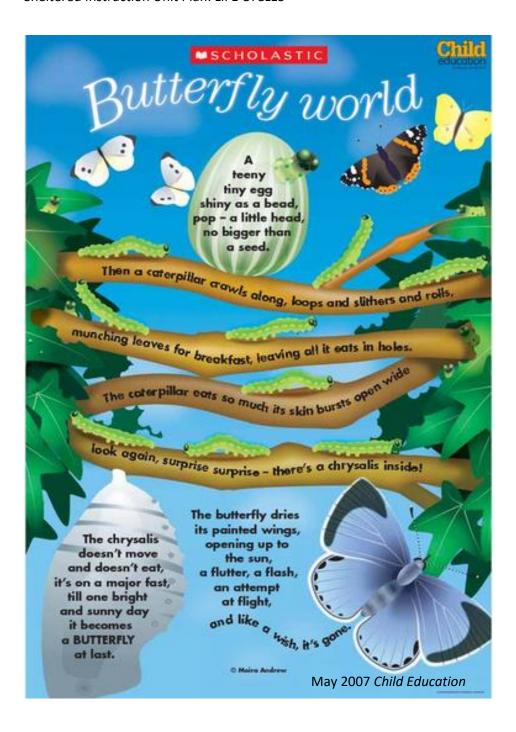
Next,			



Then_		



Last,			



#### **Butterfly Life Cycle Model**



Divide your paper plate into four equal sections using a black marker. Write each life cycle stage in the step in the sure you put them in order.



Cut two leaves out of green construction paper. Use crayons to draw lines on the leaves to make them look real.



Glue several rice grains onto one leaf. Glue two elbow macaroni onto the other leaf.



Glue the leaf with rice onto the eggs section. Using crayons color the background green and add a stem to the leaf.



Using crayons, draw a caterpillar, grass, and background in the larva section.



In the pupa section, color the background green. Glue the leaf with macaroni onto the plate and draw a stem.



Color your butterfly template. Make sure to color it symmetrically. Then, cut it out.



Color the background of the adult section blue. Glue the butterfly on. To make it look really nice, color any white around the butterfly with the same background

**EGG** 

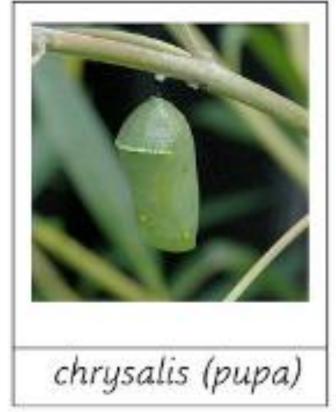
**LARVA** 

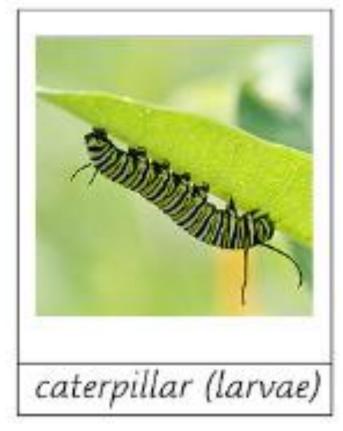
**PUPA** 

**ADULT** 

Enlarge and print in color on card stock. Cut out. Glue a magnet on back of each card. Use as magnet demonstration cards.



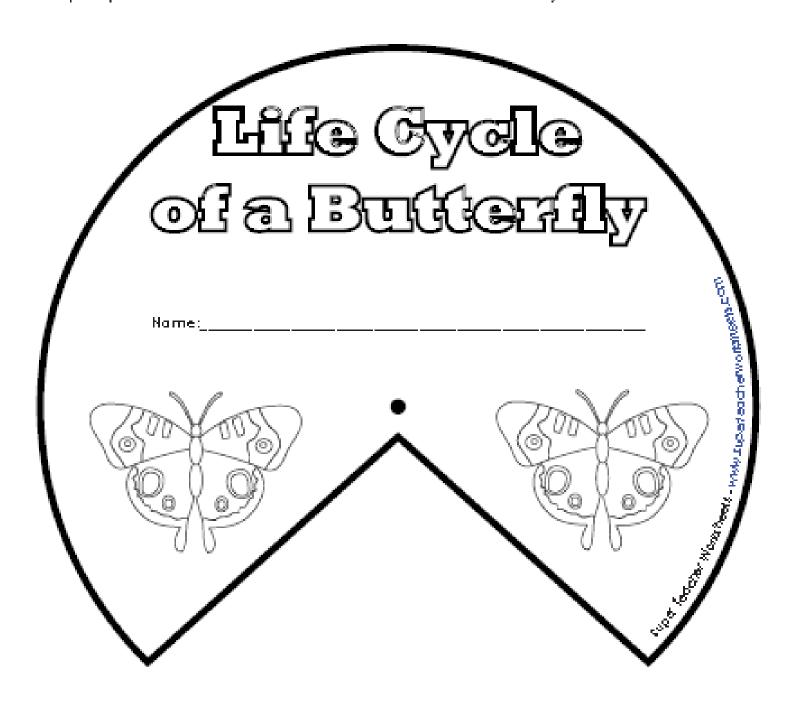


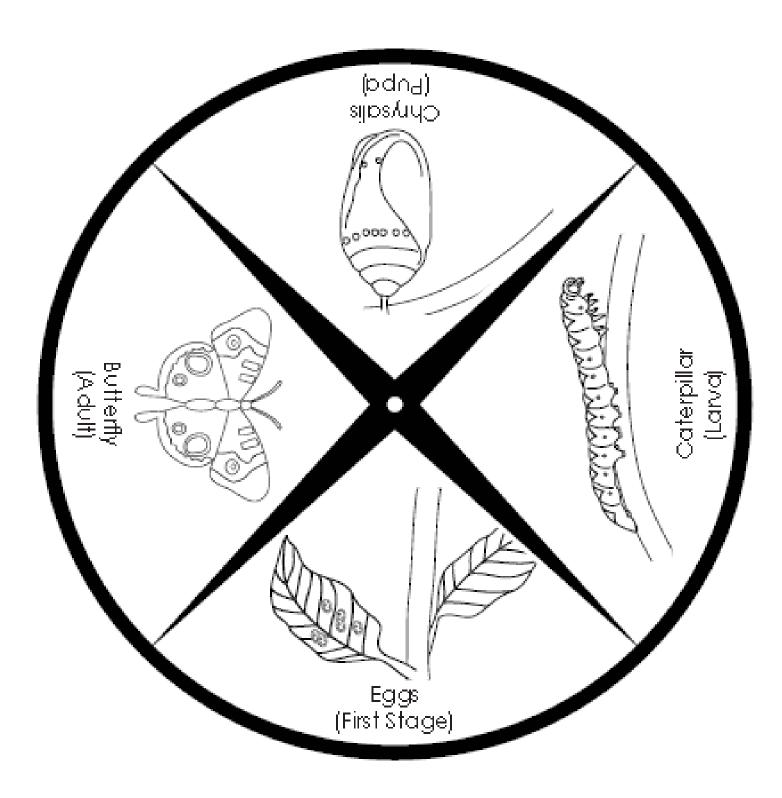


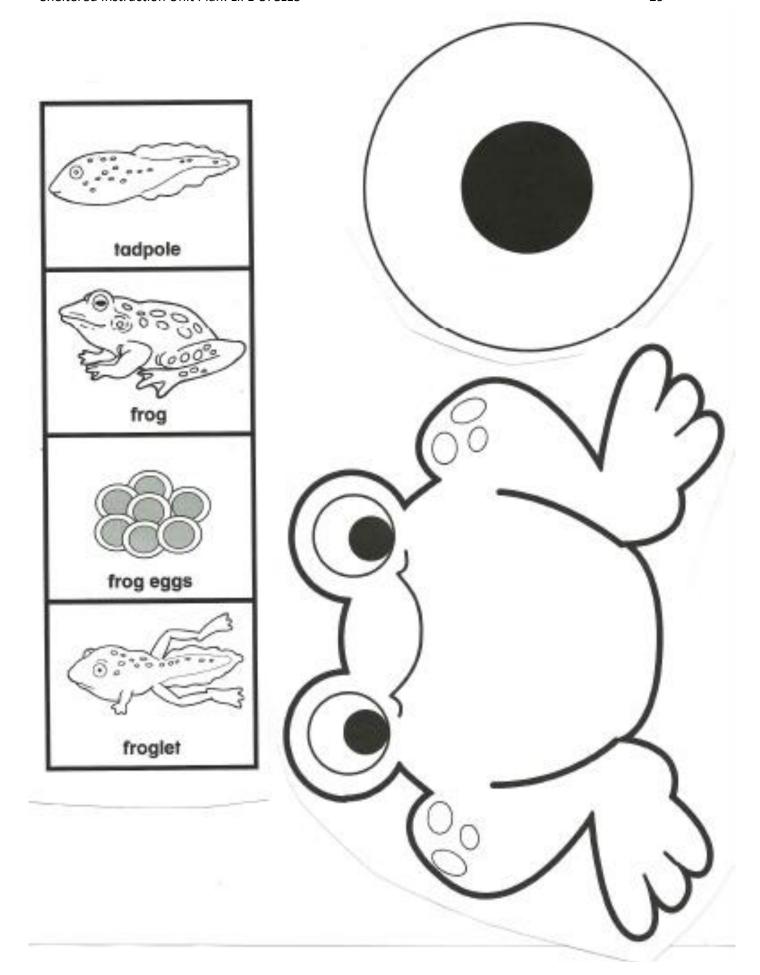


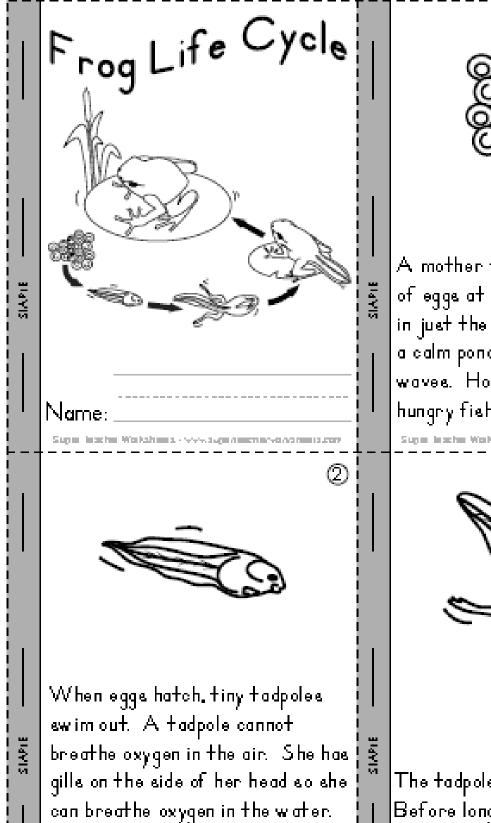
# Life Cycle of a Butterfly Wheel

- Step 1: Print the Life Cycle Vuheel on card stock.
- Step 2: Color the front and back wheels.
- Step 3: Attach the front to the back with a brasspaper fastener.
- Step 4: Spin the wheel in the direction of the arrow to follow the life cycle.









She looks like a fish, but she's not

really a fish. She's an amphibian

A mother frog can lay thousands
of eggs at a time. She lays them
in just the right place. She needs
a calm pond or lake without many
waves. Hopefully there aren't any
hungry fish that will eat her eggs.

Sugar, Inschol Workshame, Averaging an earn area or many access



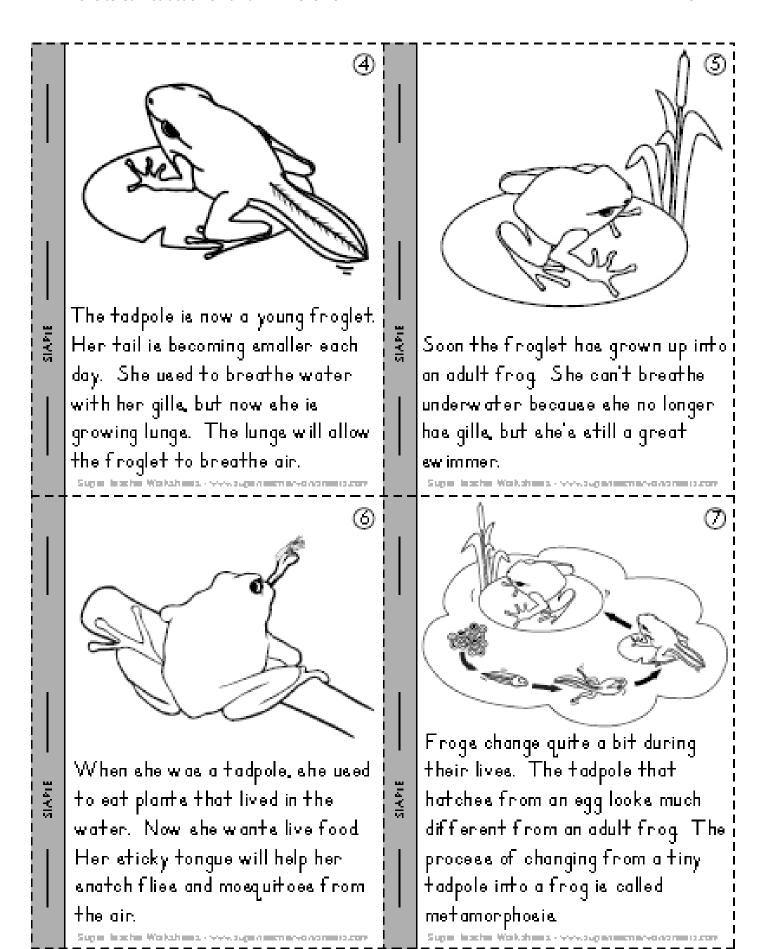
The tadpole grows and grows.

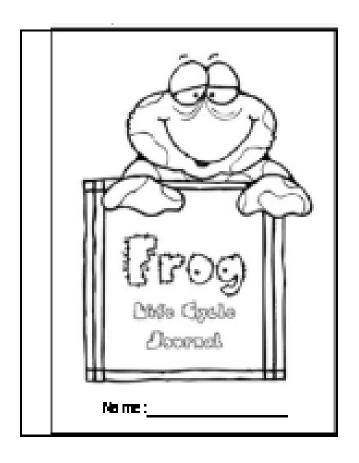
Before long, she begins to change.

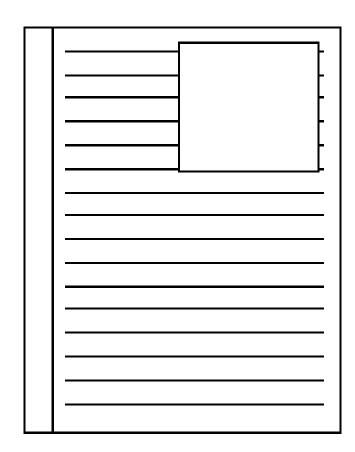
She grows two long back legs. Then

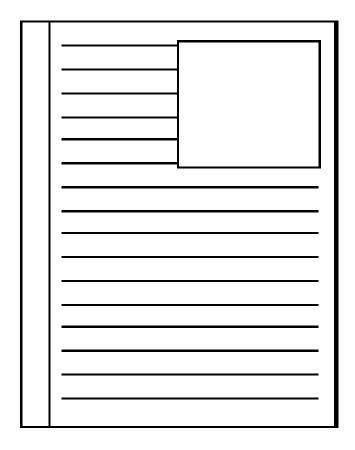
tiny front legs appear.

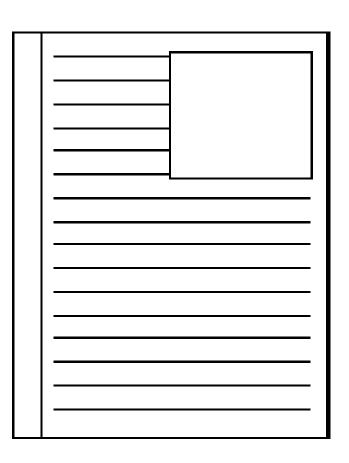
Sugar In action. Workshound - weeks agree men neve no municipative



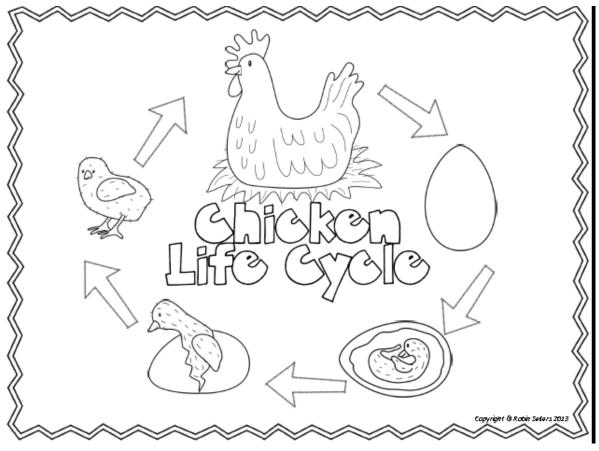












# Chicken Life Cycle 3-D Craft

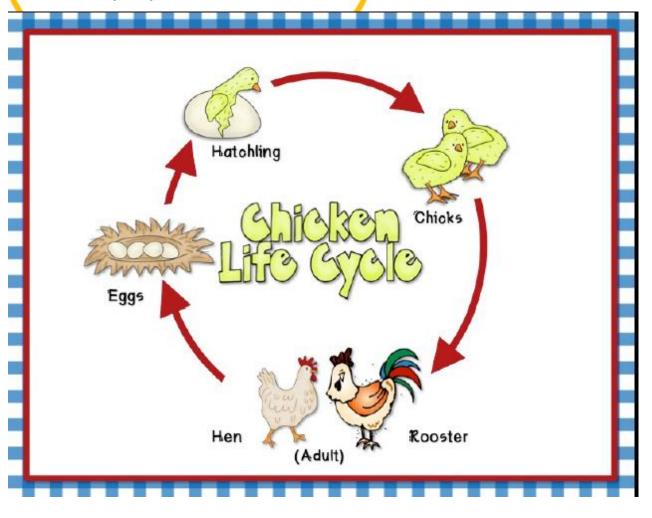
Use the following pages to make a life cycle craft with your students. Print the eggs on any color of cardstock paper. Each student will need one set of eggs I-5. Cut these out if your students are unable to cut them on their own.

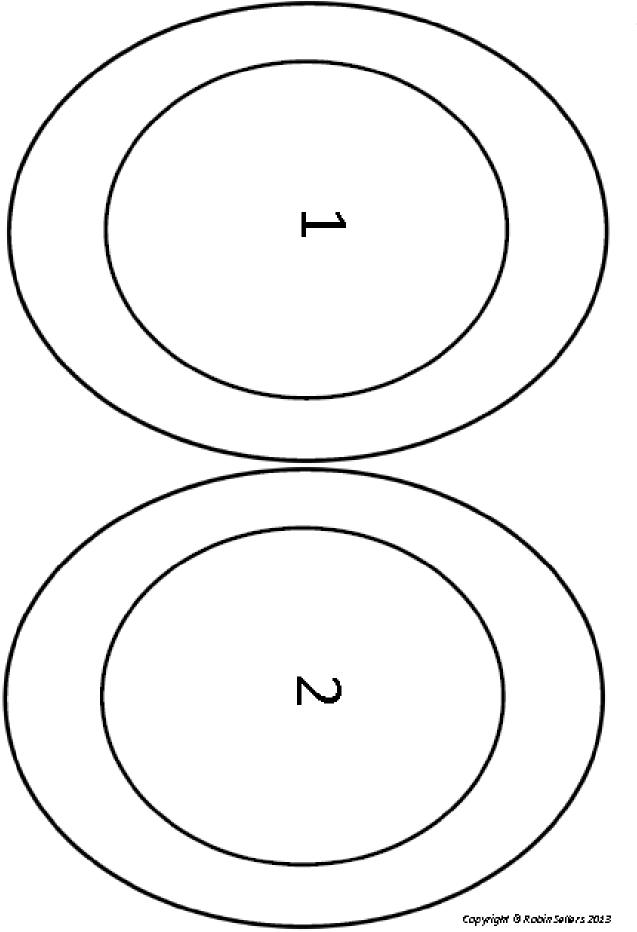
Your students will then color in each stage of the life cycle. Then they will cut out the ovals and place them in order from chicken nesting, egg, egg with chicken growing inside, hatching chicken, and baby chicken. They can begin with any stage in the cycle and add their own labels using their own description if needed.

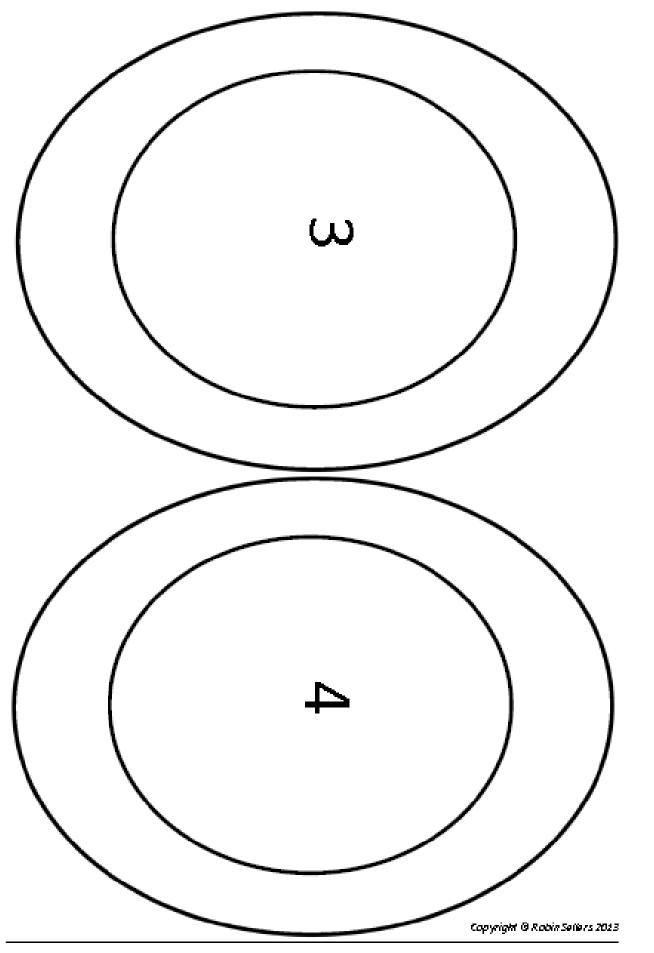
They will glue them to the egg patterns. Then fold each egg in half vertically and glue, staple, or tape the backs together to form a 3-D egg. Have dothespins handy to hold the cards together or you can also tape the pieces together.

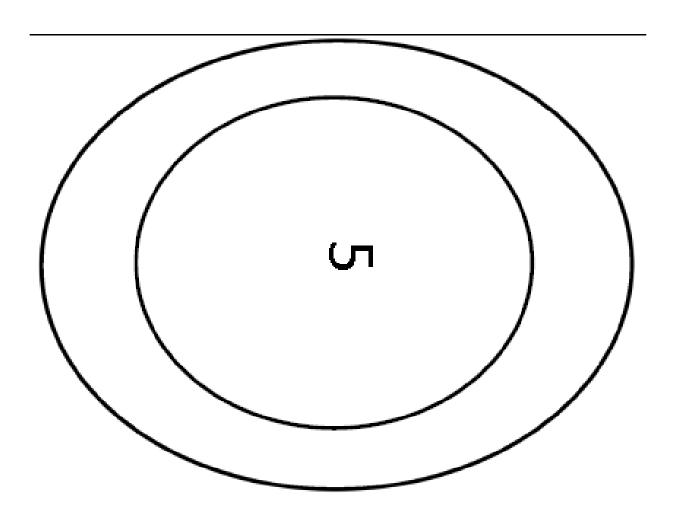
This egg is meant to hang, so add a string to the top to display your So Sweet Craft. When it turns, you see how the cycle repeats.

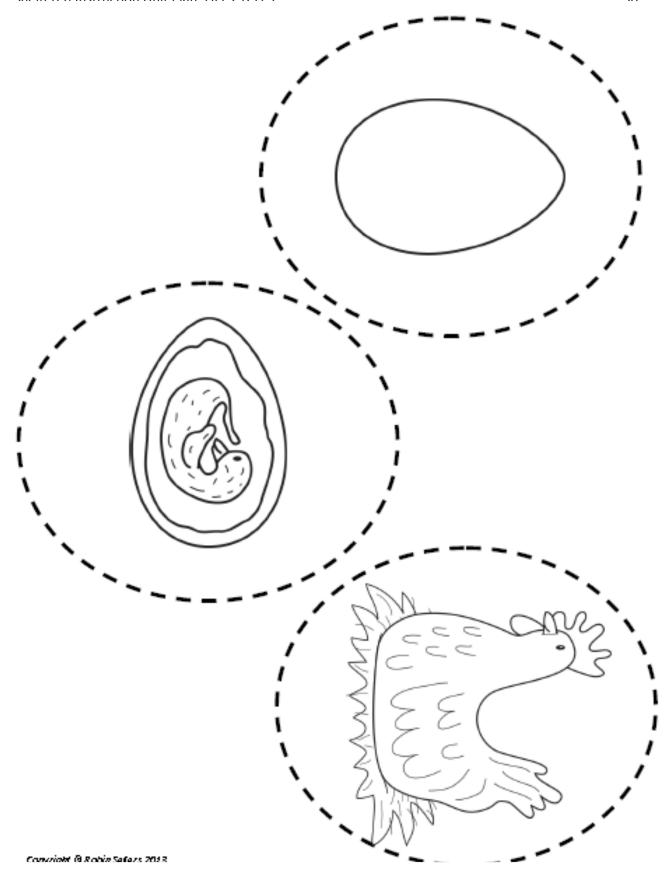


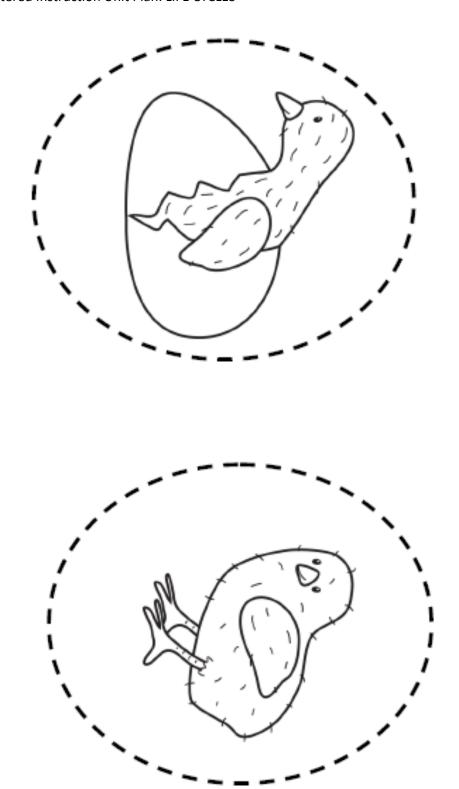












000000000000000000000000000000000000000	Misconceptions	00000000	What I Know What I Wonder About No.	All About Chickens	
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# the life cycle of a chicken In Muthate-Your -Dum must-book

## Illustrated By:\_

## lage o

Even though the egg appears to be doing nothing for 21 days, lots of action is happening inside! Each day, the growing embryo slowly develops into a chick. Un day 1, the chicks brain, heart and veins begin to develop.

#### 7 stry

Did you ever wonder wrich came first, the cricken or the egg? All crickens start as an egg. A fertile egg is laid by a nen. I nen, a nen or an incubator must keep the egg warm for 21 days until a crick has fully developed inside.

## Tage 1

On day 2, the neart begins to beat. On day 10, the egg tooth is formed and the embryo begins to move. By day 13, the embryo is covered in feathers. By day 20, the embryo may pip, or break through the shell.

### 200

Ine little chick inside begins working to peck at the shell, gradually making a larger hole. Once the chick is completely out, he has to stay warm until he is dry and his down is fluffy. Chicks don't need to eat or drink for up to 3 days because of the nutrients from the yolk.

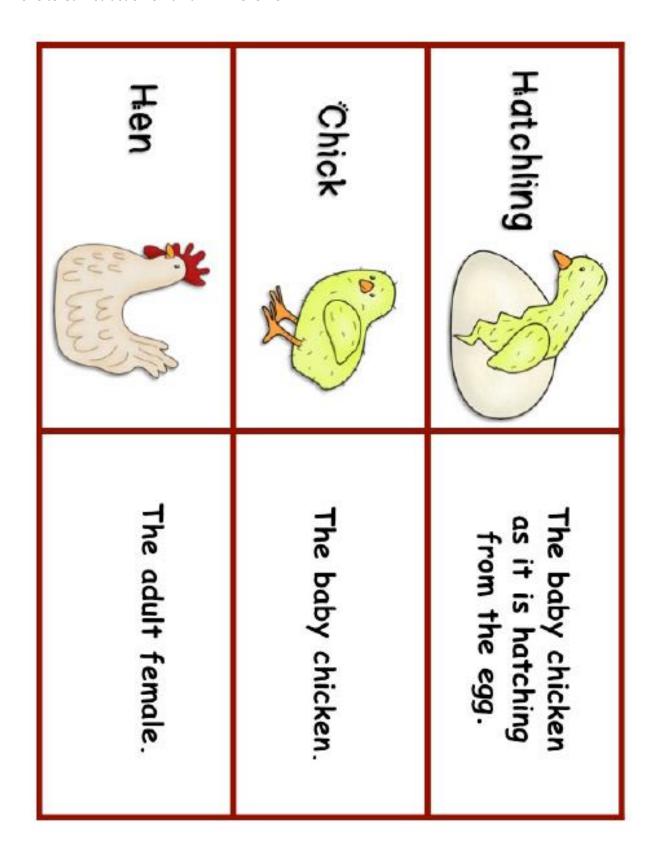
Gradually, the chicks lose their down and their feathers grow in. They begin to look like their parents. By the time the chicks are five or six months old, they will begin laying eggs if they are females, or pullets. If they are males, they are called cockerels.

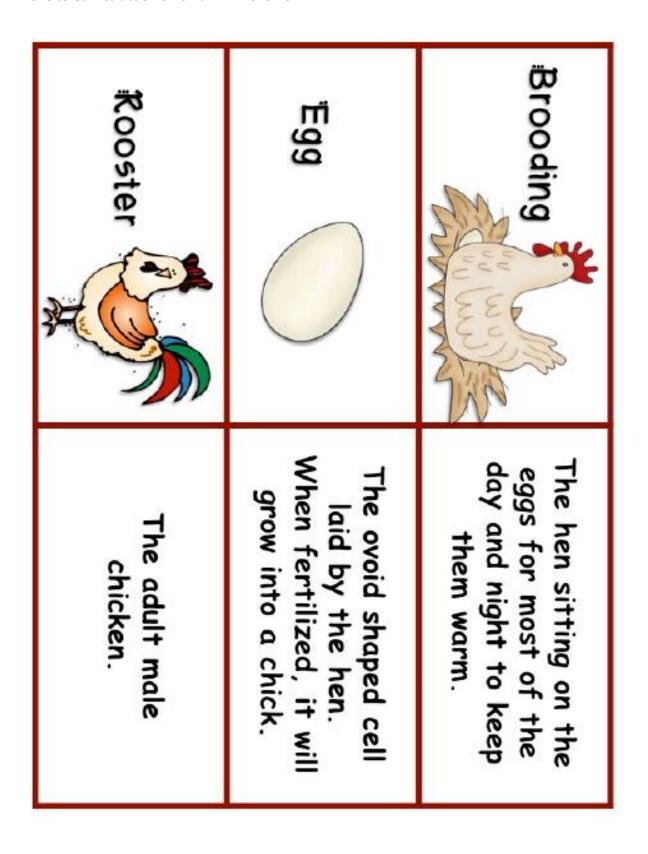
d nen or rooster, too!

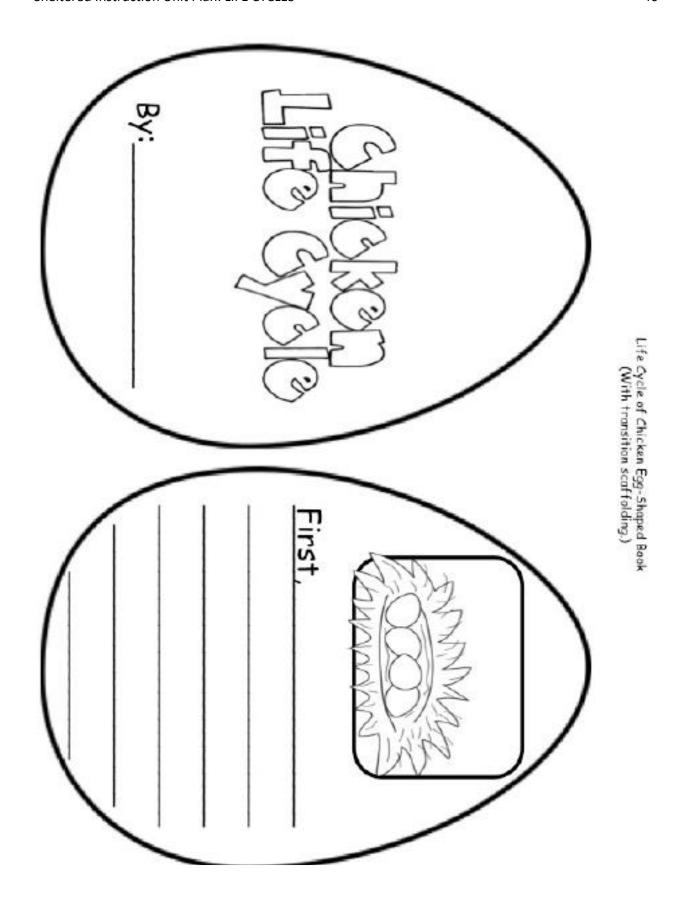
The chick will begin eating and drinking. Chicks are very curious and like to explore the world around them. They like shiny, reflective materials like mirrors and like to chase bugs! Chicks must be kept warm, either from a nem or a special light. If they are warm, they will spread out. If chicks are cold, they will huddle together to maintain the correct temperature.

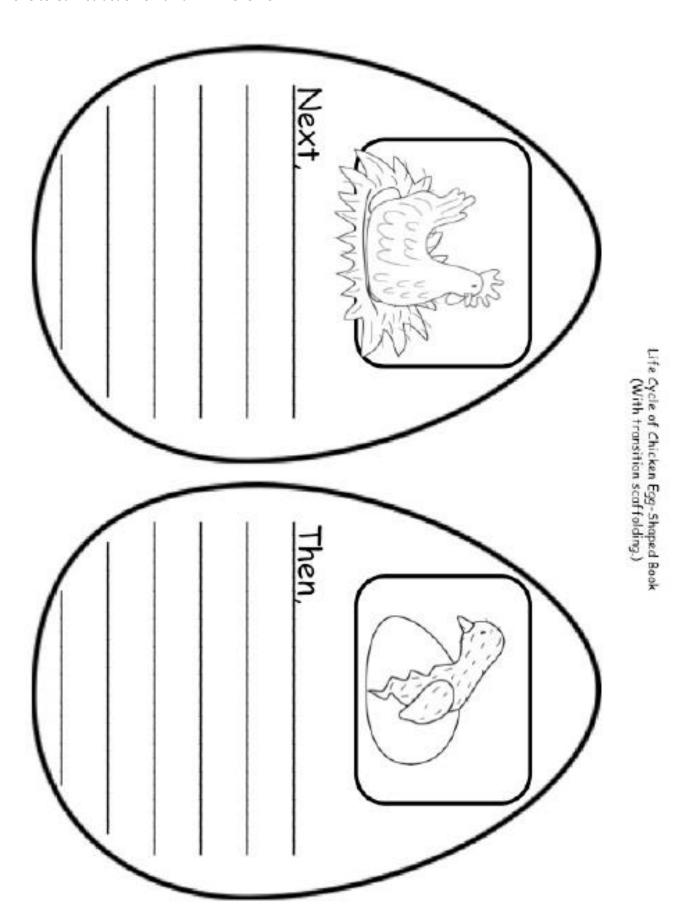
Soon the story begins again! The pullets, or hens, lay eggs that nave been fertilized by the cockerels, or roosters. In 21 days, another fluffy little chick will hatch and begin to grow up to become

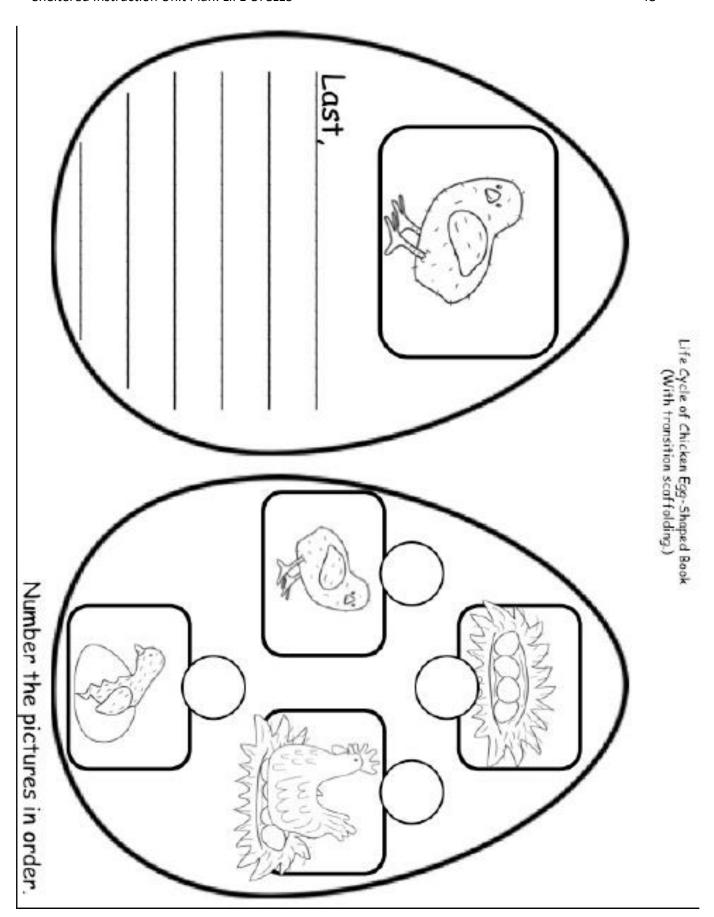
500000		00000	Word	
The adult female.	The baby chicken.	The baby chicken as it is hatching form the egg.	Definition	Chicken *Ocabulary
			Picture Clue	pood Chi
			Word	ary o
The adult male chicken.	The avoid shaped cell lad by the hen. When fertilized, it will grow into a chick.	The hen sitting on the eggs for most of the day and night to keep them warm.	Definition	000000
			Picture Clue	

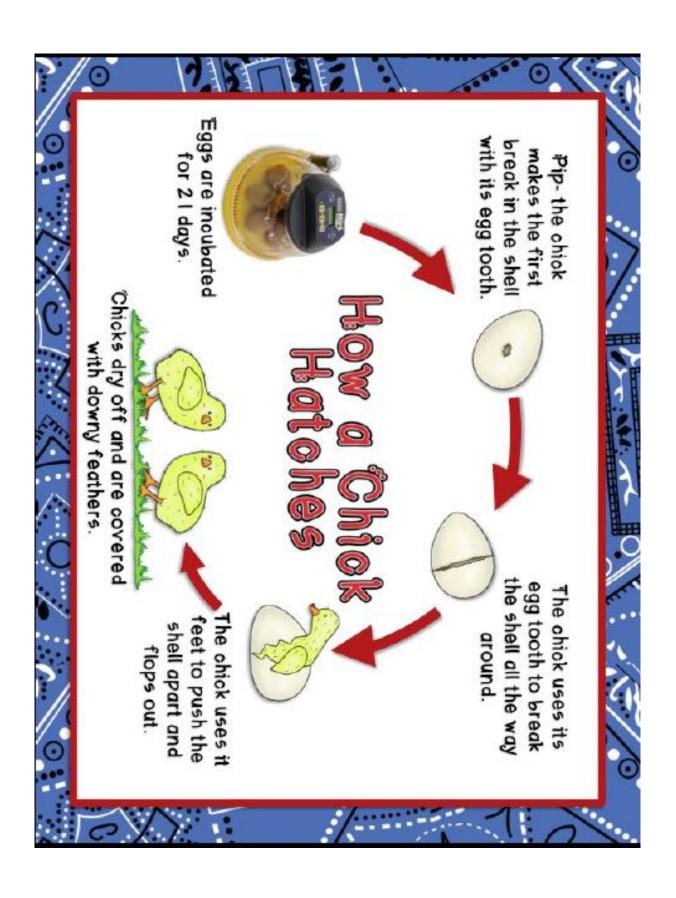


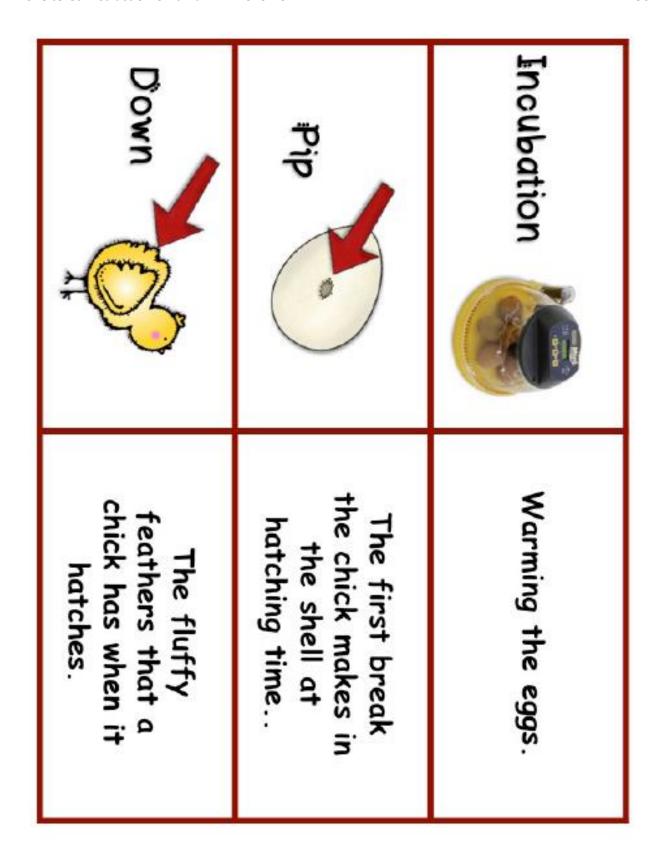


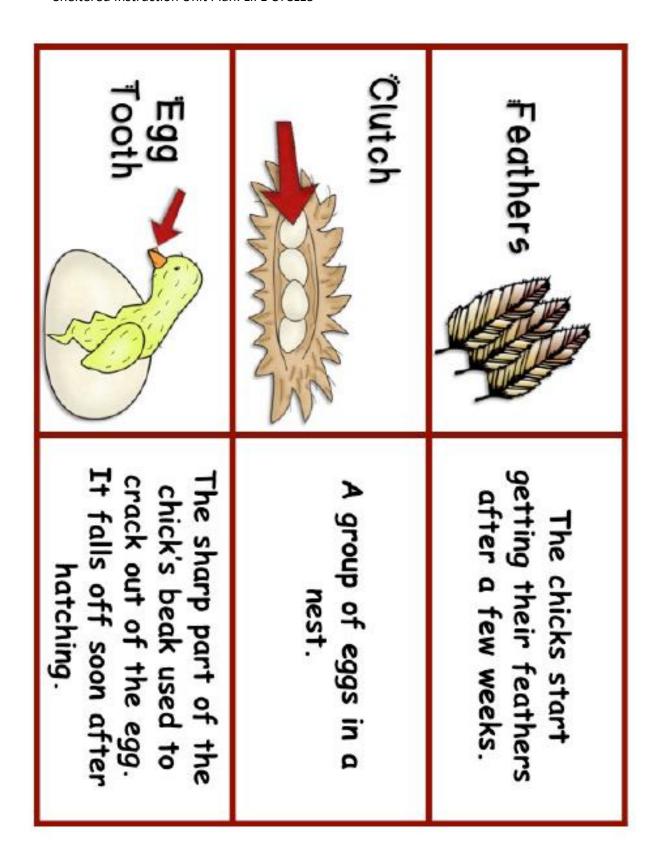


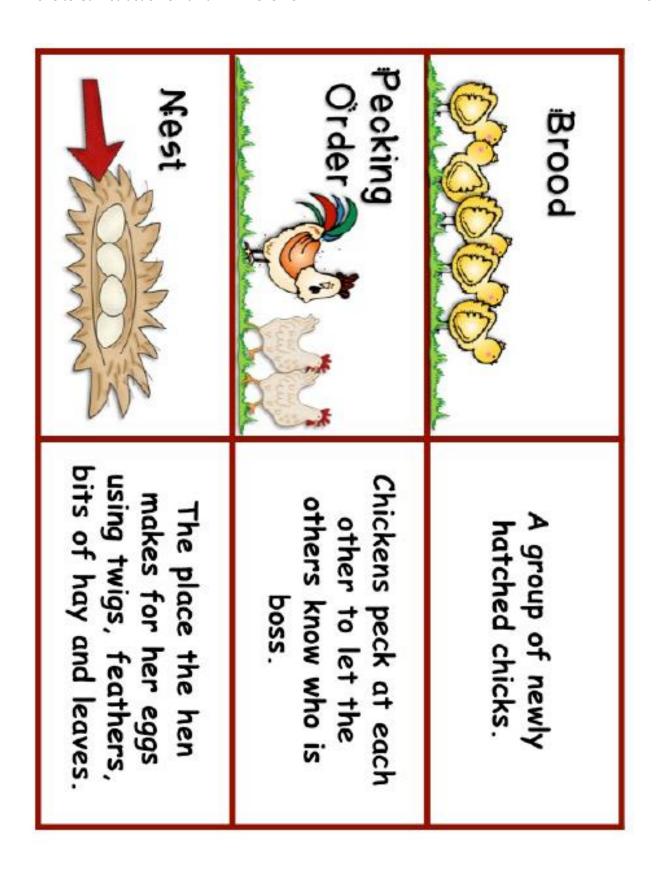


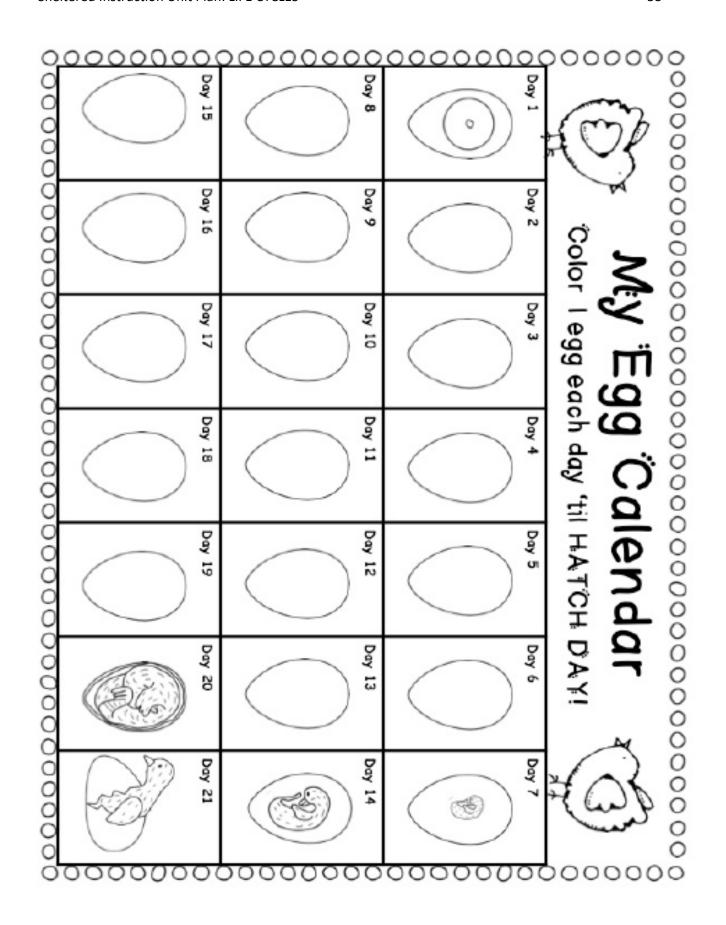


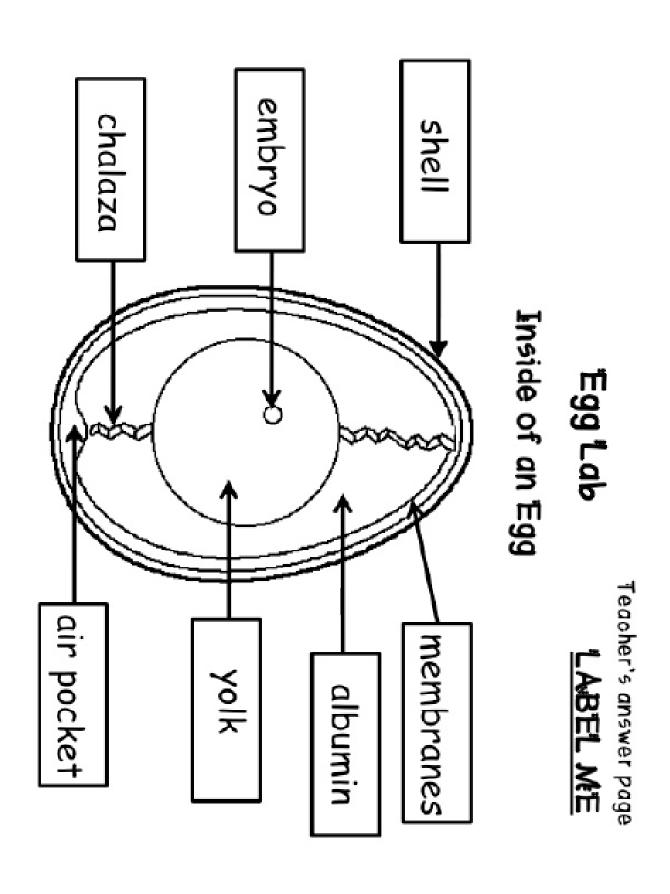


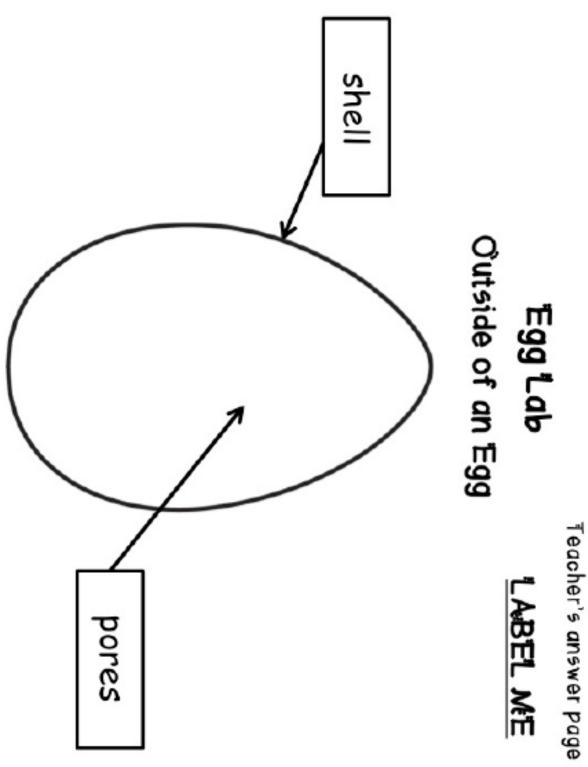












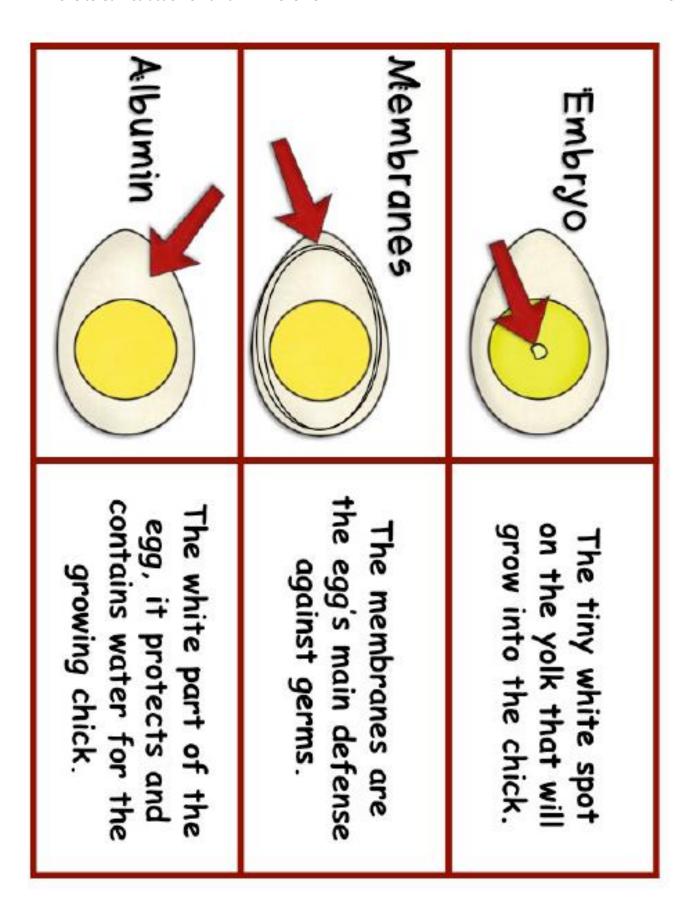
Shell

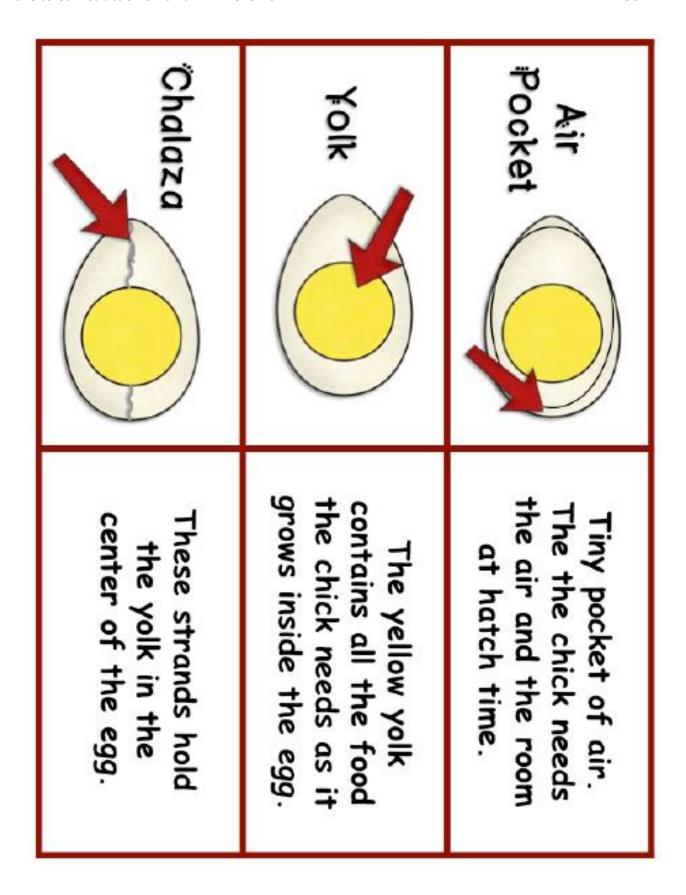


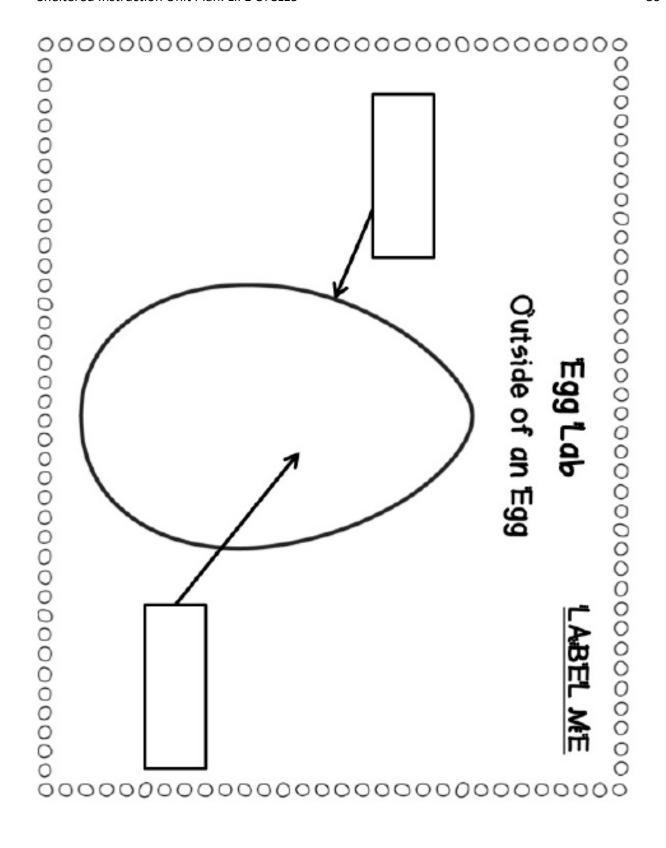
Pores

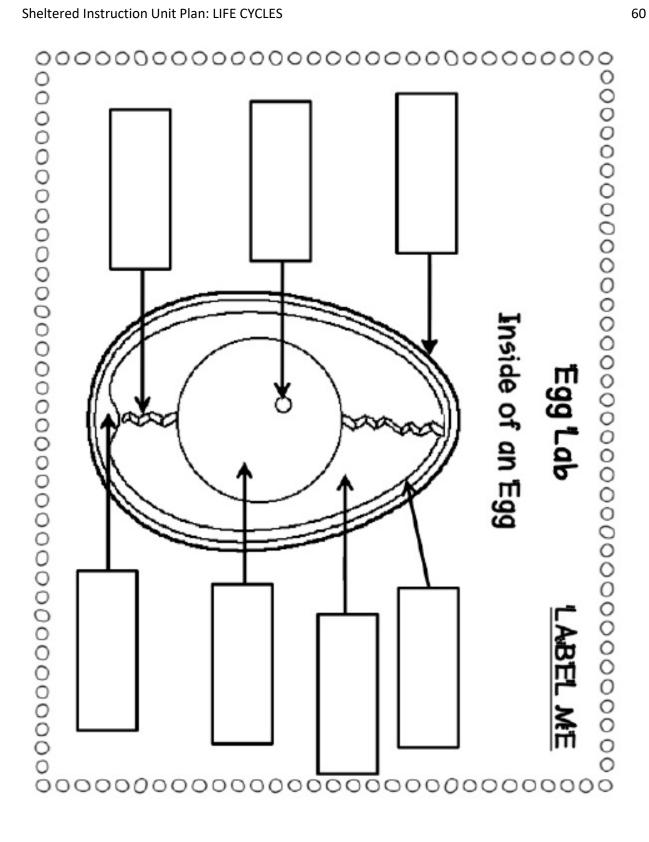
of the egg made up largely of calcium. It he hard outer surface oxygen to enter the protects the growing egg, and carbon dioxide to get out Tiny holes for

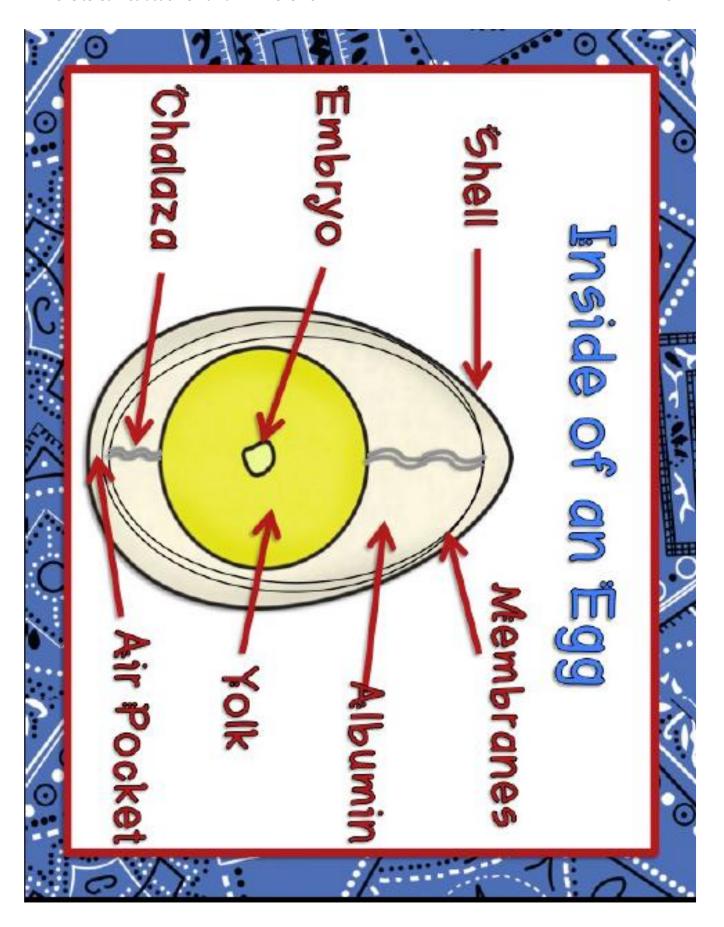
chick.

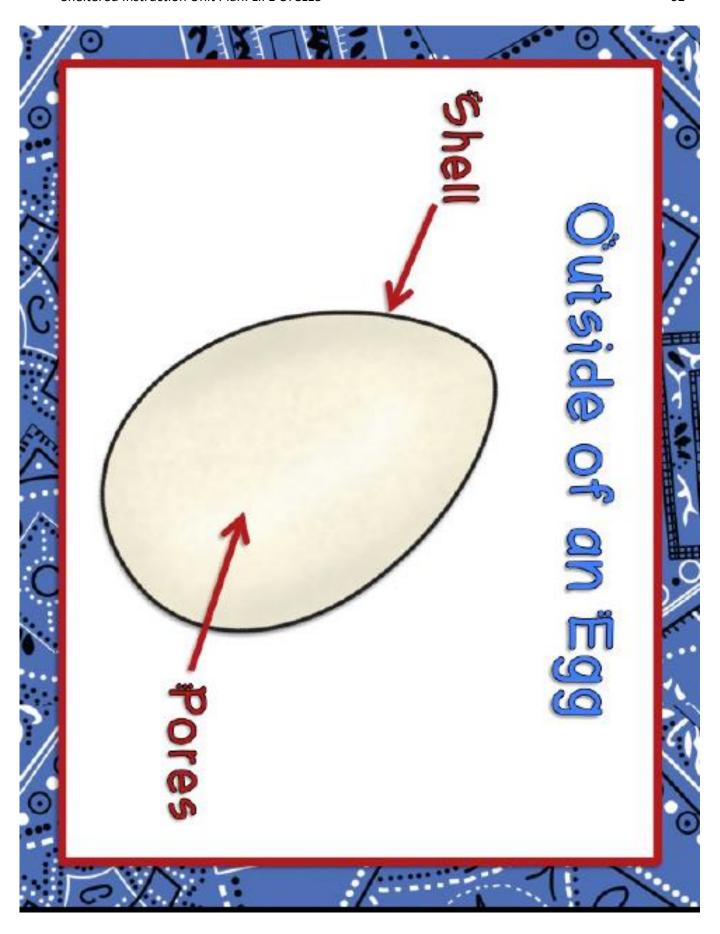








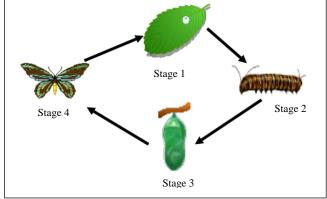




Name	# Date_	
	Life Criste Due/Deet Teet	
	Life Cycle Pre/Post Test	
	Teacher must read all questions and answers aloud to students.	

Multiple Choice Directions: Circle the answer to the question.

- 1. What is another name for a butterfly larva?
  - a. Pupa
- b. Caterpillar
- c. Insect
- 2. Look at the picture of the butterfly's life cycle. What do we call Stage 1?
  - a. Larva
  - b. Egg
  - c. Chrysalis



- 3. How does a hen care for eggs in the nest?
  - a. by cracking them open
- b. by cleaning them
- c. by keeping them warm
- 4. Which animal has a larva stage in its life cycle in which the larvae live in water and breathe through gills?
  - a. butterfly
- b. chicken
- c. frog
- 5. In what stage of the frog life cycle does it live mostly on land?
  - a. Tadpole
- b. Adult frog
- c. Egg
- 6. Which animal goes through metamorphosis after it is born?
  - a. Cat
- b. Butterfly
- c. Dog
- 7. Identify the order of the stages in the butterfly life cycle.
  - a. larva, butterfly, chrysalis, egg
  - b. chrysalis, egg, butterfly, larva
  - c. egg, larva, chrysalis, butterfly
- 8. Where do adult frogs lay eggs?
  - a. In a hole
- b. In the water
- c. In the tree

9. Which of these stages is a tadpole?





b



c.



Directions: Use the words from the box to fill in the blanks. Use each word only one time.

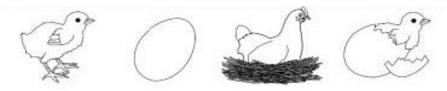
gills organism shell life cycle develop

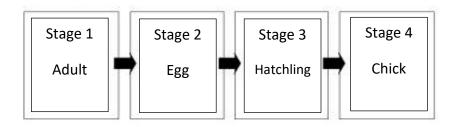
- 10. A tadpole breathes by using \_\_\_\_\_\_.
- 11. The hard outer protective coving of the egg is called the \_\_\_\_\_\_.
- 12. To grow or reach the next stage in a life cycle is called\_\_\_\_\_\_.
- 13. A living thing is called an \_\_\_\_\_.
- 14. The stages of change that an organism goes through during its life is called a

\_\_\_\_\_.

Directions: Draw a line from the picture to the correct life cycle stage.

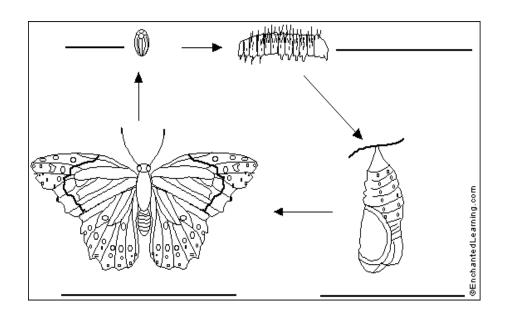
15.





16. Directions: Label the stage of the butterfly life cycle with its picture by writing the name of the stage beside its picture. Use the words from the word box.





Directions: Circle true if the statement is correct. Circle false if the statement is incorrect.

17. Metamorphosis is when an animal resembles its parents when it is born.

True False

18. Every living thing will go through a life cycle.

True False

19. The life cycle order of events is: birth, reproduction, growth, death

True False

20. To reproduce, most living things need to have a part from an adult male and a part from an adult female.

True False