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DepED
DEPARTMENT OF EDUCATION

Lesson Exemplar for Science

Quarter 2
Lesson
6

Lesson Exemplar for Science 4
Quarter 2: Lesson 6 (Week 6)
S.Y. 2024-2025

Development Team

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SCIENCE (BIOLOGY) / QUARTER 2 / GRADE 4

I. CURRICULUM CONTENT, STANDARDS, AND LESSON COMPETENCIES	
A. Content Standards	Learners learnt that animals have life cycles that include development and reproduction.
B. Performance Standards	By the end of the Quarter, learners identify that plants and animals have systems whose function is to keep them alive. They observe, describe, and create representations to show how living things interact with their habitat, survive, and reproduce in specific environments. They use flowcharts to show the feeding relationship among different organisms within a given environment
C. Learning Competencies and Objectives	*The learners* use flow charts to compare the different stages in the life cycle of animals, such as a butterfly, frog, chicken, and human; *Lesson Objectives:* • Describe the different stages in life cycle of butterfly. • Describe the different stages in life cycle of frog • Describe the different stages in life cycle of chicken. • Describe the different stages in life cycle of human.
C. Content	Life Cycles of Animals *a.* Life cycle of butterfly *b.* Life cycle of frog *c.* Life cycle of chicken *d.* Life cycle of human
D. Integration	Preservation and continuity of life

II. LEARNING RESOURCES
• Delos Reyes Jr, R. L., Balabat, F. P., Quicho, K. L., & Rex Book Store. (2023). Science Links: Worktext for Scientific and Technological Literacy (Revised Edition). Rex Book Store. pp. 194-201. • Department of Education. (2019). National Science Textbook, Grade 4, First Edition (pp. 105-118). Papua New Guinea. • Department of Education. (2019). Science Teacher Manual, Grade 4, First Edition (pp. 102-115). Papua New Guinea. • Department of Education. (Year). MATATAG Curriculum in Science. DepEd Complex, Meralco Avenue, Pasig City, Philippines. • Human Life Cycle. (n.d.). K8 School Lessons. Retrieved October 18, 2023, from https://k8schoollessons.com/human-life-cycle/ • Let's Talk Science. (2019, September 5). Animal Life Cycles. https://letstalkscience.ca/educational-resources/lessons/animal-life-cycles • Republic of the Philippines. (2013). Enhanced Basic Education Act of 2013. Retrieved from https://www.officialgazette.gov.ph/2013/05/15/republic-act-no-10533/

III. TEACHING AND LEARNING PROCEDURE		**NOTES TO TEACHERS**
A. Activating Prior Knowledge	**Day 1** **Short Review** • Begin the class with what students learned about different habitats, their unique characteristics and examples of animals and plants found in these habitats, and their importance. • Provide pictures, illustrations and video clips of plants and animals found in different habitats such as terrestrial, aquatic, and aerial including gardens, rice field, seashores and mangroves. • Let students share the ecological significance of gardens, rice field, seashores and mangroves to human beings in terms of source food source, livelihood, medicine and maintaining biodiversity.	

B. Establishing Lesson Purpose	**Lesson Purpose** • Begin by sharing that Science uses a diverse system to categorize or classify all the organisms (animals and plants) on our planet, including people. Animals are classified based on their unique characteristics and on process they reproduce or how their babies are born. Some are born like us, and others are hatched from eggs like fish and birds. Understanding the life cycles of animals are important because it helps us learn about the different ways animals live, grow, and reproduce. Animals have to reproduce to preserve and perpetuate their species. **Unlocking Content Area Vocabulary** • Introduce new vocabulary words that are related to life cycle: reproduce, perpetuate, birth to death, born alive, lay eggs, metamorphosis, larvae, adult, tadpole, baby animal, fetus, adolescent, adult, etc. • Ask learners to make a statement using any of these vocabulary words to show their initial understanding.	
2. Developing and Deepening Understanding	**SUB-TOPIC 1: LIFE CYCLE OF A BUTTERFLY** **Explicitation** • Begin the lesson by asking students what they know about butterflies based on their personal experiences. Ask if they like butterflies and why butterflies are important in the environment. • Show pictures about the different stages in the life cycle of a butterfly. Encourage students to describe each stage and share what they know how the butterfly changes or transforms during its life cycle from egg, larva, pupa to adult. • Discuss the different stages in the life cycle of butterflies focusing on the characteristics of each stage. Highlight how each stage develops and grows into another form, including its physical appearance, where it is mostly found and what food it eats to grow. **Worked Example and Lesson Activity** • Guide the learners to perform **Activity No. 1- The Life Cycle of Butterfly** in the Worksheet.	

- Divide the class into small groups and ask each group to discuss the growth and transformation of a butterfly from egg, larva, pupa to adult.
- Encourage students to explain each stage and how the butterfly changes during its life cycle.
- Emphasize the significance of each stage and its role in the overall life cycle.
- Reinforce the understanding of a butterfly's life cycle and its importance in the broader context of nature

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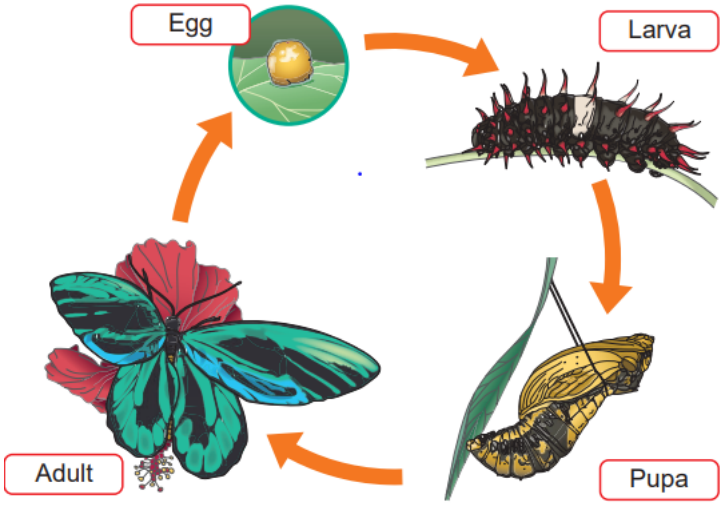
Facts for the Teacher: Butterfly Life Cycle

A butterfly goes through four stages in its life. It all starts with an egg. From that egg hatches a tiny creature called a caterpillar (larvae stage). Caterpillars love to eat plants and they grow quickly. When they're done eating, caterpillars create a case called a chrysalis (pupa stage). Inside the chrysalis, the caterpillar changes into an adult butterfly. Once the transformation is complete, the adult butterfly breaks free from the chrysalis. Now, it can lay eggs and start the life cycle all over again.



Life cycle of a butterfly

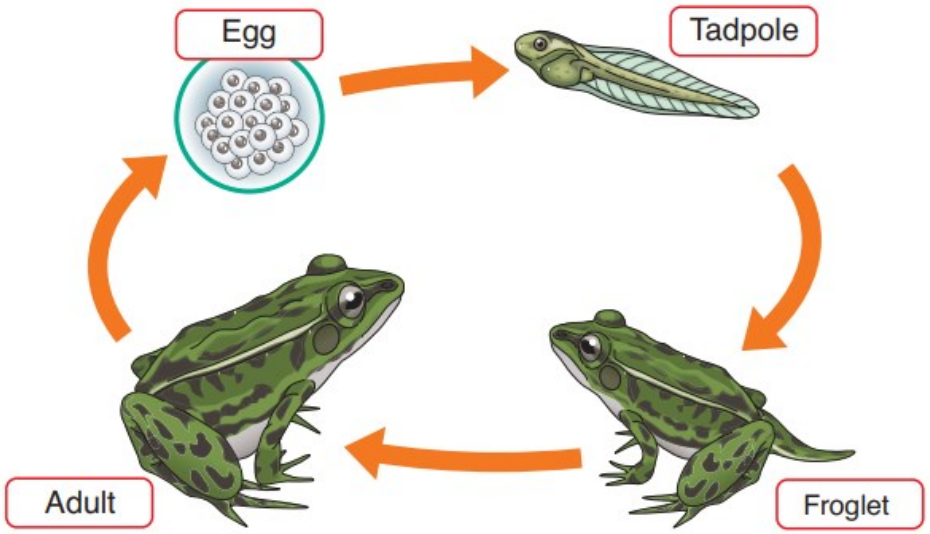
Source: Picture taken from National Science Textbook, Grade 4, First Edition. Papua New Guinea

	Insect Life Cycles: Many insects begin their lives as eggs. When they hatch, they look quite different from their parents and are called pupas. Pupas are inactive, don't have wings, and may not even have legs. As they grow, they start to change shape, which we call metamorphosis. There are two kinds of metamorphosis: complete and incomplete. Complete metamorphosis includes insects like beetles, bees, and butterflies. Insects that undergo incomplete metamorphosis have three life stages: egg, nymph, and adult, and they include insects like grasshoppers and stick-insects. **Day 2 – Week 6** **SUB-TOPIC 2: LIFE CYCLE OF A FROG** **Explicitation** • Begin the lesson by asking students what they know about frogs based on their personal experiences. Ask if they like frogs and why frogs are important in the environment. • Show pictures about the different stages in the life cycle of a frog. Encourage students to describe each stage and share what they know how frog changes or transforms during its life cycle from egg, tadpole, froglet to frog. • Discuss the different stages in the life cycle of frogs focusing on the characteristics of each stage. Highlight how each stage develops and grows into another form, including its physical appearance, where it is mostly found and what food it eats to grow. **Worked Example and Lesson Activity** • Guide the students to perform **Activity No.2- Life Cycle of a Frog** in the Worksheet. • Divide the class into small groups and ask each group to discuss the growth and transformation of a frog from egg, tadpole, froglet to frog. • Facilitate a discussion on the unique features of the frog's life cycle being an amphibian. Use the whiteboard to create a collective chart highlighting key points from the discussion.	

- Discuss the significance of understanding life cycle of frog in the broader context of nature and ecosystems.
- Challenge groups to compare the frog's life cycle with that of the butterfly previously studied in the first activity.

The Frog's Life Cycle:

Frogs, being **amphibians**, undergo a unique transformation. Unlike fish, the young frogs look distinct from the adults. Their **life cycle** initiates from an **egg**. From this egg, a **tadpole** emerges, which resides in water. Initially, it possesses gills and a tail but lacks legs. Gradually, the tadpole develops into a **froglet** with legs, ultimately losing its gills and tail. Over time, the froglet transforms into an **adult frog**. These adult frogs lay **eggs**, thus marking the beginning of a new life cycle.



Life cycle of a frog

Source: Pictures taken from National Science Textbook, Grade 4, First Edition. Papua New Guinea

Day 3

SUB-TOPIC 3: LIFE CYCLE OF A CHICKEN

Explicitation

- Begin the lesson by asking students what they know about chickens based on their personal experiences. Ask if they like chickens and why are chickens important for humans as source of food and livelihood in food production.
- Show pictures about the different stages in the life cycle of a chicken. Encourage students to describe each stage and share what they know how the chicken changes or transforms during its life cycle from egg to adult.
- Highlight how each stage develops and grows into another form, including its physical appearance, where it is mostly found and what food it eats to grow.

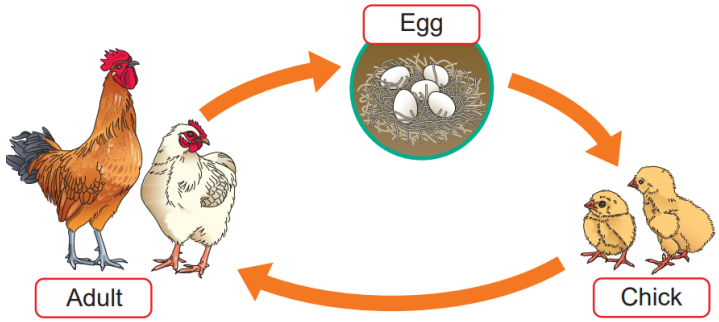
Worked Example and Lesson Activity

- Guide the students to perform **Activity No.3: Exploring the Life Cycle of Chickens** in the Worksheet.
- Divide the class into small groups based on their assigned activity groups.
- Encourage discussions on key life stages, the significance of each stage, and the role of chickens in agriculture/ food production.
- Discuss the economic importance of understanding the life cycle of chickens in the context of poultry farming.
- What challenges might chickens face during their life cycle, and how can these challenges be addressed?

Facts for the teacher: The Life Cycle of Chicken (Bird):

Birds, including chickens, begin their life cycles from eggs. A young chicken, known as a chick, looks similar to an adult chicken. The life cycle of a chicken starts as an egg, hatches, grows, and matures into an adult chicken. Adult chickens lay eggs, starting a new life cycle. Birds, like the bird of paradise and cassowary, have similar life cycles to chickens. In various bird species, life begins within an egg. A newly hatched bird is called a hatchling. During growth in the nest and while being cared for by parents, the hatchling is called a nestling. Once it develops flight feathers and is ready to leave the nest, the bird

takes its first flight, becoming a fledgling. When the fledgling or juvenile reaches full growth, it becomes a mature or adult bird.



Life cycle of chicken

Source: Pictures taken from National Science Textbook, Grade 4, First Edition. Papua New Guinea

Day 4

SUB-TOPIC 4: LIFE CYCLE OF HUMAN

Explicitation

- Begin the lesson by asking students what they know about how humans reproduce their own kind based on their personal experiences.
- Show pictures about the different stages in the life cycle of a human beings. Encourage students to describe each stage and share what they know how the babies change or transform from fetus, infant, childhood, adolescence, adulthood, and to old age.
- Highlight how each stage develops and grows into another form, including its physical appearance, what food it eats to grow and some daily life activities.

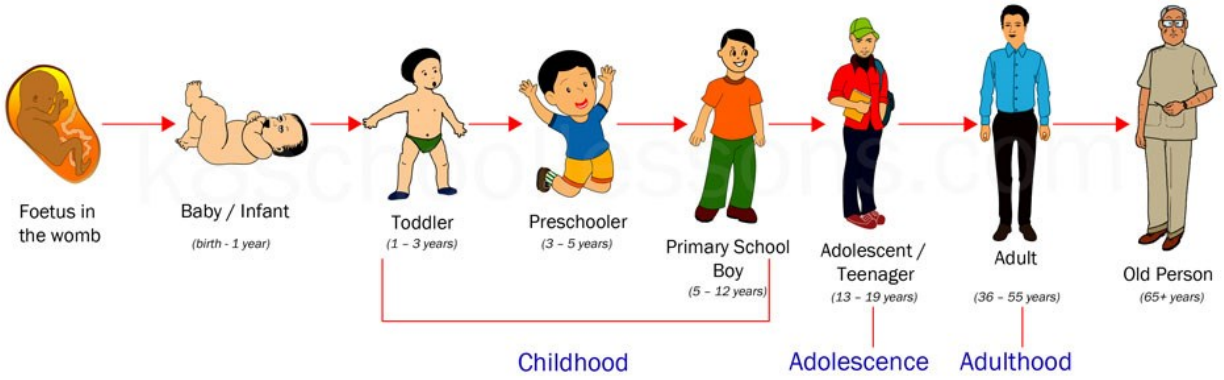
Worked Example and Lesson Activity

- Guide students to perform **Activity No.4: Exploring the Human Life Cycle in the Worksheet.**
- Divide the class into small groups. Ask students to cut out the pictures and

arrange them in sequence from the earliest to the latest stage Emphasize. the importance of accurately sequencing the stages of the human life cycle.

- Instruct each group to share their thoughts on the growth and transformation of humans through different stages of life.
- Encourage discussions on physical, emotional, and social changes during each stage. Use guide questions to prompt discussions and critical thinking.
- What are some societal expectations and roles associated with different stages of life, such as adulthood and old age
- How does cultural and environmental factors affect growth of humans at different life stages?
- How does the concept of family and relationships evolve throughout the human life cycle?
- Summarize key points discussed during group activities and reflect on the uniqueness and complexity of the human life cycle.
- Connect the exploration of the human life cycle to broader topics like sociology, psychology, and anthropology.

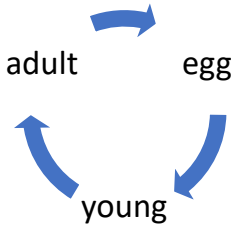
Facts for the Teacher: Stages of Human Life Cycle

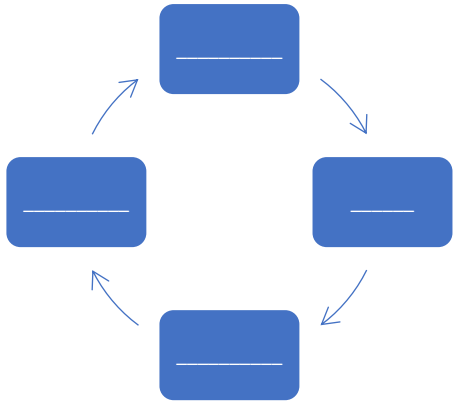
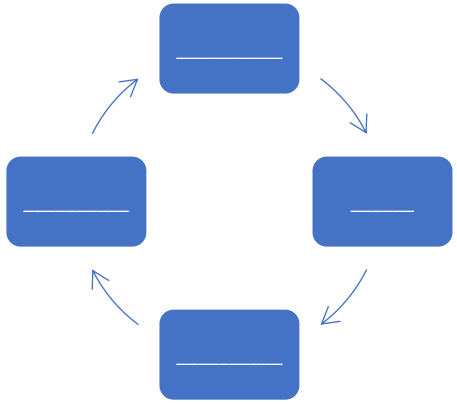


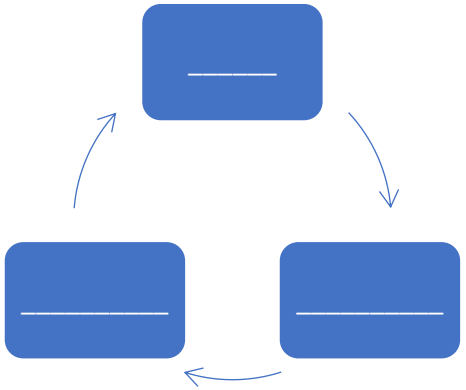
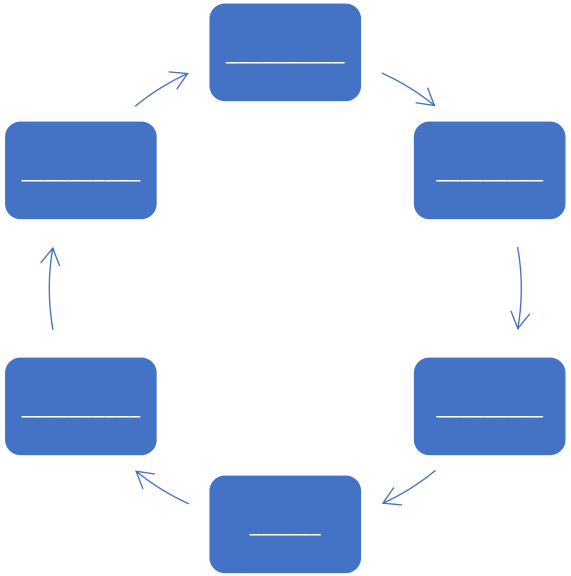
	Stage 1 - Foetus in the womb: A baby begins as a tiny thing when a mother's egg joins with a father's sperm. Inside the mother's tummy, it grows into a little human shape. We call this the "foetus." The foetus can't eat, drink, or breathe on its own and needs its mom. **Stage 2 – Baby:** After about nine months, the baby is born. Babies at this stage are called "infants." They can't talk yet, but they can cry, eat, and let you know when they're hungry or uncomfortable. Moms usually feed them with milk. **Stage 3 – Childhood:** Babies grow into children who learn to crawl, walk, talk, and do more things. They make friends, read, write, and become more independent. In this stage, we have toddlers (1-3 years), preschoolers (3-5 years), and primary school children (5-12 years). **Stage 4 – Adolescence:** As kids grow into teenagers (usually from 13 to 19 years old), their bodies change a lot. They grow taller, get hair in new places, and their voices may deepen. They become more independent and their behaviors change. **Stage 5 – Adulthood:** People from 20 to 65 years are called adults. They can have families and continue the life cycle. We can split adults into young adults (20-36 years), middle-aged adults (36-55 years), and older adults (55-65 years). **Stage 6 – Old Person:** When a person reaches 65 years, they're called an old or elderly person. How long someone lives can vary, but it usually depends on their health. Some people live beyond 100 years, while others don't. The human life cycle comes to an end at this stage.	
3. Making Generalizations	**1. Learners' Takeaways** To summarize the main learning points in the topic "Life Cycle of Animals" and engage students effectively, you can consider the following approach: 1. Recap Main Learning Contents: • Explain the concept of a life cycle, which is the sequence of changes an organism goes through during its life.	

	• What are the different stages in the life cycle of a butterfly, frog, chicken and human? • What are the similarities and differences in the life cycle of these animals? 2. Provoke Critical Thinking: • What are some advantages of being born as a live mammal rather than hatching from an egg like a bird, amphibian or a reptile? **2. Reflection on Learning** Reflect with the aid of the following: **What Worked Well:** We used pictures, hands-on activities, and stories to make learning fun. **Learning About Animal Preservation:** We discussed how some animals are in danger and need our help. Students felt they could make a difference by taking small actions, like using less plastic and keeping our environment clean. **Looking Ahead:** We'll keep students engaged by bringing in experts and sharing success stories about saving animals. Our goal is to inspire students to take action and protect animal life, making our world a better place. In conclusion, learning about animal life cycles has been exciting. It's not just about understanding animals; it's about taking care of our planet and the creatures we share it with. Our Grade 4 students are on a journey to become animal protectors, and we're here to support them every step of the way.	

IV. EVALUATING LEARNING: FORMATIVE ASSESSMENT AND TEACHER'S REFLECTION	NOTES TO TEACHERS

A. Evaluating Learning	**1. Formative Assessment** **Answer the questions below based on your understanding** 1. Fill in the missing words in each sentence: A. The first step in an animal's life is the _____. (Egg) B. The second stage in a butterfly's life is called _____. (Larva) C. A baby frog that hatches from an egg is called a _____. (Tadpole) D. A grown-up animal is called an _____. (Adult) E. When animals have babies again and again, it's called _____.(Reproduce) 2. Pick the correct letter. The diagram displays life cycles of different animals. Which animal doesn't have this life cycle? A. Chicken B. Dog C. Fish D. Grasshopper  **Diagram 1** **Instruction:** Please provide the missing information to complete the animal cycle.	**ANSWER KEY:** 1. A. Egg B. Larva C. Tadpole D. Adult E. Reproduce 2. D. Grasshopper

Life Cycle of Butterfly	
Life Cycle of Frog	

Life Cycle of Chicken		
Life Cycle of Human		

B. Teacher's Remarks	*Note observations on any of the following areas:*	**Effective Practices**	**Problems Encountered**	
	strategies explored	This section should capture what strategies have been successfully employed during the observed activities. It could include innovative teaching techniques, group work, or the use of technology that improved the learning process.	In this part, you would document any issues or challenges encountered during the lesson. These might include difficulties in grasping certain concepts, distractions, or obstacles to active engagement.	
	materials used	Note what teaching materials or resources were particularly effective in enhancing the learning experience. This could involve textbooks, multimedia presentations, or hands-on materials	Document any problems with materials or resources that hindered the learning process. For example, outdated textbooks, technical issues with digital resources, or a lack of essential materials	
	learner engagement/ interaction	Observe how well the students were engaged with the lesson. Effective practices might include students participating actively in discussions, asking questions, or demonstrating enthusiasm for the topic	Mention any instances where learner engagement was lacking, such as disinterest, distractions, or difficulty in understanding the subject matter	
	others	This section is for any notable positive practices	Document any miscellaneous issues or	

		that don't fit within the categories above. It could include classroom management techniques, the use of assessment tools, or successful communication with students	problems that don't fall under the previous categories. These could encompass behavioral problems, communication challenges, or other noteworthy concerns.	
C. Teacher's Reflection	*Reflection guide or prompt can be on:* ▪ *<u>principles behind the teaching</u>* *What principles and beliefs informed my lesson?* *Why did I teach the lesson the way I did?* ▪ *<u>students</u>* *What roles did my students play in my lesson?* *What did my students learn? How did they learn?* ▪ *<u>ways forward</u>* *What could I have done differently?* *What can I explore in the next lesson?*			