



LIFE·PAC[®]

Science



Alpha Omega Publications[®]

SCIENCE 503
ANIMALS: LIFE CYCLES
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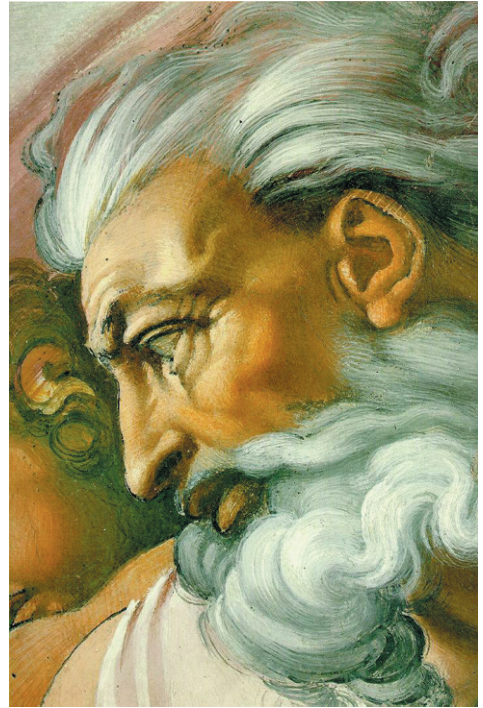
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INTRODUCTION

God has created a rich variety of animals. In the Book of Genesis, we read: “And God said, Let the waters bring forth abundantly the moving creature that hath life, and fowl that may fly above the earth in the open firmament of heaven. And God created great whales, and every living creature that moveth, which the waters brought forth abundantly, after their kind, and every winged fowl after his kind: and God saw that it was good. And God blessed them, saying, Be fruitful, and multiply, and fill the waters in the seas, and let fowl multiply in the earth. And the evening and the morning were the fifth day. And God said, Let the earth bring forth the living creature after his kind, cattle, and creeping thing, and beast of the earth after his kind: and it was so. And God made the beast of the earth after his kind, and cattle after their kind, and every thing that creepeth upon the earth after his kind: and God saw that it was good.” (Genesis 1:20-25)

Fish, birds, insects, lizards, cattle, and bears are all examples of the animals that God has created. In this LIFEPAK®, you will explore the rich variety of animals found in the waters and on the earth. You will also learn about some one-celled, animal-like protists such as amoeba and paramecium. You will examine aspects of the life cycles of these living things. You will learn about some similarities and differences among various animals and protists. You will also learn about their common structures and the ways they reproduce. Finally, you will have an opportunity to observe some of these living things close-up during experiments!



OBJECTIVES

Read these objectives. The objectives tell you what you should be able to do when you have successfully completed this LIFEPAK.

When you have finished this LIFEPAK, you should be able to:

1. Describe the life cycles of invertebrates.
2. Explain the differences between the life cycles of invertebrates.
3. Describe the life cycles of vertebrates.
4. Explain the differences between the life cycles of vertebrates.
5. Name the groups to which the animals belong.
6. Show the relationship of the structures of animals to their reproduction in a life cycle.

VOCABULARY

Study these new words. Learning the meaning of these words and their pronunciation will help you read and understand this LIFEPAK better.

amoeba (ə mē' bə). A microscopic, one-celled protist.

amphibians (am fib' ē ənz). Plural of amphibian. Animals that live part of their lives as water animals and part as land animals.

carnivores (kär' nə vorz). Animals that eat only other animals. They are also called meat-eaters.

chemical (kem' ə kəl). A material that may be found in nature or produced by man. Iron, oxygen, carbon dioxide, tin, and plastics are examples of chemicals.

extends (ek stendz'). Stretches out or reaches out.

flukes (flüks). Flatworms of a certain type.

fragmentation (frag' mən tā' shən). a method of asexual reproduction in animals by the division of the body into two or more pieces.

gills (gilz). The parts of a fish body that take oxygen from the water.

herbivores (her' bə vorz). Animals that eat only plants.

host (hōst). An animal that has another animal living in or on it.

invertebrates (in ver' tə brəts). Animals that do not have backbones. Insects, jellyfish, snails, spiders, and worms are examples of invertebrates.

larva (lär' və). The worm-like form of an early stage in the life cycle of some insects.

larvae (lär' vë). Plural form of larva.

maggot (mag' ət). The larva of a fly.

mammal (mam' əl). Vertebrate animal that bears its young alive and can produce milk with which to feed them.

metamorphosis (met' ə mōr' fə sis). The process by which a young larva (such as a tadpole) changes into the adult animal (a frog).

migrate (mī' grāt). To move from one place to another.

mollusks (mol' əsks). Animals with soft bodies. Adults often grow hard shells. A snail is an example of a mollusk.

nymph (nimf). The part of certain insect life cycles where the young animal has no wings or reproductive organs.

octopus (ok' tə pəs). A mollusk with a soft body and eight long arms.

omnivores (om' nə vorz). Animals that eat both plants and animals.

paramecium (par' ə mē' see um). A one-celled, animal-like protist that has a special shape.

parasites (par' ē sīts). Animals that live on or in other animals. They get their food from the hosts.

protozoans (prō tə zō ənz). A large group of one-celled protists.

pupa (pyü' pə). The form of certain insects between the time they are larvae and adults.

pupae (pyü' pē). plural for pupa.

reptile (rep' til). An animal that crawls or creeps. Some have shells. Others have scales. Turtles, snakes, and lizards are examples of reptiles.

salmon (sam' ən). A large fish found in the Atlantic or Pacific Oceans. They return to their home river streams to reproduce.

squid (skwid). A mollusk that lives in the sea.

tadpole (tad' pōl). The form of a frog immediately after hatching from an egg. It has gills and a tail.

testes (tes' tēz). The body parts of male animals where sperm is formed.

variety (və ri' ə tē). Different kinds or types.

vertebrates (vēr' tə brits). Animals that have backbones. Birds, fish, reptiles, and mammals are examples of vertebrates.

zoology (zō ol' ə gē). The science of the study of animals.

Note: These words appear in **boldface** print the first time they are used in this LIFEPAC. If you are unsure of the meaning when you are reading, restudy the definition given in this LIFEPAC.

Pronunciation Key: hat, āge, cāre, fār; let, ēqual, tērm; it, īce; hot, ōpen, ôrder; oil; out; cup, pūt, rüle; child; long; thin; /ʒh/ for then; /zh/ for measure; /ə/ represents /a/ in about, /e/ in taken, /i/ in pencil /o/ in lemon, and /u/ in circus.



SHARK

I. INVERTEBRATES

INTRODUCTION

In the previous LIFEPAC, Science 502, you learned that God has created a great **variety** of living things. You learned that scientists classify all living things into 5 kingdoms: animals, plants, fungi, protists, and monerans. In the previous LIFEPAC, you studied the life cycles of plants, fungi, protists, and monerans. In this LIFEPAC, you will learn about the life cycles, structures, and reproduction of animals. We will also cover a couple of examples of one-celled, animal-like protists in this LIFEPAC. We will cover these protists because, like almost all animals, they are able to move about in their environments.

God has created such a rich variety of animals that no one knows for sure how many kinds of animals there are! Scientists have classified and named over 1 1/2 million different kinds of animals. However, many scientists believe that there may be from 2 million to as many as 50 million different kinds of animals. Many new kinds of animals are discovered, named, and classified each year. The world of animals is exciting! The study of animals is called **zoology**, and scientists who study animals are called *zoologists*.

Review these objectives. When you have completed this section, you should be able to:

1. Describe the life cycles of invertebrates.
2. Explain the differences between the life cycles of invertebrates.
5. Name the groups to which the animals belong.
6. Show the relationship of the structures of animals to their reproduction in a life cycle.

Restudy these words. They will appear for the first time in Section I of this LIFEPAC.

amoeba	carnivores	extends
flukes	fragmentation	gills
herbivores	host	invertebrates
larva	larvae	maggot
mollusks	nymph	octopus
omnivores	paramecium	parasites
protozoans	pupa	pupae
squid	testes	variety
vertebrates	zoology	