

3-5 Life Cycles Activity

Overview

Focus Question

What is a life cycle? What is the human life cycle? What is an alligator's life cycle?

Activity Synopsis

Students will start learning life cycles by discussing a human life cycle. Then they will learn about a reptile's life cycle by creating an alligator's life cycle.

Time Frame

60 minutes, or 2-30 minute sessions.

Objectives

The learner will be able to:

- Define a life cycle.
- Explain a human life cycle.
- Describe and draw an alligator (reptile) life cycle.

Student Key Terms

- adult
- egg
- hatchling
- juvenile
- life cycle
- organism

Teacher Key Terms

- carrion
- complete metamorphosis
- counter shading
- crocodilian
- DDT
- ectothermic
- fetus
- incomplete metamorphosis
- keystone species
- larva
- nymph
- opportunistic feeders
- organism
- pupa
- scutes/osteoderms

Standards

South Carolina College- and Career-Ready Science Standards 2021

3rd Grade: 3-LS1-1, 3-LS3-1, 3-LS3-2, 3-LS4-2, 3-LS4-3, 3-LS4-4

4th Grade: 4-LS1-1

5th Grade: 5-ESS3-1

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* **Bold standards are the main standards addressed in this activity**

Third Grade Performance Expectations

3-LS1-1 Develop and use models to describe how organisms change in predictable patterns during their unique and diverse life cycles.

3-LS3-1 Analyze and interpret data to provide evidence that plants and animals have inherited traits that vary within a group of similar organisms.

3-LS3-2 Use evidence to support the explanation that traits can be influenced by the environment.

3-LS4-2 Use evidence to construct an explanation for how the variations in traits among individuals of the same species may provide advantages in surviving and producing offspring.

3-LS4-3 Construct an argument with evidence that in a particular habitat some organisms can thrive, struggle to survive, or fail to survive.

3-LS4-4 Make a claim about the effectiveness of a solution to a problem caused when the environment changes and affects organisms living there.

Fourth Grade Performance Expectations

4-LS1-1 Construct an argument that plants and animals have internal and external structures that function together in a system to support survival, growth, behavior, and reproduction.

Fifth Grade Performance Expectations

5-ESS3-1 Evaluate potential solutions to problems that individual communities face in protecting the Earth's resources and environment.

Cross Curricular Standards

South Carolina College and Career Standards for Social Studies

3-3

South Carolina College and Career Standards for ELA

Inquiry (I) – 3-1.1, 3-2.1, 3-3.1, 3-3.2, 3-4.1, 3-4.2, 3-4.3, 3-5.1, 3-5.2, 4-1.1, 4-2.1, 4-3.1, 4-3.2, 4-4.1, 4-4.2, 4-4.3, 4-5.1, 4-5.2, 5-1.1, 5-2.1, 5-3.1, 5-3.2, 5-4.1, 5-4.2, 5-4.3, 5-5.1, 5-5.2

Reading Informational Text (RI) – 3-3.1, 3-3.6, 3-5.1, 3-6.1, 3-12.1, 3-12.3, 4-3.1, 4-5.1, 4-6.1, 4-12.1, 4-12.3, 5-5.1, 5-6.1, 5-12.1, 5-12.3

Writing (W) – 3-2.1, 3-4.1, 3-5.3, 3-5.4, 3-5.5, 3-6.1, 4-2.1, 4-4.1, 4-5.4, 4-6.1, 5-2.1, 5-4.1, 5-6.1

Communication (C) – 3-1.2, 3-1.3, 3-1.4, 3-2.1, 3-2.4, 4-1.2, 4-1.3, 4-1.4, 4-2.1, 5-1.2, 5-1.3, 5-1.4, 5-2.1

Background

Key Points

Key Points will give you the main information you should know to teach the activity.

- A life cycle is a series of changes an organism goes through in its lifetime.
- Every organism has a different life cycle unique to its way of life.
 - Plants: seed, sprout, small plant, adult plant
 - Mammal: egg, baby, juvenile, adult
 - Reptile: egg, hatching, juvenile, adult
 - Bird: egg, hatchling, chick, adult
 - Fish: egg, larva, juvenile (fry), adult

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- Amphibian: egg, tadpole, froglet, frog (frog)
- Insects with complete metamorphosis: egg, larva, pupa, adult (butterfly, bee)
- Insects with incomplete metamorphosis: egg, nymph, adult (grasshopper, cricket)
- A typical human life cycle has 8 stages including fertilized egg, fetus, baby/infant, toddler, child, teenager, adult, senior citizen.
- American alligators are large reptiles found in the Southeast US. Reptiles are animals with scaly skin, lay leathery eggs, breathe air with lungs and are cold blooded.
- The life cycle of an alligator is egg, hatchling, juvenile and adult.
- Animals and plant populations can be affected by environmental hazards that harm a specific life stage. An example is how the pesticide DDT caused reptile and bird eggs to become brittle making it hard for the young to survive (alligators, bald eagles and brown pelicans).

Detailed Information

Detailed Information gives more in-depth background to increase your own knowledge, in case you want to expand upon the activity or you are asked detailed questions by students.

A life cycle is a series of changes an organism goes through in its lifetime. An organism is living thing (plants, animals, fungi, bacteria). There are about 8.7 million organism species on earth. Each species has its own life cycle. That means there are 8.7 different life cycles on earth! It's too many to describe here so we will group them generally into these life cycles:

- Plants: seed, sprout, small plant, adult plant
- Mammal: egg, baby, juvenile, adult
- Reptile: egg, hatching, juvenile, adult
- Bird: egg, hatchling, chick, adult
- Fish: egg, larva, juvenile (fry), adult
- Amphibian: egg, tadpole, froglet, frog (frog)
- Insects with complete metamorphosis: egg, larva, pupa, adult (butterfly, bee)
- Insects with incomplete metamorphosis: egg, nymph, adult (grasshopper, cricket)

Animals change from stage to stage in order to give them the best chance to survive in their environment. Each stage of a life cycle can be food for another organism, so the importance of each stage is important.

In this activity, we will focus on 2 life cycles; human and alligator. There are many activities that will lead you through other popular life cycles such as frogs and butterflies, so we decided to pick a different animal's favorite, the alligator. Below you will read a lot of background information for both human and alligator life cycles.

Human Life Cycle

It's often best to start teaching life cycles by starting with ourselves as humans. We can always relate to what we know and then expand on that as we learn new life cycles. A human's life cycle can be described many different ways. Here we will use 8 stages (fertilized egg, fetus, baby/infant, toddler, child, teenager, adult, senior citizen). For this age group of learning, it might be best to start with stages outside the human body (baby/infant), unless your school provides sex education.

Ages for each human life stage:

- Infant/baby – birth to 1 year
- Toddler – 1-3 years
- Child – 4-12 years
- Teenager – 13-19 years
- Adult – 20-64 years
- Senior Citizen – 65+ years

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American Alligator

Reptiles are vertebrates (have a backbone) animals with the following characteristics:

- Cold-blooded (ectothermic)
- Breathe air
- Lay leathery shelled eggs
- Have scaly skin

Reptiles include crocodylians (crocodiles, alligators, caiman and gharial), turtles, snakes and lizards. All together there are over 7300 known species of reptiles in the world. About 23 are crocodylians, 285 are turtles and over 7200 species of snakes and lizards.

All reptiles are cold blooded or ectothermic. This means that their internal body temperature is controlled by the temperature of their environment. They are air breathers, using lungs to breathe. Reptiles have internal fertilization, resulting in leathery shelled eggs, laid outside their body (oviparous). There are a few species of snakes that have live birth, but this is the exception. Reptiles are also known for their scaly skin and internal ears that can feel sound vibrations.

American alligators (*Alligator mississippiensis*) are large reptiles that live in the Southeast US, from North Carolina to Texas. They are 1 of about 23 species of crocodylians in the world. There are only 2 species of alligators in the world, the American alligator and the Chinese alligator. As far as crocodylians, there are only 2 native species that live in the US, the American alligator and the American crocodile. American crocodiles are only found in southern Florida.

American alligators may reach lengths of 6-16ft (1.8-5m). The average size for male alligators is between 10-12 feet and the average size for females is 8-10 feet. The longest American alligator on record was 19 feet, 2 inches. The South Carolina record holder was 13 feet, 4 inches.

The average weight of a female alligator is 300 lbs whereas a male typically weighs 600 lbs. Some alligators can reach a weight of 1,000 lbs! When food is abundant, crocodylians can grow anywhere from 3-18 inches per year. Alligators can live to be 50 years in the wild (maybe as long as 70). In human care they can live to be 80 years.

The American alligator occurs in relatively shallow water, typically freshwater. Rivers, swamps, lakes and marshes are potential alligator habitats within their range. It is unlikely to see alligators venture into brackish or salt water, but occasional reports of alligators on beaches and barrier islands suggest that sometimes they do. Alligators can tolerate a reasonable amount of salinity for short periods at a time, but they eventually have to return to freshwater. In comparison, crocodiles have salt-secreting glands that allow them this ability to stay in brackish water or saltwater, but alligators do not possess these glands.

American alligators are generally black or dark brown. The species has a broad, rounded snout comparable in shape to the top of a duck's bill. In comparison, crocodiles have a longer, more pointed snout. When an alligator's mouth is closed, the edge of the upper jaw overlaps the teeth in the lower jaw. The teeth on the lower jaw actually fit into small depressions on the roof of an alligator's mouth. In contrast, a crocodile's bottom teeth will stick out when its mouth is closed. The fourth tooth of a crocodile on the lower jaw sticks out the most.

American alligators have counter-shading, which means their body is two different colors (dark/black on top and lighter/white on the underside). Counter-shading helps the alligator camouflage since the dark upper side blends in with the dark water. The light underside helps the alligator camouflage from fish and other species swimming underwater where the water looks lighter from the sun.

The scales covering an alligator's body are rough and hard, imitating a "suit of armor." The scales have a special name called scutes or osteoderms and assist the alligator in protection and absorbing heat from the sun. The interior and exterior of scutes are very vascular. Small blood vessels are coiled inside pits on the scutes and these help an alligator to absorb heat from the sun's radiation.

Alligators are an important part of the ecosystem's food chain. Alligator eggs are sometimes eaten by raccoons and snakes. As juveniles, wading birds, raccoons, crabs, bobcats, otters, large snakes, large fish, and larger alligators eat them. Humans also eat alligator.

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Alligators are opportunistic feeders eating just about anything that will fit in their mouths. As juveniles, they will eat insects, small fish, amphibians and aquatic invertebrates, while adults feed on fish, turtles, wading birds, snakes, frogs, small mammals, and small alligators. In addition, alligators are known to eat carrion (dead animals). Alligators can digest every part of their prey. They have the strongest stomach acid recorded for any vertebrate!

Alligators typically only need one pound of food per week. Adult alligators can even fast for up to 2 years. They can fast for this long because they store about 60% of their food as fat in their tails, along their backs, and in some of their organs. Their foraging activity is also dependent on air temperature. An alligator will stop hunting for food if the temperature drops below about 70°F.

Alligator Life Cycle

The life cycle of an alligator has 4 stages. The stages are fertilized egg, hatchling, juvenile and adult.

Egg: Alligators hatch from eggs. Females create large nests (10 feet wide and 2 feet tall) and lay 30-50 leathery eggs in the summer. Alligator moms cover the eggs with sticks and dirt and then guard them to keep them safe. The temperature in the environment is what determines if the alligators will be born boys or girls. If the temperature of the nest is warmer (above 90°F), there will be more males. If the temperature is cooler (below 86°F), there will be more females. This is something that will have to be monitored with climate change. Temperature skews over time could affect populations by creating more of one sex or the other.

Hatchling: After about 65 days, hatchlings make chirping noises inside the egg and this alerts the mother to uncover the eggs. When they hatch they are 6-8 inches long. They live in groups called pods with their mom for protection. They will chirp when danger is near and the mothers will allow them to jump in their mouth or on their back for protection. Hatchlings have yellow stripes on their bodies to help them hide in the grasses of the pond or swamp. This is great camouflage. Hatchling may stay with their mother for up to 2 years before venturing on their own.

Juvenile: Alligators become juveniles when they leave their mother and grow about 4 feet. They typically grow 8-12 inches a year. As they become juveniles, the yellow stripes start to fade away to just a dark brown/black color so they can better blend in with the water. A juvenile alligator's life goal is to reach adulthood. As adult they become apex predators and won't have predators other than humans.

Adult: Alligators reach sexual maturity when they reach about 6 feet. Courtships will typically begin in April and peak the last two weeks of May. During courtship, both alligators will nudge, bump, and press their heads into each other. Female alligators will produce a quiet bellow or growl, and this excites the males to produce loud bellows. Alligators have the ability to release musk from two different sets of glands and they will release this musk during courtship. The glands are located underneath the lower jaw and in the cloaca. They will also attempt to push each other underwater to assess each other's size and strength. Mating takes place underwater. Alligators are polygamous and they mate with several partners during the mating season. As adults, females stay in the same area and males will travel larger distances to find mates.

Conservation

The importance of alligators in their ecosystem is undeniable. As an apex consumer, they help to control the over population of other species in their environment. Many people refer to alligators as a keystone species because they not only control over population of other species, but also create peat due to their habit of nest making. Alligators have come up with a great way of beating the cold or the heat for that matter. They will dig "alligator holes" which they create by using their snout and tail. These holes have a multipurpose service however, when they dry out and the alligator inhabiting the hole leaves, other animals may use them for shelter and may even be able to hibernate in them.

The major threats facing the American alligator are wetland habitat loss, due to coastal development, and unregulated harvest. Hunting is once again beginning to be allowed in some states, but it must be heavily regulated. More importantly for the species, alligators are currently losing much of their native habitat due to water management systems and increased levels of mercury and toxins in water.

Human and alligator interactions have increased as coastal development continues. Alligators often inhabit golf courses as their native wetlands are altered or destroyed. Alligators will habituate to humans who feed them. Education campaigns are needed because human encounters often result in negative consequences for the alligator. In addition, large specimens that live in close

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proximity to human populations may be determined to pose a threat to human safety. These “nuisance” animals need to be managed in a way that it does not threaten the survival of the species. In SC, alligators that have been fed by humans will be euthanized to prevent negative interactions. That said, South Carolina Department of Natural Resources (SCDNR) will fine up to \$2,000 or imprison anyone who feeds, harasses, or approaches a wild alligator.

In the 1940-1950s, a pesticide known as DDT (Dichlorodiphenyltrichloroethane) was used by farmers to prevent pests from eating their crops. Over time it was found that DDT was causing a lot of environmental problems. Those environmental problems worked their way up the food chain. The pesticide was sprayed on crops/fields, covering the plants. Small animals and insects would eat the plants and ingest DDT. Those small animals and insects were then eaten by other animals and the DDT was passed up the food chain all the way to the highest levels.

As DDT accumulated in the bodies of certain animals such as alligators, bald eagles and brown pelicans (to name a few), it created a problem with the female’s eggs. The eggs laid by the animals became brittle and would break or crack easily. The babies did not survive. Over time, this affected the animal populations.

In 1972, a law was passed banning the use of DDT. It took several years, but alligator, bald eagle and brown pelican populations have rebounded to healthy levels. Alligator populations bounced back quicker than bald eagle and brown pelican because alligators lay more eggs (30-50 eggs) than bald eagles (1-3 eggs) and brown pelicans (2-4 eggs).

Procedure

Materials

- Student baby pictures (ask students ahead of time to bring in a baby picture)
- Paper
- Pencils
- [Alligator Article](#)
- [Alligator Report](#)

Option 1: Origami Life Cycle

- [Alligator Life Cycle Pictures](#)
- [Egg Origami Written Instructions](#)
- Egg origami video instructions
- White paper (origami or copy paper)
 - Egg: 6x6 inch squares (1 per group)
- [Alligator Origami Written Instructions](#)
- Alligator origami video instructions
- Green/Brown paper (origami or copy paper)
 - Adult Alligator: 8.5x8.5 inch squares (1 per group)
 - Juvenile Alligator: 6x6 inch squares (1 per group)
 - Hatchling Alligator: 3x3 inch squares (1 per group)
- Scissors (one per student or group)
- Black marker (one per group)
- Googly eyes (optional)
- Computer/Ipad (optional)

Option 2: Life cycle with playdough or model magic

- White playdough or model magic
- Green playdough or model magic

Option 3: Life Cycle Drawing

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- [Alligator Life Cycle Worksheet](#) (one per student)
- Pencils/markers

Procedure

Prep: 1 week before activity, ask parents to send in a baby picture of their student.

1. Ask students to bring their pictures to the front of the classroom and place them on the board. Allow students to look at the pictures of their classmates as babies.
2. Once they have some time to enjoy the pictures, have them sit down and think about how much they've grown since they were babies. Ask them what a life cycle is. Go over the definition of a life cycle (the series of changes in the life of an organism).
3. Describe the steps (life stages) of a human life cycle (fertilized egg, fetus, infant/baby, toddler, child, teenager, adult, senior citizen). *Can leave out egg and fetus for this age group.*
 - Infant/baby – birth to 1 year
 - Toddler – 1-3 years
 - Child – 4-12 years
 - Teenager – 13-19 years
 - Adult – 20-64 years
 - Senior Citizen – 65+ years
4. Ask them to think about someone they know in each of the human life stages. Who are they?
5. Have them draw a human life cycle using arrows. Make sure they draw it in a circle with the senior citizen taking an arrow off the circle (since they can no longer have babies).
6. Discuss how every organism's life cycle is different. Examples can include talking through a plant life cycle (seed, sprout, small plant, adult plant) and a dog's life cycle (egg, puppy, dog). Have them think about their favorite plant or animal. What is its life cycle?
7. Now it's time to talk specifically about an alligator's life cycle since they are going to be creating one for this activity. Show them a picture of an adult alligator (from [Alligator Life Cycle Pictures](#)). Have them guess what the life cycle might be for this reptile animal.
8. Go through each life stage of an alligator with them, showing them pictures along the way.
9. Have the students get into groups of 4 and give each group an [Alligator Article](#) and an [Alligator Report](#). You can have them do this individually if you want.
10. Have the students read the article out loud (taking turns) within their group. Then, they should fill out the report as a team. This will get them more familiar with alligators and their cool life cycle.
11. The next part of this activity could be done in 3 different ways depending on time, materials and students. Here are the instructions for each option:

Option 1: Origami Life Cycle

- Give each group 1 white piece of paper (egg) and 3 green/brown pieces of paper (alligator). Paper sizes are explained in materials list above).
- For instructions, you can either give them the written instructions for the origami egg and alligator or allow them to watch the video instructions.

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- For each group, they should make one alligator life cycle.
 - Student 1: egg
 - Student 2: hatchling
 - Student 3: juvenile
 - Student 4: adult
- This may take the students a bit to do and they may need extra paper for mess ups. It should be fun though and not every alligator will look the same. Here is a [picture](#) of what they could look like.

Option 2: Life cycle with playdough or model magic

- Give each group white and green/brown playdough or model magic. You can just use white model magic and students can use markers to turn it green/brown (put marker dots in the clay and then work it around to change the color). You'll need to give each group enough to make 1 egg and 3 alligators of different size.
- For each group, they should make one alligator life cycle.
 - Student 1: egg
 - Student 2: hatchling (could show alligator coming out of an egg)
 - Student 3: juvenile
 - Student 4: adult

Option 3: Life Cycle Drawing

- Give each student an [Alligator Life Cycle Worksheet](#) so they can draw the different alligator life stages and complete an alligator life cycle.
- You can show them the [Alligator Life Cycle Pictures](#) again to help them draw each stage.

12. After finishing the activity, have each group share their creations with the class. They should share a fun fact that they learned about the life cycle.

Follow-Up Questions

- Why do some animals have many babies (like alligators and fish), but some animals only have one or a few (like humans and birds)?
- How do babies resemble their parents? Do all babies look like their parents?
- If DDT hurt alligator populations, could other animals have been affected too? (read background on bald eagles and brown pelicans)

At-home Learning and Virtual Modifications

At-home Learning: Ask students to read the [Alligator Article](#) and fill out the [Alligator Report](#).

[Alligator Article](#)

[Alligator Report](#)

Virtual: Have students share a picture of themselves when they were a baby. Talk about a human life cycle. Then share them pictures of an alligator's life cycle. As you show them pictures, ask them to draw the different stages at home in their science journal or on a piece of paper. At the end, have them take turns sharing their drawings with the class.

Assessment

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Have students draw and label a human and an alligator life cycle. Have them explain how the life cycles are similar and how they are different. You can give them a word bank or not.

- Human word bank: baby, toddler, child, teenager, adult, senior citizen
- Alligator word bank: egg, hatchling, juvenile, adult

Scoring rubric out of 100 points

Correctly labeling each stage (5 points per word bank label)	50 points
Correctly drawing the human life cycle	20 points
Correctly drawing the alligator life cycle	20 points
Correctly lists one similarity	5 points
Correctly lists one difference	5 points

Cross Curricular Extensions

Science, Math and Social Studies Extension

Join From Seeds to Shoreline. This is a local South Carolina program through the SC Sea Grant Consortium for schools to harvest seeds, germinate, grow and plant spartina grass in the local salt marshes. Training starts for teachers in the summer and then the project goes all school year from harvesting seeds in the fall to planting adult plants in the spring, including data collection along the way to measure and count plants as they grow. <https://www.scseagrant.org/from-seeds-to-shoreline/>

Science Extension

Raise your own butterflies, beetles, praying mantis, frog or brine shrimp in the classroom. Students can witness the entire life cycle. Be sure to only order native butterflies/beetles/praying mantis/frog/brine shrimp. You wouldn't want to release non-natives that could harm our local ecosystems!

Butterfly resource: <https://www.amazon.com/Nature-Gift-Store-Caterpillars-Butterfly/dp/B00B7PP7WI>

Darkling beetle resource: <https://www.amazon.com/1000ct-Mealworms-Reptile-Chickens-Medium/dp/B00CQMTP56?th=1>

Praying mantis resource: <https://usmantis.com/products/carolina-mantis-ooths>

Bullfrog resource: https://www.homesciencetools.com/product/bullfrog-tadpoles-live/?gclid=CjwKCAjwvfm0BhAwEiwAG2tqzKxIqio0qRGKq4FCP_404062aVAac2AbLxmZnRwDpmfPVXpr6M3FmBoCWDYQAvD_BwE

Brine shrimp resource: <https://www.carolina.com/crustaceans/brine-shrimp-artemia-live-adult-ideal-for-food/142230.pr?question=brine+shrimp>

Science Extension

Plant seeds in your classroom and watch the flowers grow. Could do this around Mother's Day as a gift for the moms. Plant native seeds and then plant them around the school once they've grown.

STEAM Extension

Learn and perform a Life Cycles musical play from Bad Wolf Press. <https://www.bbcearth.com/news/the-strangest-life-cycles-in-nature>

Language Arts Extension

Have each student write a book from the animal's perspective as it goes through its life cycle. They could choose their favorite animal for this one making it fun for them to research and write.

Resources

Teacher Reference Books

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Animal Life Cycle Coloring Book. Robert Mendez Dutcher. Independent Publisher. 2023

This book is full of different life cycles to color. Great for your students who love to color and need a visual for learning.

The Life Cycles of Butterflies: From Egg to Maturity. Judy Burris and Wayne Richards. Storey Publishing, LLC. 2006.

Dive in deep with butterfly life cycles. Includes many beautiful pictures.

How to Raise Monarch Butterflies: A Step by Step Guide for Kids. Carol Pasternak. Firefly Books. 2012.

Good step by step guide to raising butterflies if you want to tackle this in your classroom. Special note from SCA, please only raise and release native butterflies.

Teacher Reference Websites

Britannica

<https://www.britannica.com/science/life-cycle>

Life cycle as defined in biology by Britannica.

BBC

<https://www.bbc.com/news/the-strangest-life-cycles-in-nature>

The strangest life cycles in nature.

EPA

<https://www.epa.gov/ingredients-used-pesticide-products/ddt-brief-history-and-status>

A brief history on the pesticide DDT.

Scientific American

<https://www.scientificamerican.com/article/consequences-of-ddt-exposure-could-last-generations/>

Article explaining the problems caused by DDT use and how those problems could last a long time.

Monarch Watch Tagging Program

<https://monarchwatch.org/tagging/>

Join the monarch tagging program and be a part of real citizen science in your classroom.

Student Reference Books

Life Cycles: Ocean. Sean Callery. Kingfisher. 2018.

Learn the life cycles of 3 different ocean food chains from producer to apex consumer.

The Life Cycle of a Ladybug, Colleen Sexton. Bellwether Media. 2016.

Learn all about the ladybug life cycle as well as fun facts about ladybugs.

Life Cycles: Everything from Start to Finish. Dorling Kindersley Ltd. 2020.

This book looks at many different life cycles from animals to dinosaurs to stars and volcanoes.

Science Vocabulary Readers Set: Life Cycles. Liza Charlesworth. Scholastic Teaching Resources. 2013.

This set includes 6 different life cycles books (butterfly, frog, horse, ladybug, chicken and sunflower).

Plant Life Cycles: Incredible Plants. Mara Grunbaum. Children's Press. 2019.

From seeds to large trees, this book explains plant growth.

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The Life Cycle of a Salmon. Bobbie Kalman. Crabtree Classics. 2006
Learn about the interesting and unique life cycle of salmon.

Student Fiction Books

Hello, Little One: A Monarch Butterfly Story. Zeena M. Pliska. Page Street Kids. 2020.

Videos

PBS

<https://www.pbs.org/video/life-cycles-of-different-animals-3rd-grade-science-7laemq/>

Generation Genius

<https://www.generationgenius.com/videolessons/animal-and-plant-life-cycles-video-for-kids/>

Life Cycles

<https://www.youtube.com/watch?v=cqe2Amos0yU>

Curricula

Bad Wolf Press

Learn and perform a Life Cycles musical play from Bad Wolf Press. There is a cost for this one.

For more information click on <https://www.bbcearth.com/news/the-strangest-life-cycles-in-nature>

Aquatic Project WILD

Aquatic Project WILD is an interdisciplinary curriculum for K-12 teachers on aquatic wildlife and ecosystems. The activities cover a broad range of environmental and conservation topics.

For more information click on <http://www.projectwild.org/ProjectWILDK-12AquaticcurriculumandActivityGuide.htm>

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