

# Life Cycles

A Science A-Z Life Series

Word Count: 575



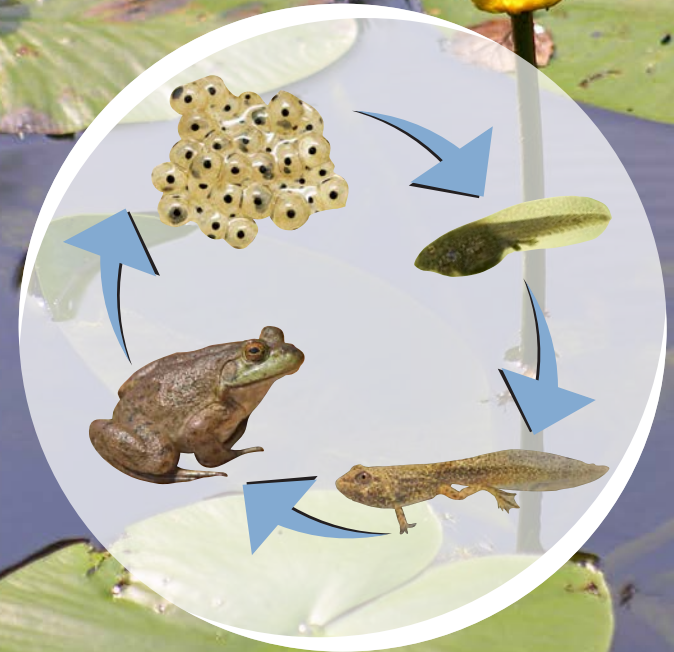
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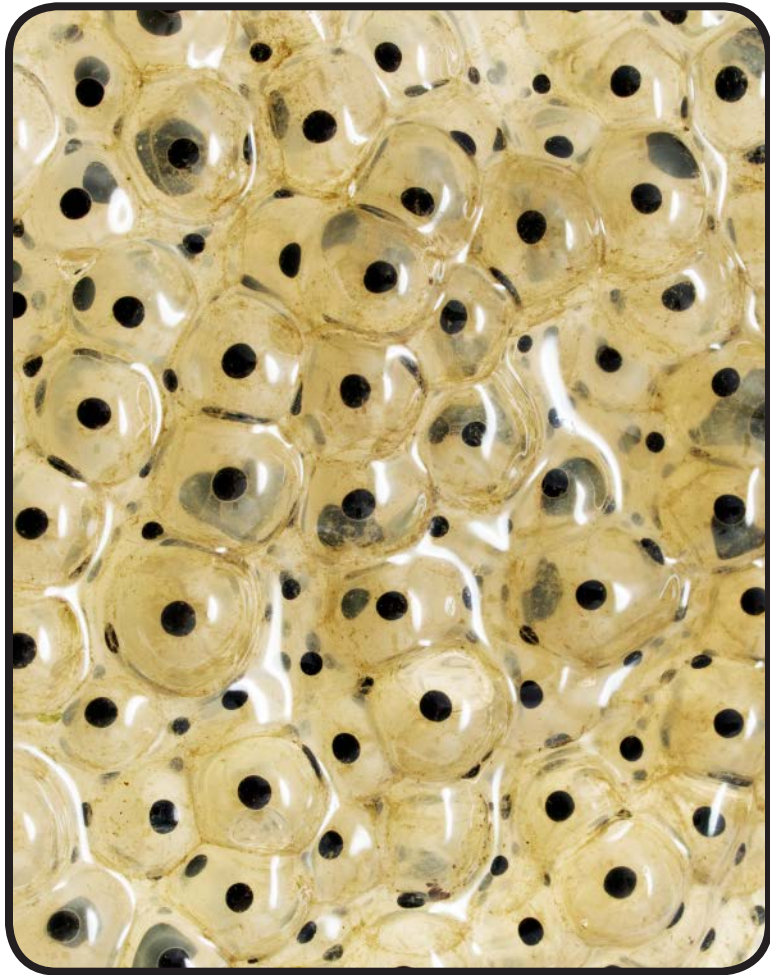
# Life Cycles



By Ned Jensen

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## KEY ELEMENTS USED IN THIS BOOK

**The Big Idea:** All living things go through changes as they grow and develop. Although individual organisms die, new ones replace them, ensuring the survival of the species. During its life cycle, an organism goes through physical changes that allow it to reach adulthood and produce new organisms. Since these changes are common within a species, they can be grouped into stages of development. Like all living things, humans go through a life cycle. Learning about life cycles helps students understand the changes they will experience, and the reasons why they will go through those changes.

**Key words:** adult, childhood, cocoon, egg, embryo, infant, larva, life cycles, mammals, monarch, nymph, pupa, quadruplets, quintuplets, seedling, tadpole, triplets, twins

**Key comprehension skills:** Compare and contrast

*Other suitable comprehension skills:* Classify information; main idea and details; identify facts; elements of a genre

**Key reading strategy:** Using a table of contents and headings

*Other suitable reading strategies:* Ask and answer questions; connect to prior knowledge; summarize; visualize

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## Table of Contents

Introduction .....	4
Human Life Cycle .....	6
A Frog Life Cycle.....	9
Insect Life Cycles.....	11
Plant Life Cycle.....	15
Conclusion .....	17
Glossary .....	19

## Introduction

Living things change. They go through stages called **life cycles**.

Plants and animals both have life cycles. During their lives they grow and make new living things. These new living things will look like the plant or animal that made them.



Families grow through stages in the life cycle.



Bears, cows, dogs, and people are all mammals and go through similar life cycles.

Dogs, cats, cows, tigers, and humans are all **mammals**. They all have the same life cycles.

Birds, frogs, and snakes are not mammals. They each have different life cycles.

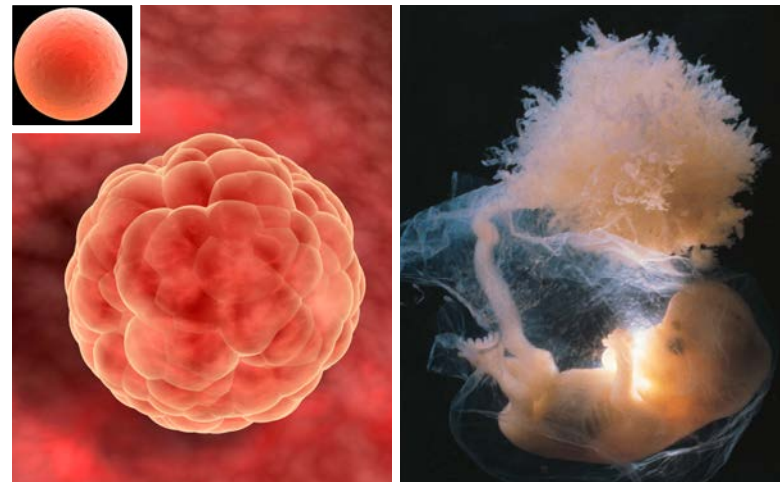
Plants and animals do not have the same life cycles.

In this book, you will learn about kinds of life cycles.

## Human Life Cycle

Let's look at your life cycle. You began as a tiny **egg**. The egg grew inside your mother. It became an **embryo**.

You grew until you had arms, legs, a head, and other parts. You began to look like a tiny person. Babies often take nine months to grow before they are born.



The egg in the upper left corner will become an embryo, like the one below it. On the right, the embryo has grown arms and a head.



A baby depends on adults for everything.

As a baby, you did not walk or talk. You were called an **infant**. You stayed in this stage for a couple of years.

Then you entered another stage. You entered **childhood**. You will stay in childhood for about ten years.

After childhood, you will go through two more stages. The last one is the **adult** stage of life.

The adult stage is your longest stage. You are an adult for the rest of your life.

New babies can be made just before and during the adult stage of life.

Can you say which stage each person is in?



**Do You Know?**

The oldest person was a French woman. She lived 122 years.



**Word Wise**

A mother can have more than one baby.  
2 babies = twins  
3 babies = triplets  
4 babies = quadruplets  
5 babies = quintuplets

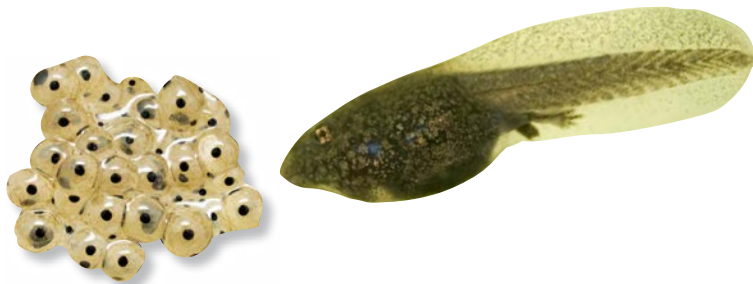


## A Frog Life Cycle

Frogs have a different life cycle. Baby frogs do not grow inside the mother frog. Instead, the mother frog lays eggs in water.

When the eggs hatch, the babies do not look like little frogs. They look more like little fish. In this stage, a frog is called a tadpole.

The tadpole slowly begins to change. It grows legs. Its tail slowly shrinks. It grows lungs that let it breathe on land.



The frog eggs to the left will turn into tadpoles like this one.



In a few weeks, the froglet (top) will turn into an adult (bottom).

After about 12 to 16 weeks, it becomes an adult. The adult frog can make more baby frogs.

### Do You Know?



Sea turtle eggs are soft.

Eggs have different coverings. Frog and fish eggs are like jelly. Snake and turtle eggs are soft like leather. Birds lay eggs with hard shells.

## Insect Life Cycles

Insects have three or four stages in their life cycles.



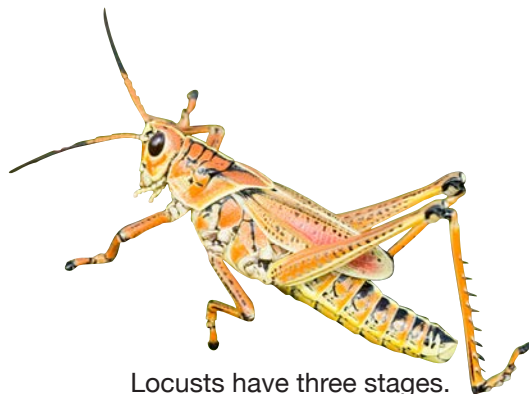
This luna moth came out of the cocoon above it.

**Do You Know?**

Some moths make silk just like spiders do. When it is a larva, it uses the silk to spin a cocoon. It changes into a **pupa** in the cocoon. It stays in the cocoon until it is an adult. Then it flies away.



Ladybugs have four stages in their life cycle.



Locusts have three stages.

Grasshoppers are a kind of insect. They have three stages in their life cycle.



### Egg

A female grasshopper lays clumps of 20 to 120 tiny eggs under the soil.

### Nymph

Eggs hatch into small nymphs that look like adult, wingless grasshoppers.



### Adult

A nymph takes about six to eight weeks to change into an adult grasshopper. Grasshoppers usually live for about three to five months.



This butterfly is also an insect. But it has a life cycle with four stages.

### Egg

A female butterfly lays hundreds of tiny eggs on the underside of leaves.



### Larva

An egg hatches into a caterpillar, or larva. It is a larva for about two weeks.



### Pupa

The larva's skin changes into a thin shell called a chrysalis that protects the larva as it changes into a pupa. The pupa begins to look like the adult butterfly.



### Adult

After about two weeks, the pupa becomes an adult butterfly with wings. It breaks out of the chrysalis. It dries its wings and flies away. It will live two to six more weeks.



A monarch caterpillar eats lots of leaves before it becomes a pupa.

### Do You Know?

Monarch butterflies go through four life cycles in a year. During the last cycle, Monarchs fly south. Then they sleep several months. When winter ends, they fly north. They lay their eggs and die.

A grasshopper nymph and a butterfly larva are munching machines. They eat lots of leaves. This gives them energy to change into adults.

Adult monarchs don't eat any more leaves. They only eat nectar from flowers. They lay many eggs.



## Plant Life Cycle

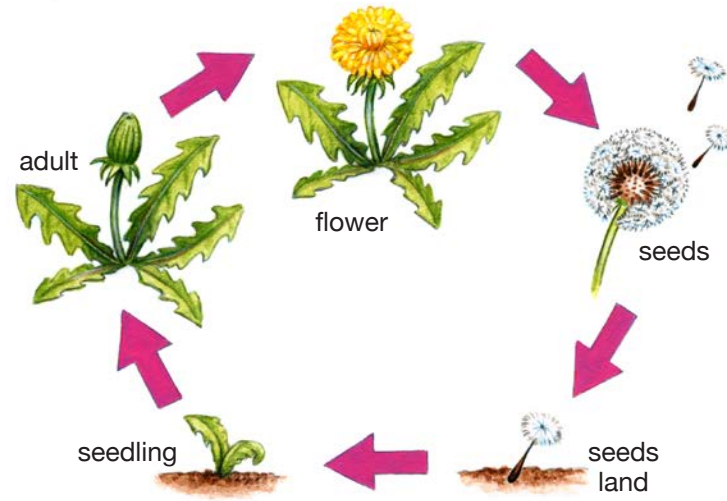
A seed is the first stage in a plant's life cycle in most plants. Seeds come from flowers. But some plants have cones instead of flowers. The cones make the seeds in these plants.

Most seeds fall to the ground. Some are blown by the wind. Some are carried away by water. Others are carried away by animals.



Pinecones make pine nuts, and tomatoes hold seeds.

## Dandelion Life Cycle



**Math  
Moment**

Five flowers each make 70 seeds. Only 15 seeds from each flower grow into new plants. How many new plants are there?

When seeds land in a good place with water, sun, and soil, they begin to grow. A small plant grows from the seed. It is called a **seedling**. The seedling will become an adult plant. It will make more seeds. Each seed that grows starts a new life cycle.

## Conclusion

Plants and animals go through stages of change as they grow. These changes make up their life cycles. Living things of the same type go through the same stages.

Can you identify the stage of their life cycle these living things are in?



Babies are born, grow, and make new babies.

All living things die. But new living things will take their place. In this way, the cycle of life goes on and on.

Which animal or plant's life cycle do you want to learn more about?

## Glossary Index

<b>adult</b>	the stage in which a living thing is fully developed (p. 7)
<b>childhood</b>	the stage in the human life cycle after infancy (p. 7)
<b>egg</b>	the beginning stage in the life cycle of many living things (p. 6)
<b>embryo</b>	the early stage in which a plant or animal begins to grow (p. 6)
<b>infant</b>	a baby human (p. 7)
<b>larva</b>	the caterpillar or worm-like stage in the life cycle of some insects (p. 14)

<b>life cycles</b>	the changes that a living thing goes through during its life (p. 4)
<b>mammals</b>	animals that have live babies and make milk for them (p. 5)
<b>nymph</b>	a young insect in the stage of its life cycle in which it looks like a small adult (p. 12)
<b>pupa</b>	an insect in the stage of its life cycle in which it changes from a larva to an adult (p. 11)
<b>seedling</b>	a young plant growing from a seed (p. 16)