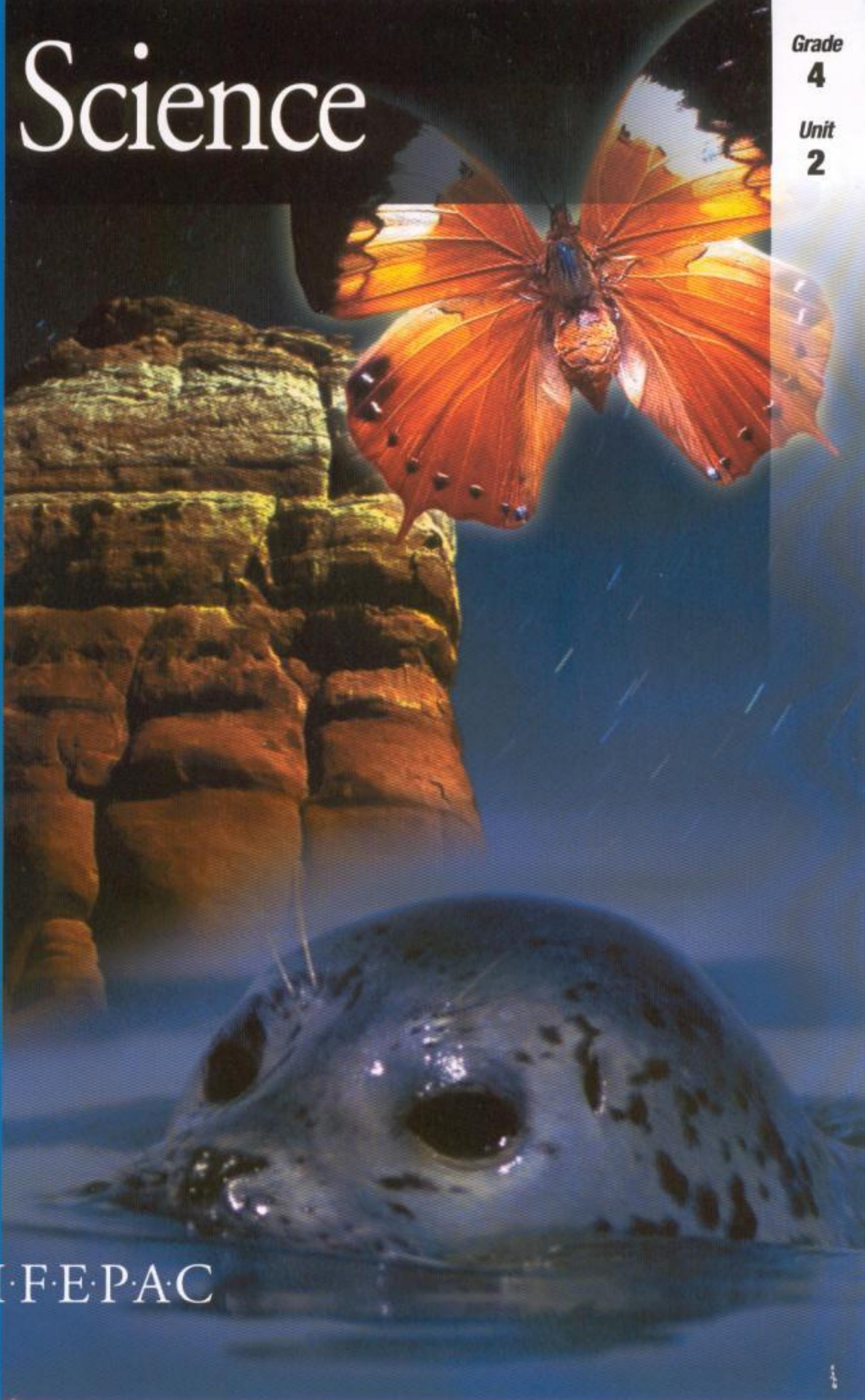


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Science

Grade
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2



L·I·F·E·P·A·C

SCIENCE 402

ANIMALS

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Author:

Editor:

Consulting Editor:

Revision Editor:

Merton B. Osborn, Ed.D.

Richard W. Wheeler, M.A.Ed.

Harold Wengert, Ed. D.

Alan Christopherson, M.S.



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ANIMALS

As you study this LIFE PAC, you will learn that animals are wonderfully made. Animals can travel long distances by walking, running, flying, or swimming. Some travel in all four ways. Others wiggle along from place to place. Animals eat and digest different types of food. You breathe by means of lungs, gills, tubes, and pores. In this LIFE PAC you will begin to understand how God provided in the Creation for the food, shelter, and instinct of animals. Man, too, has a part to play in taking care of animals as well as in the way he uses them for work, for fun, and as pets.

OBJECTIVES

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

When you have finished this LIFE PAC, you should be able to do the following:

1. Tell how animals differ in the ways they travel, eat, digest food, and breathe.
2. Tell how jaws and teeth of animals are made to help them eat.
3. List some differences between animals that live on the land and those that live in water.
4. Tell how mammals, birds, and insects do unusual things.
5. Explain how some animals keep certain territories for their own use.
6. Describe the wisdom of God in providing animals with instinct.
7. Explain why man is beginning to see the importance of protecting wildlife.
8. Tell what man is trying to do to provide protection for wildlife.

VOCABULARY

Study these new words. Learning the meanings of these words is a good study habit and will improve your understanding of this LIFE PAC.

amoeba (u mē' bu). An extremely small, one-celled animal.

aquarium (u kwer' ē um). A pond, tank, or bowl in which living fish are kept.

armor (är mur). A protective covering.

barbicel (bär' bu sul). Tiny hooks that make up part of the barb of a feather.

barbs (bärbz). Little feathers attached to the main feather of a bird.

belly (bel' ē). The under part of an animal's body

boa constrictor (bō' u kun strik' tur). A large, tropical American snake.

breeding ground (brē' ding ground'). The place where an egg is hatched or an animal is born and raised.

bumblebee (bum' bul bē). A large bee with a thick, hairy body.

chirp (chērp). A short, sharp sound made by some small insects and birds.

drone (drōn). A male honeybee.

equator (i kwā' tur). The line on a map dividing the Northern Hemisphere of the earth from the Southern Hemisphere.

evaporate (i vap' u rāt). To remove water.

extinct (ek stingkt'). Has died out and will be no more.

gill (gil). Part of the body of the fish used for breathing in water.

hive (hiv). House or box for bees to live in.

honeybee (hun' ē bē'). A bee that makes honey.

instinct (in' stingkt). Knowing something without needing to learn it.

invertebrate (in vēr' tu brit). An animal without a backbone.

ivory (ī' vur ē). A hard, white material present in elephant tusks.

migrating (mī' grāt ing). Traveling from one place to another or changing locations.

navigate (nav' u gāt). To follow a planned course.

ostrich (ôs' trich). A large bird that can run very fast but cannot fly.

pore (pôr). A very small opening.

python (pī' thon). A large snake.

radar (rā' dār). Machine for measuring radio waves.

rasp (rasp). A hard, grating sound.

refuge (ref' yüj). A shelter from danger or trouble.

reptile (rep' tul). A cold-blooded animal that creeps or crawls.

rudder (rud' ur). A flat piece of wood at the rear of a boat used for steering.

sanctuary (sangk' chü erē). A place of refuge or safety.

schedule (skej' ül). A timetable or list of leaving and arriving times.

scraper (skrā' pur). A part of a cricket's wing which helps make a chirping sound.

shrew (shrü). A mouse-like mammal that eats insects and worms.

spawning ground (spôn' ing ground'). The place where salmon are born.

sperm whale (spèrm' hwāl'). A mammal that lives in the ocean.

spout (spout). A stream or jet of water.

tern (tèrn). A sea bird.

tortoise (tôr' tus). A turtle living on land.

transgressor (trans gres' ur). One who goes beyond a law or command.

trespasser (tres' pus ur). One who goes on someone else's property.

ventilate (ven' tl āt). To change the air.

vertebrate (vèr' tu brit). An animal that has a backbone.

wheatear (hwēt' ir'). A small bird with white tail feathers that builds its nest on the ground.

Note: All vocabulary words in this LIFE PAC appear in **boldface** print the first time they are used. If you are unsure of the meaning when you are reading, study the definitions given.

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

I. HOW ANIMALS ARE STRUCTURED

This part of your LIFE PAC tells you how some animals travel, what some animals eat, and how some animals breathe. You will also learn some things about how animals digest their food.

SECTION OBJECTIVES

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

1. Tell how animals differ in the ways they travel, eat, digest food, and breathe.
2. Tell how jaws and teeth of animals are made to help them eat.
3. List some differences between animals that live on the land and those that live in water.

Restudy these words.

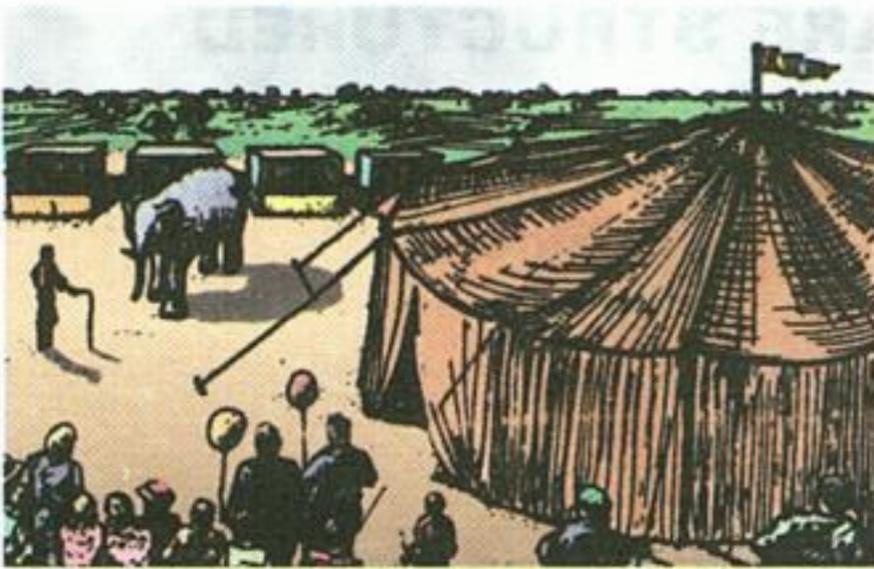
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python
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reptile
rudder

schedule
shrew
sperm whale
spout
tern
tortoise
vertebrate
wheatear

HOW ANIMALS TRAVEL

Have you ever gone to a circus or to the zoo? Did you notice that an elephant has four large, strong legs to hold him up and help him walk?



When God created elephants, He provided them with strong legs because the elephants weigh so much. The elephant is the largest of all land animals. A full-grown African elephant often weighs more than 10,000 pounds (4,600 kg). In spite of his size, an elephant can run as well as walk.

Elephants are mammals. Mammals are one class of five classes of animals called **vertebrates**. This word means the animal has a backbone. Animals that do not have backbones are called **invertebrates**. Mammals also have hair and most of them breathe by means of lungs. The female mammals make their own milk to feed their young. Mammals are warm-blooded animals. The word *warm-blooded* means that their blood stays the same temperature all the time.

There are two kinds of elephants in the world. One kind of elephant lives in Asia, the other kind in Africa. Both kinds have a large body, four strong legs, and long trunks. An adult elephant is about as tall as it is long. The elephant's trunk is a strong and useful part of the animal. It measures about 6 feet (2 m) long and weighs about 300 pounds (140

kg). He uses it to carry food to his mouth. Two teeth, called tusks, stick out from the elephant's upper jaw. The tusks of elephants are called **ivory**. The elephant uses his tusks for digging up food and for fighting. He also uses them for lifting and carrying heavy loads.

Because an elephant is so big and heavy we would expect him to be very noisy when he moves. However, a large herd of elephants can move out of a forest and

disappear without breaking a twig or making a sound. Because his ankles are located near the bottom of his legs, an elephant can walk easily and even slide down a steep bank or walk over sliding stones without stumbling or injuring himself. The elephant's foot is nearly round with a soft part of the bottom that acts like a cushion. If his foot sinks into the mud, he can pull his legs out easily because his feet become smaller when he lifts them.



Write the correct word in the blank.

- 1.1 An elephant has four large, _____ legs.
- 1.2 The elephant is the _____ of all land animals.
- 1.3 An elephant is called a _____.
- 1.4 There are _____ kinds of elephants in the world.
- 1.5 The elephant tusk is a long, hard _____.
- 1.6 A hard, white material present in elephant tusks is called _____.



Write true or false.

- 1.7 _____ Elephants are very noisy animals when they travel.
- 1.8 _____ Several elephants traveling together are called a herd.
- 1.9 _____ An elephant's foot is nearly round.
- 1.10 _____ Because of their great weight, elephants cannot get out of mud very easily.
- 1.11 _____ The elephants is the largest of all land animals.
- 1.12 _____ A full-grown African elephant can weigh as much as eight or ten thousand pounds.
- 1.13 _____ The elephant's ankle is located near the middle of the leg.
- 1.14 _____ Elephants can run as well as walk.

You already know that mammals are animals with hair and that the female mammal makes her own milk to feed her young. Over 3,500 kinds of mammals are in the world. Some are large like the elephant. Some are small like the **shrew**, which weighs less than a dime. The shrew is the smallest mammal.

The elephant is not the largest animal. The elephant is the largest *land* animal, but the whale is the largest animal of all the mammals.

You may not have thought of the whale as a mammal, since the whale lives in the ocean. Whales are not fish. Whales bear their young alive. They feed their babies with their own milk, breathe through their lungs, and have to hold their breath when they dive under the water. Whales are warm-blooded animals like land animals, not cold-blooded animals like fish.

Whales are shaped like fish, but whales' tails are flat. They swim by moving their tails up and down. A whale's nose forms a blowhole on the top of the head. Now and then the whale must come to the surface for air. This breathing produces what is called a spray or **spout**. The air in the lungs gets full of moisture. When the whale comes to the top of the water, it blows out its breath through the blowholes (nostrils) at the top of its head.

One kind of whale, called the **sperm whale**, is sometimes called a "living oil tank" because it stores so much oil in its head. Sperm whales are so valuable, because of their oil, that men have hunted them for centuries. So many have been killed that the sperm whale, and some of the other kinds of whales, are in danger of becoming **extinct**.



Place the letter and word or words in each blank to make a correct sentence.

- 1.15 Whales are _____ animals.
a. cold-blooded b. warm-blooded
- 1.16 Whales breathe by means of their _____.
a. mouth and gills b. lungs and mouth or nose
- 1.17 The whale's nose on the tip of its head is called a _____.
a. blowhole b. spout
- 1.18 The sperm whale is much desired by whalers because of the large amount of _____ which it has in its body.
a. blood b. oil



Write true or false.

- 1.19 _____ The elephant is the largest mammal in the world.
- 1.20 _____ The shrew is the smallest mammal.
- 1.21 _____ Whales are the largest fish in the world.
- 1.22 _____ Whales are cold-blooded animals.
- 1.23 _____ Fish are warm-blooded animals.
- 1.24 _____ The whale's tail is flat.
- 1.25 _____ Whales swim by moving their tails up and down.
- 1.26 _____ Whales can stay under water as long as a day or two without coming to the top.
- 1.27 _____ The blowholes of a whale are in the gills.
- 1.28 _____ Any kind of animal which has completely died off is said to be *extinct*.



Do this library research.

Look up *whale* in an encyclopedia. Write your answer to the question in the space provided. Use complete sentences.

- 1.29 How can whalers tell the difference among these three kinds of whales?
 - a. The blue whale
 - b. The right whale
 - c. The sperm whale



Blue Whale



Right Whale



Sperm Whale

Did you ever hear the cry of wild geese as they were flying south? They were on their way to warmer land. They were **migrating**. Geese fly in a pattern forming a V.



Flock of Geese

Wild geese are the highest-flying birds in the world. Some have been known to fly as high as 29,000 feet (9,000 m). This distance is the highest ever recorded for birds. However, most birds remain under the clouds when they are migrating.

The ability of birds to **navigate** long distances is amazing. Birds make their long trips without the help of chart or compass. One little bird called the **wheatear**, about the

size of a sparrow, travels every year all the way from Africa to Greenland. It travels on a fixed **schedule**. Nearly all of its trips are made at night. The bird flies over great stretches of water and wilderness. Who tells the bird where to go and when?

Do you know what bird flies the greatest distance? It is the Arctic **tern**. The Arctic tern migrates from the Arctic to Antarctica and returns. This round trip flight is 22,000 miles (35,000 km). The terns leave in August. They spend the winter in Antarctica. Then they return north in the middle of June.

Some birds travel by night; other birds travel by day. Some birds travel alone; others in flocks. Some take one route going, and another returning.

A scientist once said that a bird uses about the same type of equipment as a plane—wings, propellers, steering gear, slots, and flaps. Where do you think man got his idea of a flying machine with wings, propellers, steering gear, slots, and flaps?

What a wonderful God we have Who created birds in such a way that they can fly on such long trips without getting lost.



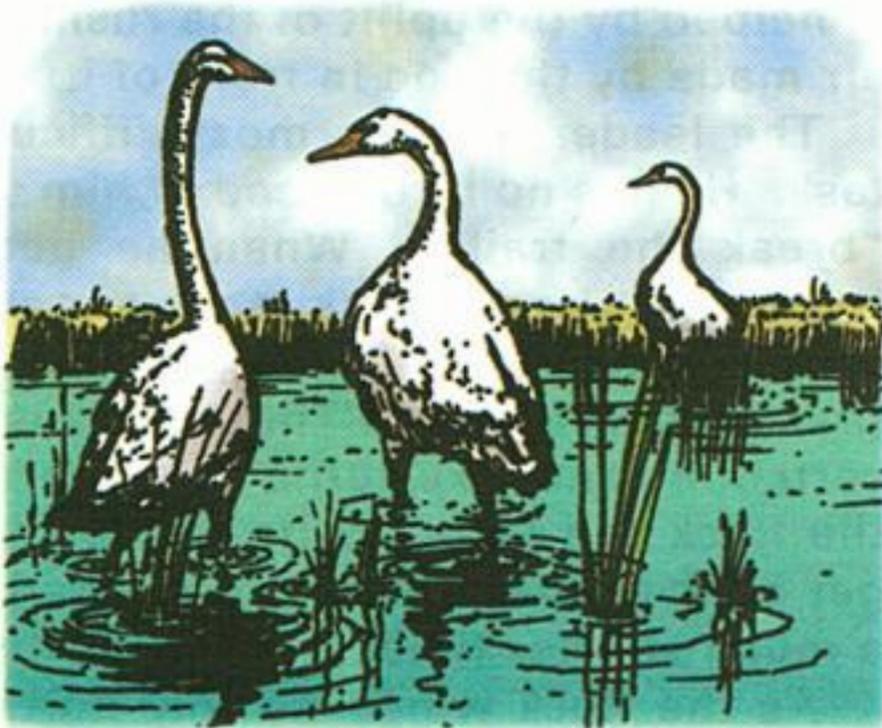
Select the word or phrase that best completes the sentence and place the letter and the words in the blank.

1.30

Navigate means to _____.

- a. tell a story
- b. wander
- c. follow a planned course
- d. run slowly

- 1.31 A schedule is a _____.
- | | |
|----------------------------------|--------------------|
| a. timetable of coming and going | c. location |
| b. trip | d. path to walk in |
- 1.32 The wheatear is a _____.
- | | |
|--------------|---------------------|
| a. vegetable | c. part of the body |
| b. grain | d. bird |
- 1.33 The bird that has a record of flying the greatest distance is the _____.
- | | |
|-------------------|---------------|
| a. whistling swan | c. wild goose |
| b. Arctic tern | d. sparrow |



Whistling Swans Collecting Food before Migrating

The scene is a South Carolina marshland. Hundreds of whistling swans are dipping their long, curving necks into the dirty marsh in search of food. They are looking for worms and shellfish and for seeds and roots of water plants.

Great excitement is in the air. Not only are the swans busy eating extra food to store energy for the long trip, but also they are calling back

and forth to one another with loud calls. They are getting ready to take off on a long, long flight to their northern **breeding grounds**. Their northern breeding ground is where they will build their nests and raise their young.

In the far Arctic the cold, winter months are ending. The snow is melting and running down into the rivers and to the ocean. The ice on the lakes is beginning to thaw and break up into small pieces. Winter is nearly over in the Arctic, and spring will soon be there.

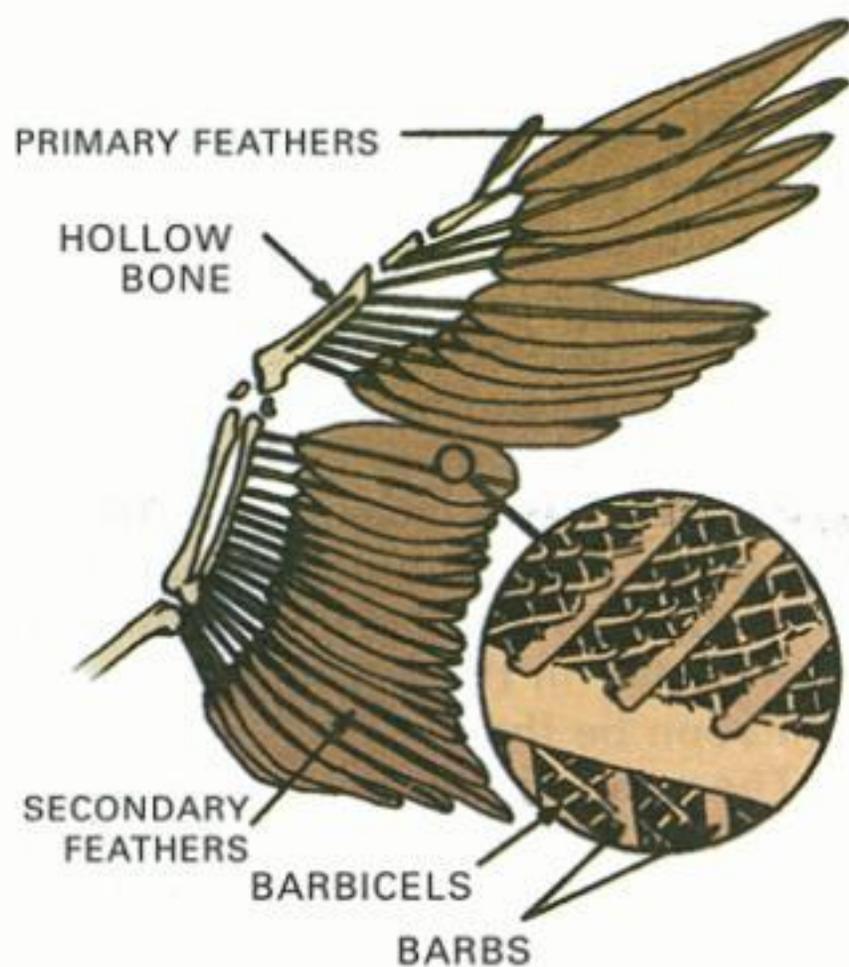
The nesting season for the swan is short. The whistling swans are getting ready to make their 3,000 mile (4,800 km) flight from South Carolina to the Arctic north where they will build their nests and raise their young. Since they do not fly with other birds, they will form a large flock of their own and travel the long distance together. This flock that is beginning to come together will number up to 500 swans.

When all is ready for the flight, a leader is found. The flock rises slowly from the marshland.

Even though most adult swans weigh somewhere between twelve and sixteen pounds (5 and 7 kg), they are able to rise in the air with the help of their powerful wings.

When birds were created, God fashioned them in such a way that they could fly easily. The bones of most birds are hollow, but they are very strong. The hollow bones make the bird lighter in flight.

Bird Wing



The feathers, too, are made in such a way as to help the bird fly. Each feather of a swan is made up of many little feathers. These little feathers are called **barbs**. You can see how they look under a microscope by studying the picture. Each barb is made up of a number of

little hooks called **barbicels**. These little hooks hold the barbs in place.

The migrating flock will soon reach a speed of from forty to fifty miles an hour (64 to 80 km an hour) as it speeds toward the Arctic.

There are two reasons why the swans can travel at such high speed. Like our modern jets, swans fly above the storms and above the mountains. They also fly in a pattern forming a V. By using this pattern, the leader acts as a "trail breaker" in the air for the others to follow. Each of the birds that follow is helped by the uplift of the rushing air made by the one in front of it.

The leader has the most difficult task. He has no bird ahead of him to "break the trail". When he gets tired, he drops back and a new leader takes over. This gives the first leader a rest. Thus, because certain swans take turns as leaders, the flock can increase its speed and get back to the breeding grounds in a much shorter time.

As the flock wings its way north, it stops from time to time to rest. Many years ago, a flock was returning to the Arctic in the month of March. As they started to light on one of the Great Lakes in New York State, they found the fresh water of the lake frozen over. They landed instead on the fast-moving water of the Niagara River. Can you guess what happened? They put their heads under their wings and floated gently down the river. Suddenly the river flowed faster and faster. Before they knew what was

happening, they had been washed over the falls, many of them to their death on the rocks below.



Niagara Falls

When Jack Miner, a famous bird watcher from Canada, heard about it, he went to Niagara Falls and found several wounded swans still alive. He took them home to his bird refuge in Kingsville, Ontario, Canada, and doctored their broken wings and legs. He placed them in

his bird **refuge**, which was nearly 300 miles (480 km) from Lake Erie where they had tried to land. The very first year that he placed them in his bird refuge, the wild swans changed their route. Since that year (1925) very few swans have gone over Niagara Falls. They have made their spring stop near Jack Miner's home where they have a good supply of food and where they know they are safe from harm while they rest from their long journey.

When the whistling swan's journey is over and it chooses its nesting place in the far north, it will select one near a body of water with an uneven shoreline and one at least nine acres in size. This selection is made because the bird needs a long runway to take off from the water. If all goes well at the nesting place, the swan will go back to the same place and the same nest year after year.



Write the correct answer in each blank. Refer back to the story if you need to.

- 1.34 Whistling swans build their _____ in the Arctic region.
- 1.35 Swans travel in _____.
- 1.36 Swans eat worms and shellfish as well as _____ and roots of water plants.
- 1.37 The place where the swans build their nests and raise their young is called a _____ ground.
- 1.38 The flocks of swans sometimes travel as much as _____ miles.

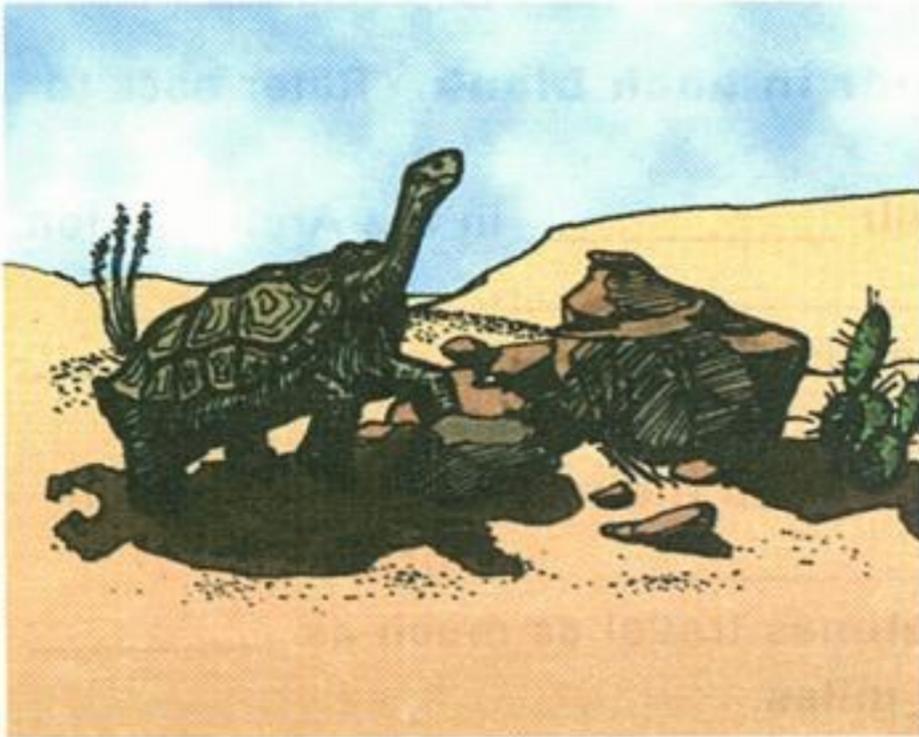
- 1.39 The nesting season for swans is _____.
- 1.40 The swan needs to have a long _____ to get into the air.
- 1.41 Swans spend the winters in the _____.
- 1.42 Swans nearly always go back to the same place to build their _____.
- 1.43 Migrating swans fly in a _____ pattern.



Match each column by writing the letter in the blank.

- | | | | |
|------|-------|--------------------------|----------------------------|
| 1.44 | _____ | North and South Carolina | a. barbs |
| 1.45 | _____ | feathers | b. bones |
| 1.46 | _____ | Arctic | c. winter home |
| 1.47 | _____ | leader | d. small hooks on feathers |
| 1.48 | _____ | hollow | e. nesting place |
| 1.49 | _____ | barbicels | f. trail breaker |

Reptile is an animal class that includes lizards, snakes, turtles, and crocodiles. All of these animals are cold-blooded. That is, they do not have any system for heating their



Tortoise

bodies from the inside. The reptiles get their heat from the sun, the ground, or the air around them.

Reptiles come in many shapes and sizes. Some reptiles spend most of their time swimming in the water. Others live all the time on the land. Still others live on land and in water at different times. They can swim in the water and walk on the land. Reptile groups include lizards, snakes, turtles and **tortoises**, and crocodiles. Lizards have legs, and they can walk or crawl. Several different kinds of lizards are found in many places in the world. There are more than 3,000 different kinds of snakes. Their sizes range from the tiny garter snakes only a few inches long, to the **python** and **boa**

constrictor, which measure twenty-five to thirty feet (7 to 9 m). Snakes have no legs and are forced to crawl on their **bellies** as they were commanded by God and as recorded in the book of Genesis. The turtles and tortoises wear **armor** to protect themselves.

Crocodiles are large crawling and swimming reptiles. They live in water most of the time. Crocodiles look like large lizards, but they are not lizards. They are from ten to twenty feet long (3 to 6 m) and have a heavy, horny skin.



Write the correct word on the blank.

Some words may be used more than once.

armor crawl reptile water
cold legs snake

- 1.50 The turtle is a _____.
- 1.51 The boa constrictor is a large _____.
- 1.52 Turtles have _____ to protect themselves from enemies.
- 1.53 God commanded the snake to always _____ upon its belly.
- 1.54 Snakes have no _____.
- 1.55 Crocodiles live in the _____ most of the time.
- 1.56 Most all reptiles are _____-blooded animals.
- 1.57 The python is a very large _____.
- 1.58 Lizards have four _____ and can walk or crawl.
- 1.59 _____-blooded animals have no way of heating their bodies from the inside.

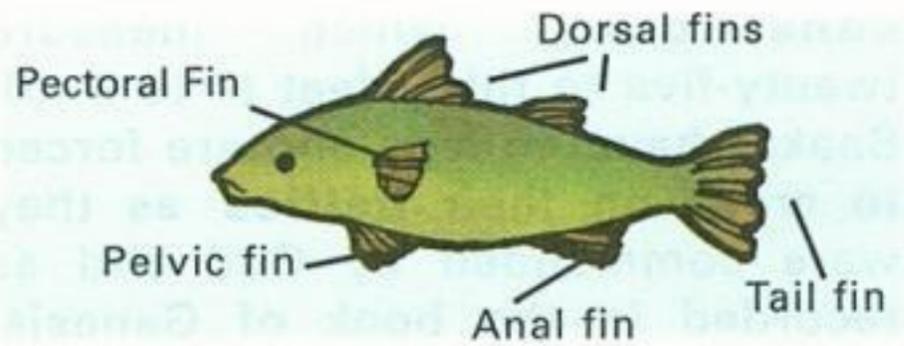


Do this activity.

- 1.60 Name four kinds of reptiles.
 - a. _____
 - b. _____
 - c. _____
 - d. _____

Fish are backboned animals that live and move in the water. They have several fins to help them travel from place to place in rivers, lakes, and oceans. The fins are like broad paddles. They help to move and

guide the fish through the water. As fish move their bodies, they use their tail fins like oars on a boat. The other fins are used as **rudders** and brakes to keep the fish upright in the water and guide its movement.



Take a few minutes to look at the fish in the schoolroom **aquarium** or in one you may have at home.

Answer the following questions in complete sentences.

1.61 How did God create the fish to live and move within water?

1.62 How does a fish swim? _____

1.63 How is a fish able to go through the water?

1.64 How does a fish turn? _____

1.65 How are fish's scales placed? _____



Look up the subject FISH in an encyclopedia.

1.66 On the lines below, write four good sentences that tell something about fish. Do not copy the sentences exactly from the encyclopedia. Write the sentences in your own words.



Teacher check _____

Initial

Date

HOW ANIMALS EAT AND DIGEST FOOD

All cats, including the house cat, are meat-eaters. They have long, sharp teeth. Members of the cat family tear the meat from the bone and chew it before swallowing it. Tigers, lions, leopards, and house cats are all members of the cat family.

A dog's jaws and teeth are like the other meat-eating animals'. The dog's teeth help prepare the food for digestion by chewing and grinding it.

The teeth of the sheep are made for eating grass. When we compare the jaws of the cat or dog with those of a sheep, we see that cats and dogs have long, sharp teeth. Sheep have no cutting teeth on their upper jaw.

Digestion takes place in the stomach. The food is broken into small pieces, and special juices break it into a liquid. This liquid is then absorbed into the blood and taken to all parts of the body.



Digestive System of a Cat



Answer these questions in a few words.

- 1.67 After a cat eats its food, where does the food go to be digested? _____
- 1.68 A pet cat is related to what wild animals? (Name as least two.) _____

- 1.69 Why do members of the cat family have sharp teeth?

- 1.70 In what way are the teeth of a sheep different from those of a cat or dog? _____

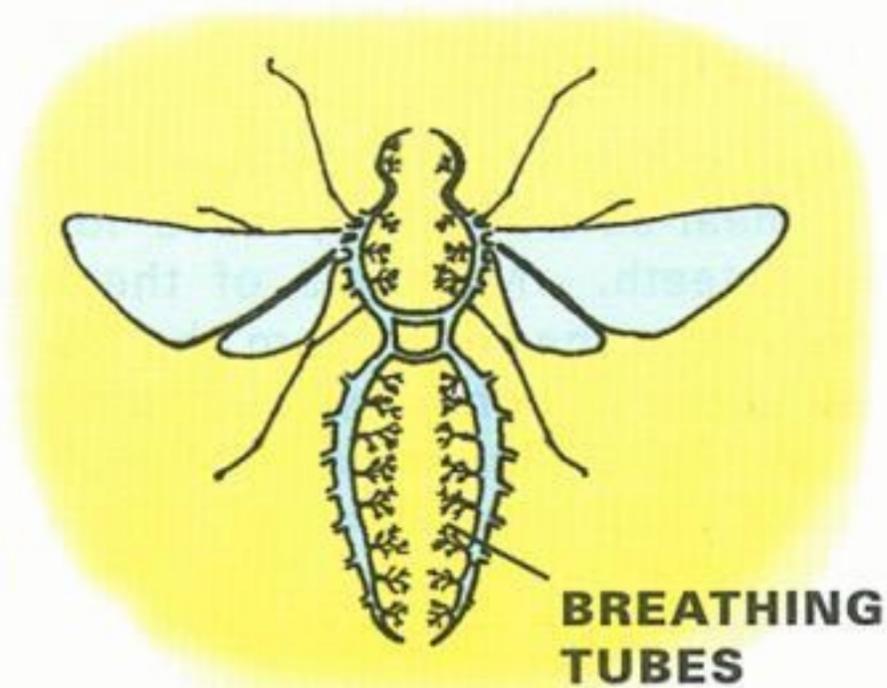
HOW ANIMALS BREATHE

All animals must have oxygen in order to get energy. Some very tiny animals, such as the **amoeba**, take in air over the whole surface of their body. Animals that live in the water, such as fish, take in water through their mouths, and let it out through their gills. Oxygen is in the water and is used by the body of the fish before it goes out the gills.

Mammals breathe by means of lungs. As they take in air through the mouth or nose, it goes down the windpipe and into the lungs. From there the oxygen passes to the blood and is carried to every part of the body.

Insects have many, many tubes in their bodies. These tubes reach to every part of the insect's body. They carry air to different parts of the insect's body.

Reptiles such as lizards, snakes,



and turtles breathe by means of lungs. Amphibians, such as salamanders, breathe by means of lungs, gills, and even through their skin.

Birds have air sacs as part of their lungs. These air sacs give the bird extra air and oxygen, which the birds need to help them fly long distances.



Write the correct answer on the blank.

- 1.71 Mammals have lungs for _____.
- 1.72 Insects breathe through tiny _____ which go to all parts of their bodies.
- 1.73 A mammal takes in air through its mouth and _____.
- 1.74 The air goes down through a mammal's windpipe and into its _____.
- 1.75 A reptile breathes by means of _____.
- 1.76 Birds have air _____ as part of their lungs.
- 1.77 The air sacs help the birds have more _____ in order to make long flights.
- 1.78 Fish take water in through their mouths and let it out through their _____.

- 1.79 The _____ in the air and water makes it possible for animals to live and to have energy.
- 1.80 The amoeba takes in air through the surface of its whole _____.



Review the material in this section to prepare for the Self Test. The Self Test will check your understanding of this section. Any items you miss on this test will show you what areas you need to restudy.

SELF TEST 1

Match these items (each answer, 2 points).

- | | | | | |
|------|-------|--------------|----|-----------------|
| 1.01 | _____ | tusk | a. | windpipe |
| 1.02 | _____ | Arctic nests | b. | fins and gills |
| 1.03 | _____ | armor | c. | tigers |
| 1.04 | _____ | fish | d. | ivory |
| 1.05 | _____ | pet cats | e. | turtle |
| 1.06 | _____ | sheep | f. | whistling swans |
| 1.07 | _____ | lungs | g. | barbs |
| 1.08 | _____ | feathers | h. | eat grass |

Write true or false (each answer, 2 points).

- 1.09 _____ Swans migrate in flocks.
- 1.010 _____ Most bones of birds are hollow.
- 1.011 _____ A fish takes in water through its gills.
- 1.012 _____ Whalers do not kill the sperm whale because it has no value to them.
- 1.013 _____ Fins of a fish help it to breathe.
- 1.014 _____ Whales are warm-blooded animals.
- 1.015 _____ Lions are meat-eaters.
- 1.016 _____ Sheep have no cutting teeth in their upper jaws.
- 1.017 _____ Fish are cold-blooded animals.

- 1.018 _____ Insects breathe through tiny tubes.
- 1.019 _____ The whale is the largest of all mammals.
- 1.020 _____ The leader of a migrating flock of birds has the easiest job of all because he flies in front.
- 1.021 _____ Whales breathe by means of gills.
- 1.022 _____ Fish have several fins.
- 1.023 _____ Jack Miner shot many swans when they stopped to rest at Niagara Falls.
- 1.024 _____ Swans usually go back to the same place year after year to raise their young.
- 1.025 _____ *Navigate* means to take oxygen from the air.
- 1.026 _____ The elephant is the largest land animal
- 1.027 _____ Some birds travel long distances.
- 1.028 _____ Pythons are very tiny fish.
- 1.029 _____ Snakes usually have two legs and a long tongue.
- 1.030 _____ Snakes (serpents) are mentioned in the Bible.
- 1.031 _____ An elephant has three large, strong legs.
- 1.032 _____ Most reptiles are warm-blooded animals.

Write the correct letter and answer on each blank (each answer, 3 points).

- 1.033 Several elephants traveling together are called a _____.
 a. flock b. migration c. herd.
- 1.034 Swans spend the winter in the _____.
 a. Arctic region b. South c. west
- 1.035 *Navigate* means to _____.
 a. follow a b. protect birds c. eat meat
 planned course
- 1.036 The jaws of a sheep and a lion are _____.
 a. exactly the b. about the c. much different
 same same
- 1.037 Members of the cat family are _____.
 a. grass-eaters b. meat-eaters c. neither of these

- 1.038 A place where birds are protected from harm is called a _____.
a. bird refuge b. bird bath c. bird migration
- 1.039 The bird that has a record of flying the greatest distance is the _____.
a. Arctic tern b. whistling swan c. wheatear
- 1.040 The vertebrate animals are those with _____.
a. gills b. backbones c. four legs

Complete these items (each numbered item, 4 points).

- 1.041 Name four kinds of reptiles.
a. _____
b. _____
c. _____
d. _____
- 1.042 Name four things that are true about mammals.
a. _____
b. _____
c. _____
d. _____
- 1.043 Name four things that are true about swans.
a. _____
b. _____
c. _____
d. _____



Possible Score 100

My Score _____

Teacher check _____

Initial

Date

II. HOW ANIMALS ACT

You have had a chance at home, no doubt, to watch animals at work and play. You have probably visited a zoo. You have seen dogs and cats at play. You have seen many kinds of animals as they have moved about. You may have taken a ride on a horse or, if you live on a farm, helped care for the animals.

This part of your LIFEPAK will help you know more about mammals. It will help you know

how fish, birds, reptiles, and insects act and how they help and serve us.

Almost everyone likes animals. The Bible mentions them often. The Bible tells how God created them and blessed them. "And God said (Genesis 1:24), Let the earth bring forth the living creature after his [own] kind, cattle and creeping thing, and beast of the earth after his [own] kind: and it was so."

SECTION OBJECTIVES

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

3. List some differences between animals that live on the land and those that live in water;
4. How mammals, birds, and insects do unusual things.
5. Explain how some animals keep certain territories for their own use.

Restudy these words

bumblebee
chirp
drone
evaporate
hive

honeybee
ostrich
rasp
scraper

spawning ground
transgressor
trespasser
ventilate

MAMMALS

For many years, people in all parts of the world have kept and enjoyed animals for pets. Some of the most common pets are dogs, cats, birds, and fish. Many people keep such unusual pets as raccoons, monkeys, skunks, and even alligators.

Dogs have been called man's best friend. They are given this title

because of their loyalty and devotion to their masters. Dogs are friendly and obedient and give pleasure to mankind in work, play, and sport.

Dogs help in many ways. They can be trained to guard children, homes, and property. They frighten burglars away and wake up families in case of fire. The seeing-eye dog

has been trained to lead a blind person across the street. He watches over his master each hour of the day. During 1880 in Switzerland, a Saint Bernard by the name of Barry rescued forty persons when they were lost in the snow. A few years ago, a pet dog and a little child were left in the back seat of a car. The car was in the parking lot, and the family was in the store shopping. The car caught fire. Smoke was pouring out above the window, which had been left rolled down a little way. Before the father could reach the car, the dog had pulled the child through the opening in the window to safety.



Pet Cat

House cats are one of the most popular pets. Although they are friendly animals, they usually want to have their own way. To train cats takes longer than to train dogs. Cats help by catching rats and mice in homes, barns, stores, and warehouses. They learn many tricks and have good memories. They

even make up rules for games they like to play.

A cat named Toby enjoyed playing hockey. Every morning he went to the family room before breakfast. There he waited for the family to join him in his favorite game. They would push a round, wrapped candy mint from one end of the long room to the other. Try to, that is! Toby would rush out from the corner where he was waiting. He would try to stop the candy or bat it back like a hockey player pushing a puck. When he had success with several tries, he would sometimes turn a somersault. When he failed, he would go back to his corner and soon want to quit. He seemed to need success to keep him happy.

In many places in the world today, animals work for man. In the Arctic region a child who is sick is rushed to the hospital on a sled pulled by a team of Eskimo dogs. In northern England, Shetland ponies have been used in the coal mines. Because they are so useful in hauling coal out of the dark mines, they are called pit ponies and are protected by law.

In the Bible we are told that man shall have dominion over the animals. *To have dominion* means *to have the rule over*. "And God said (Genesis 1:26), Let us make man in our image, after our likeness: and let them have dominion [rule] over the fish of the sea, and over the fowl [birds] of the air, and over the cattle, and over all the earth, and over every creeping thing that

creepeth upon the earth." You will remember from your Bible stories that a dove served Noah by letting him know when the waters had gone down after the Flood. In another

place in the Old Testament, we are told about the ravens (birds) that brought bread and meat to the prophet Elijah in the wilderness.



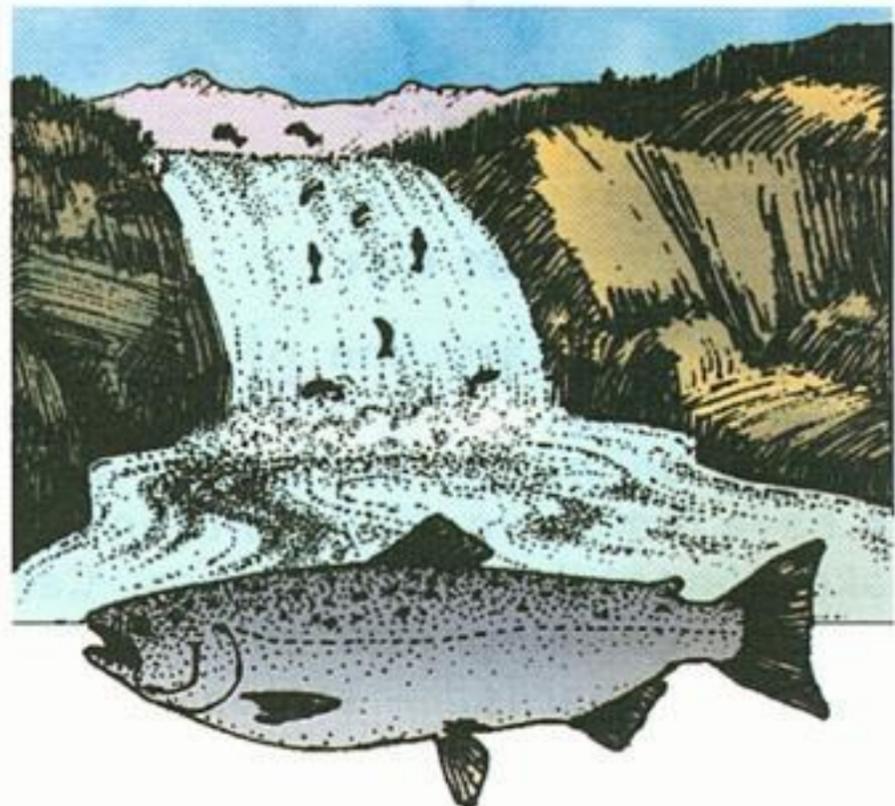
Write true or false.

- 2.1 _____ Dogs are usually devoted and loyal friends of children and adults.
- 2.2 _____ Dogs protect people in many different ways.
- 2.3 _____ It usually takes a longer time to train a dog than it does a cat because of its size.
- 2.4 _____ The Shetland pony is used in many countries to pull heavy loads.
- 2.5 _____ Many tame and wild animals are mentioned in the Bible.
- 2.6 _____ God tells man in His Word to have dominion over the animal world.
- 2.7 _____ *To have dominion means to be kind to animals and let them do whatever they want to do.*
- 2.8 _____ The birds came and fed the prophet Elijah with bread and meat.

FISH

The life story of the chinook salmon is very exciting. It begins in the clear, cold waters of a mountain stream in western Canada. It is a bright autumn day. The sun is shining. The air is cool and clear. The salmon scrapes out a channel about two feet long at the bottom of the stream. When the water temperature is just right (about 50° F, 10° C), the female begins to lay her eggs. She lays about 1,000 at a time until she has laid between 10,000 and 30,000 eggs in the sand. After

Salmon



the eggs are laid, they are covered with sand and gravel. Then the two parents drift down the stream and die.

In about seventy-five days the eggs begin to hatch. The tiny salmon stay in the quiet stream until they are about a year old. Then they are about five inches long. Something within tells them that it is time to move downstream. They start toward the great Pacific Ocean, which they have never seen. Many are caught and eaten on the way, but some will live. By that time they are eight to ten inches long. At that stage they are called *smolts*. After a long, dangerous journey some of the smolts reach the salty ocean. There the little fish find plenty of food and grow bigger and bigger. After four or five years have gone by, they will have grown to weigh as much as

twenty pounds (9 kg). At that time they are full-grown salmon.

Then something within the adult salmon causes it to want to seek the same stream from which it came. It starts the long, dangerous trip up the same river on its way to the **spawning ground** where it was hatched. While the trip downstream was dangerous, the journey upstream is much more difficult. Besides swimming against the current, the salmon must leap over many waterfalls. At times it leaps as much as fifteen feet (5 m) to push itself over the top. Finally, it finishes its travels and reaches the spawning ground.

There the cycle of life begins all over again. The male fish seeks out a partner, the female fish lays eggs, and another group of salmon will be born.



Complete the sentence by writing the correct letter and answer from the box in the blank.

| | | | |
|----------|--------------|------------|---------------|
| a. ocean | d. five | g. 30,000 | j. hatched |
| b. one | e. a stream | h. fifteen | k. waterfalls |
| c. 1,000 | f. difficult | i. two | |

- 2.9 The little salmon hatches from an egg that has been laid in _____.
- 2.10 The female salmon lays about _____ eggs at a time.
- 2.11 It takes about _____ days for the salmon eggs to hatch.
- 2.12 The little fish stay in the stream where they were born until they are about _____ year(s) old.

- 2.13 The smolts remain in the ocean for about _____ years before returning to their spawning grounds.
- 2.14 On their way back to the spawning ground, the salmon must leap some high _____.
- 2.15 Some of the waterfalls may be as high as _____ feet.
- 2.16 The upstream travel of the salmon is very _____.
- 2.17 The salmon have no trouble finding food in the salty _____.
- 2.18 A spawning ground is a place where the salmon were _____.
- 2.19 The female salmon sometimes lay as many as _____ eggs.
-

BIRDS

The African weaverbird is the most skillful of all birds in nest building. A male weaverbird gets a long blade of grass. He flies with it to a branch of a tree, holds one end of it down with his foot, and wraps the grass around the branch with his beak. Then he ties a knot in it. A boy scout would have to practice to tie a better knot. Yet the weaverbird ties it without practice.

He gathers more grass and weaves a hollow nest with a little entrance at the bottom. He makes a dividing wall inside to keep the eggs from falling out the entrance. He may use as many as three hundred pieces of grass and tie many knots in making a single nest.

Most birds build nests to hold their eggs and shelter their young. Birds build many different kinds of nests. An example of a very simple

nest is that of the **ostrich**. These strange birds kick or scratch a hole in the ground about eight feet across and eight inches deep.

The female ostrich lays from six to twelve large eggs in the nest. Both the male and the female sit on the nest and wait until the nest is full of eggs. Then they take turns keeping them warm. The female usually sits on the nest from nine o'clock in the morning until four o'clock in the afternoon. Then the male takes his turn. He sits through the night from four o'clock in the afternoon until nine o'clock in the morning. In this way the eggs are cared for every minute, and the growing chicks in the eggs will become neither too hot nor too cold.

After about six weeks, the eggs hatch. The little chicks grow rapidly. By the time they are a month old,

they can run as fast as their parents.

An old belief is that the ostrich hides its head in the sand when it is frightened. This story is not true. When an ostrich is frightened, he tries to hide by lying flat on the ground with his head and neck stretched out flat. From a distance, it looks as though he has buried his head.

If you watch any songbird for several hours, you will learn some very interesting things about it. If you watch it long enough, you will discover that it has taken over a certain territory. While a bird's song may sound like a cheerful greeting to a sunny day, scientists tell us that this song may be a warning to other birds to stay out of his territory.

Notice how the bird goes again and again to the same tree branch. Or perhaps he picks a certain fence post or telephone pole. Sitting there, he claims the property and

will guard it against all rivals. If a rival bird pays no attention to the warnings, he may be attacked.

Two rival birds will chase each other from one territory to another and back again. Sometimes they fight. They battle each other in midair. These fights do not usually result in injury to either bird. The one who is the **transgressor** or **trespasser** usually retreats to his home ground.

The final size of a bird's territory depends much upon (1) the bird's success in driving off his rivals (2) the size of territory the bird needs, and (3) how much food is available. Although we cannot see the dividing lines, the birds know exactly where their territory ends and other territories begin.

You may be able to discover and to tell your classmates many other interesting facts about birds if you watch them closely enough.



Write true or false.

- 2.20 _____ The African weaverbird is able to tie knots in grass to build his nest.
- 2.21 _____ This little bird must spend several days learning to tie knots.
- 2.22 _____ The entrance to the nest is at the bottom.
- 2.23 _____ Many birds have possession of and hold certain territories.
- 2.24 _____ When disputes arise over territory between two birds, the trespasser usually wins.

Answer the following question.

2.25

What three things does the size of one bird's territory depend upon?

a. _____

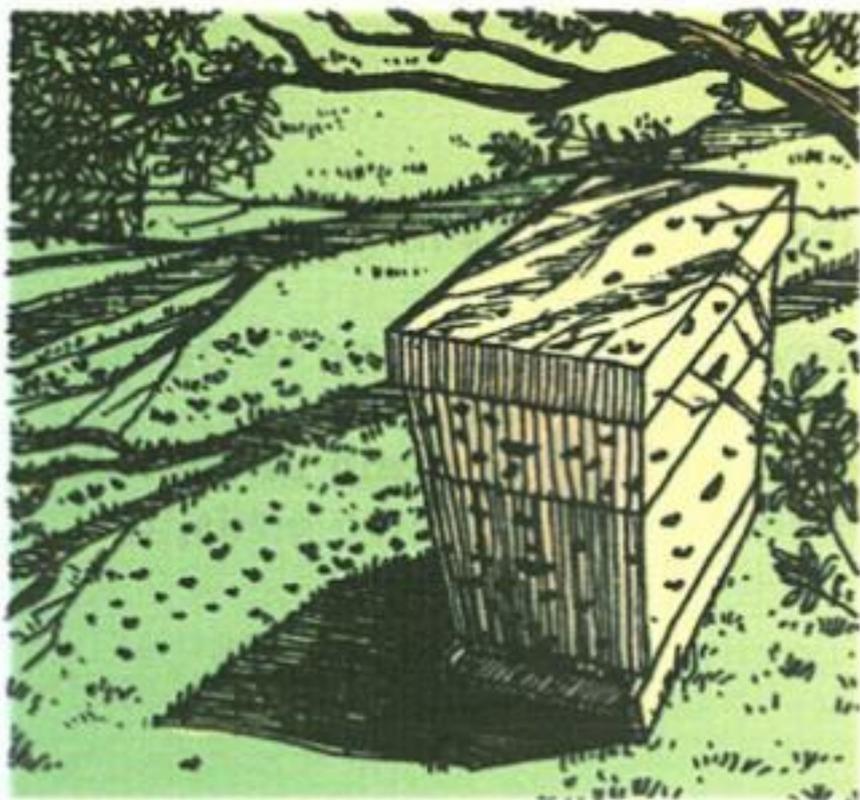
b. _____

c. _____

INSECTS

Scientists have discovered more than 10,000 different kinds of bees. The largest of the bees is the **bumblebee**. One of the smallest is the dwarf **honeybee**. Bees belong to the insect family. Bees exist in nearly every part of the world. They are the only insects that make food that can be used by man.

Like most insects, bees have three pairs of legs and four wings. The worker bee's hind legs have an area called "pollen baskets." These "baskets" are used to carry the pollen from the flowers to the **hive**.



Beehive and Bees

We can learn some lessons from the little honeybees. They live in a honeybee city, or hive. Only one queen is in the whole hive with a few male bees, called **drones**.

Of the 75,000 or more bees in a hive, most of them are worker bees. They have many different kinds of work to do. Some gather pollen from flowers. Others build honeycombs out of wax from their bodies. Some **ventilate** the hive. In hot weather most of the workers leave the hive to get rid of the heat of their bodies. Several workers stay at the entrance and fan their wings very fast. This fanning drives the air into the hive. Others bring water in and carefully wet the surface of the honeycomb. As the water **evaporates**, it cools the food supply. In this way the hive is kept at an even temperature of 95° F (35° C). In the winter when the hive begins to get too cold, the workers gather at the top of the comb and make as much heat as possible. From these many activities we can begin to see the wisdom of God in creating these insects. They have

their own air conditioning system with which to ventilate, cool, and heat their homes.

When the worker bees want to look for flowers, they do not start out on their own without knowing where they are going. Scouts have already been sent out to find the best flowers. When the scouts find them, they fly back to the hive. The

scouts let the other workers know where the flowers are by performing a dance. When the dance is ended, the workers know how far and in what direction they will have to fly. They also know what kind of pollen they will be gathering. Hasn't God made a wonderful provision for the honeybees as they work together to make food for us?



2.26

Do this research.

Look up the subject of bees in one or more encyclopedias. Also use one or two library books to learn more about honeybees. You may wish to look at books in a public library. You may wish to ask your father or mother to help you. After you have done your research on the honeybee and have taken careful notes, write a short story on one of the following topics:

- a. The Dance of the Honeybee
- b. The Sting of the Honeybee
- c. How Bees Make Wax
- d. Keeping Bees as a Hobby
- e. How Honeybees Make Honey
- f. Keeping Bees for Money

Write your story, in your own words, on separate paper. Write at least two paragraphs. Check your spelling and punctuation. Be sure to begin each sentence with a capital letter.

When you have finished and corrected your story, put a check here.

Now have the teacher check your story with you.



Teacher check _____
Initial Date

Now you are ready to copy your finished story in your very best handwriting. Give it to your teacher for final checking.



On the lines below, copy the first sentence of your story.

2.27

My first sentence _____



Complete these activities.

2.28

One main idea of my story is _____

2.29

A supporting detail of this main idea is _____

2.30

A second main idea of my story is _____

2.31

A supporting detail of the second main idea is _____



Teacher check _____

Initial

Date



Review this reading rule and do the practice activities.

When a single consonant comes between two vowels in a word, the word is usually divided **before** the consonant if the first vowel is **long**.

Example: spider — spi/der (long *i* before *d*)

Write each word in the blank, dividing it into syllables.

2.32

tiger _____

2.33

nature _____

2.34

locate _____

2.35

moment _____

2.36

motel _____



Review this reading rule and do the practice activities.

When a single consonant comes between two vowels, the word is usually divided **after** the consonant if the vowel is **short**.

Example: honey — hon/ey (short *o* before *n*)

Copy the underlined words in these sentences and divide them into syllables.

2.37

Migrating birds travel long distances. _____

- 2.38 The salmon swam upstream in the river. _____
- 2.39 Some animals have some very strange habits.

- 2.40 The squirrel is a timid animal. _____



Circle the word in each line that does NOT have the same double vowel sound as the first word in that row.

- | | | | | | |
|------|-------|-------|--------|-------|-------|
| 2.41 | hoot | toot | took | root | loot |
| 2.42 | book | shook | look | boot | brook |
| 2.43 | shout | pout | bought | out | doubt |
| 2.44 | toil | coil | spoil | point | owl |



Form a word from each of these letter sounds and write it in a sentence.

- | | | |
|------|----|-------|
| 2.45 | oo | _____ |
| 2.46 | oo | _____ |
| 2.47 | oi | _____ |
| 2.48 | ou | _____ |



Teacher check _____

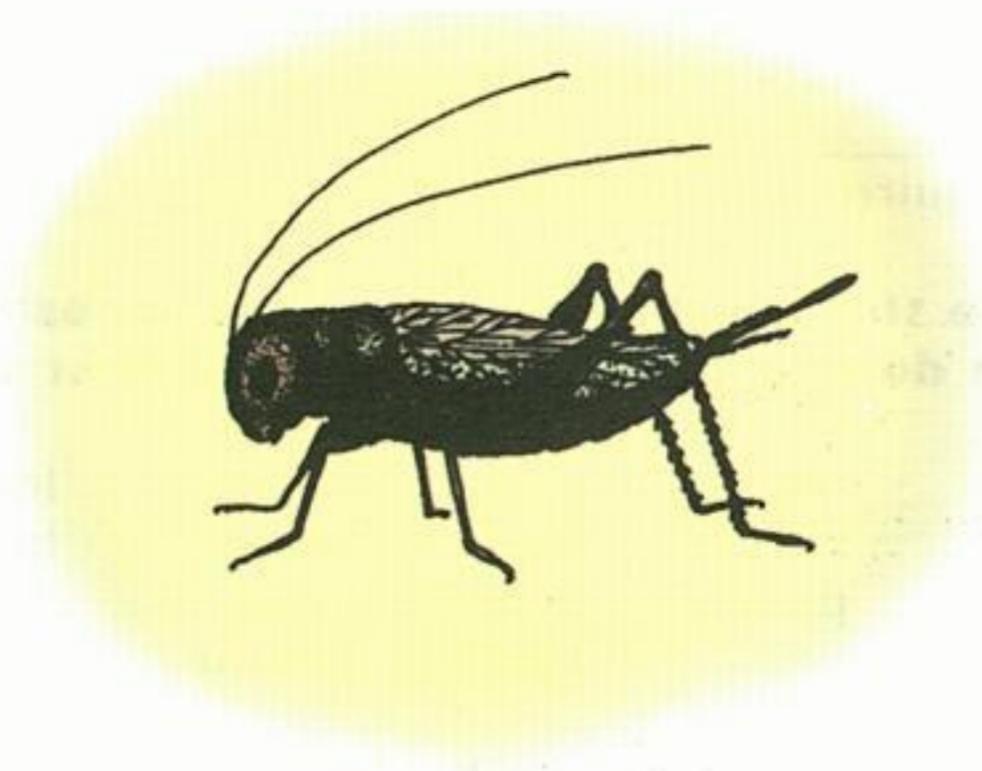
Initial

Date

Another interesting insect is the cricket. Only the male cricket can sing. Perhaps you have heard crickets singing on a warm summer evening. The **chirps** are made when crickets hold their wings at an angle of 45 degrees and rub them together. On each wing is a **rasping** area, called the *file*. On the same wing is another area called the **scraper**. When these two parts are rubbed together, a chirping sound is heard.

a tree cricket chirp and counting the chirps you can tell the temperature of the air? You do it this way. Write it down in your nature notebook and try it the next time you hear a cricket chirping. Count the number of cricket chirps in fifteen seconds. Add thirty to the number of cricket chirps. The answer will be the temperature of the air. For example, if a cricket chirps fifty times in fifteen seconds, the temperature is fifty plus thirty or about 80° F (26° C).

Did you know that by listening to



Cricket



Write the correct words in the blanks.

- 2.49 If you listen to a tree cricket and count the number of _____ in fifteen seconds, then add
- 2.50 _____ to this number, the resulting number will
- 2.51 be equal to the _____ of the air.



Review the material in this section to prepare for the Self Test. The Self Test will check your understanding of this section and will review the other section. Any items you miss on this test will show you what areas you need to restudy.

SELF TEST 2

Select the correct words from the list below and write them in the blanks (each answer, 3 points).

- | | | |
|--------------|-----------------|--------------|
| Bible | protect | territory |
| cold-blooded | rose | warm-blooded |
| extinct | rule | weaverbird |
| ivory | spawning ground | |

- 2.01 Whales are _____ animals.
- 2.02 Fish are _____ animals.
- 2.03 Any kind of animal that has completely died off is said to be _____.

- 2.04 Many wild and tame animals are written about in the _____.
- 2.05 To have *dominion over* means to have _____ over.
- 2.06 Dogs _____ people in many different ways.
- 2.07 The place where the salmon are born is called a _____.
- 2.08 The most skillful of all birds in building nests is the African _____.
- 2.09 Most birds try to keep control over a certain _____.
- 2.010 An elephant's tusks are made of a material called _____.

Write true or false (each answer, 2 points).

- 2.011 _____ A hive is a place where salmon spawn.
- 2.012 _____ Lions are meat-eaters.
- 2.013 _____ An ostrich can run very fast.
- 2.014 _____ Some birds travel long distances.
- 2.015 _____ An ostrich is a bird that has two legs and does not build a nest for its eggs.
- 2.016 _____ A trespasser is one who goes onto someone else's territory without permission.
- 2.017 _____ Snakes usually have two legs and a long tongue.
- 2.018 _____ Whales are shaped like fish but have flat tails.
- 2.019 _____ Elephants travel in herds.
- 2.020 _____ Whales are the largest fish in the ocean.
- 2.021 _____ The sperm whale has a large amount of oil in its head.
- 2.022 _____ Snakes (serpents) are mentioned in the Bible.
- 2.023 _____ Whalers cannot tell the difference between the whales they are hunting without catching them.
- 2.024 _____ The dove is mentioned in the Old Testament.
- 2.025 _____ Crocodiles live in the mountains most of the time.

- 2.026 _____ A bird's "territory" depends upon the size needed, his success in driving off other birds, and how much food is available.
- 2.027 _____ Most reptiles are warm-blooded animals.
- 2.028 _____ Elephants are very noisy when they travel.

Answer these questions (each answer, 5 points).

2.029 How can one tell the temperature of the air by listening to a tree cricket chirp? _____

2.030 How do honeybees ventilate their hive? _____

Write the correct words on the blanks (each answer, 4 points).

2.031 The _____ is the largest mammal.

2.032 When a whale comes to the surface of the water, it blows its breath through nostrils called a _____.

2.033 The _____ is the smallest mammal.

2.034 The chirp of the cricket is made with its rasp and _____.

2.035 Whales breathe by means of their _____ and mouth or nose.

2.036 Scout bees let other bees know where to go for honey by doing a _____.

| | | |
|---|---------------------|--------------------------|
|  | Possible Score 100 | My Score _____ |
| | Teacher check _____ | Initial _____ Date _____ |

III. HOW ANIMALS ARE PROVIDED FOR AND PROTECTED

Would you like to learn who or what sent and received the first **radar** signals? It was a furry little mammal not much larger than a mouse. Do you know how a homesick turtle finds its way home through hundreds of miles of ocean? In the first part of your LIFE PAC, you learned about mammals, fish, birds, and insects. In this part of your LIFE PAC, you will think about the instincts God has given to animals. You will also think about what man has done and is doing to provide for and to protect animals, both tame and wild.



Bat

SECTION OBJECTIVES

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

4. Tell how mammals, birds, and insects do unusual things.
6. Describe the wisdom of God in providing animals with instinct.
7. Explain why man is beginning to see the importance of protecting wildlife.
8. Tell what man is trying to do to provide protection for wildlife.

Restudy these words.

equator

radar

sanctuary

GOD GAVE INSTINCT TO ANIMALS

Are bats mammals or birds? Bats fly like birds. Bats have wings, but they also have babies and feed them with milk from their own bodies. They are also covered with hair.

Yes, you are right. Bats are mammals. They live in caves or

dark places during the day. Just before the sun goes down at night and early in the morning, the bats come out in large numbers. There are so many of them at times that the sun is darkened.

Bats are able to fly long

- 3.6 The bat's eyes are very
a. large. b. strong. c. weak.
- 3.7 Bats can hear the faintest
a. bird song. b. echo. c. bell.
-

Do you know how a homesick green turtle finds its way home to the Ascension Island in the Atlantic Ocean? Write your answer (yes or no) in this blank. _____.

Have you written your answer above? Good. Now read the next paragraph and check your answer.

If you answered the question with a "yes" you should think some more about it. If you answered "no" you are like the scientists. Scientists have not discovered many secrets about animal instincts.

The United States Navy, too, is trying to find the answer to the secret of the homesick turtle. They think that if the answer is found, they can use the information to help them control the course of ships better.

For hundreds of years, men have tried to find what powerful forces guide animals in traveling long distances. These animals seem to have some built-in way that helps them travel across great stretches of land or water to some place where they have never been before.

Our story begins on a little island in the Atlantic Ocean. The name of the island is Ascension. A huge, green turtle, weighing about 300 pounds, crawls out of the ocean

onto the beach. She looks around for some sign that she has reached the right place. She drags her huge body up on the beach and starts scratching a hole in the sand.

As soon as the nest is ready, she begins to fill it with eggs. After laying about one hundred of them, she covers them with sand. Then she crawls back to the ocean and disappears.

Hundreds of other green turtles dig similar nests and bury thousands of eggs on the shore of this little island. The island is only five miles wide (8 km). Ascension Island is about 500 miles (800 km) south of the **equator**. It is only a dot on the map.

At last the eggs hatch. In each nest 100 tiny baby turtles break out of their shells and push up through the soft sand. Already many animals that like to eat little turtles have gathered on the beach waiting. It is probably in the middle of the night. The moon may not be shining. It is dark, but the babies must go fast and straight toward the ocean even though they have never seen it. They must hurry to avoid the animals waiting to eat them. The mother of the baby turtles is no longer around to help them.

Nothing on the beach can guide them to safety. They are on their own.

Just like a toy that has been wound up and starts out straight ahead, the little turtles turn toward the ocean, which they cannot see. They flip-flop across the beach. Many do not make it, but those that do soon disappear into the salty ocean.

Nobody knows what guides them. Whatever does guide them, their lives depend upon that instinct that God has given them. As they raced toward the water for safety, if they had stopped to wonder which way to go or if they had gone in the wrong

direction, they would have been picked up and eaten.

What becomes of them or what they do for the next few months is not known. Many of them swim or drift hundreds of miles away from their breeding grounds.

After a few years when they become adults, the turtles swim back to the very same beach where they were born. Just like their parents, they lay their eggs in the sand; and new green turtles are born.

If you were a turtle, do you think you could find your way back to that little speck of an island in the ocean?



Write true or false.

- 3.8 _____ For many years scientists have tried to discover more about the instinct that animals have.
- 3.9 _____ They have finally found the answers to all their questions.
- 3.10 _____ Birds are the only animals that migrate.
- 3.11 _____ Green turtles travel hundreds of miles to return to their home island.
- 3.12 _____ Ascension Island is in the Pacific Ocean.
- 3.13 _____ Ascension Island is north of the equator.
- 3.14 _____ Instinct is something that God has given to many animals to guide them.



Do this activity.

- 3.15 From what you have learned about animal instinct from this LIFE PAC, put a ✓ in the blanks by each statement that you think describes God. Share your answer with a friend.
- a. _____ God is a great Creator.
- b. _____ God does not really care about animals.

- c. _____ God plans ahead.
- d. _____ God thinks.
- e. _____ God no longer thinks about His creation.
- f. _____ God cares *only* for men and women and children.
- g. _____ God provides for His creation.
- h. _____ God is a good God.
- i. _____ God knows all things.
- j. _____ God loves us.



Teacher check _____

Initial Date

MAN PROTECTS ANIMALS

As more and more people live in our country, animals have less and less room in which to live and to raise their young. Many forests have burned or have been cut down. Some animals have been killed needlessly. The buffalo have nearly all disappeared. The passenger pigeon is now extinct. Each year animals are having greater difficulty staying alive.

As man sees his mistakes, he is trying to correct them. He is becoming more and more aware of his responsibility toward the animal world.

Many groups of people now are working hard to protect our animals. Our government has formed wildlife

refuges. These refuges are special areas of land in which animals are protected from hunters. Bird **sanctuaries** are made for such birds as herons and gulls. Big game refuges are being set aside for such large animals as the mule deer, the elk, and the mountain sheep. Some of the marsh birds, such as geese, are provided with breeding grounds and resting and feeding areas to make sure that they will be neither disturbed nor killed.

Groups such as the Audubon Society help educate children and adults about the need to protect God's created wildlife.

Think about some of the ways you can help in this work.



Something to do.

Gather some magazines together. Select some with animal pictures in them. Ask your teacher if you may work with one or two others in making a scrapbook. Cut out pictures of as

many animals as you can find. Make a scrapbook, using the pictures you have cut out. Divide the scrapbook into sections or chapters. Letter titles under each picture. Here are some suggestions for divisions or chapters: Mammals, Birds, Fish, Insects. Another division might include Land Animals, Water Animals, Warm-blooded Animals, and Cold-blooded Animals.

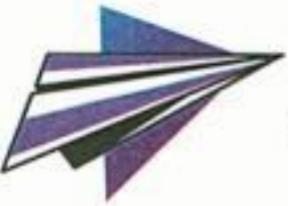


Write true or false.

- 3.16 _____ A bird refuge is a place where birds can go for protection.
3.17 _____ The buffalo have nearly all disappeared.
3.18 _____ Man is now becoming less caring toward animals.
3.19 _____ The Audubon Society is interested in helping save our birdlife.
3.20 _____ Gulls are of little importance and may be killed anywhere.
3.21 _____ We can help protect and care for God's creation.



Teacher check _____
Initial _____ Date _____



Before you take this last Self Test, you may want to do one or more of these self checks.

1. _____ Read the objectives. See if you can do them.
2. _____ Restudy the material related to any objectives that you cannot do.
3. _____ Use the SQ3R study procedure to review the material:
 - a. **S**can the sections,
 - b. **Q**uestion yourself,
 - c. **R**ead to answer your questions,
 - d. **R**ecite the answers to yourself, and
 - e. **R**evise areas you did not understand.
4. _____ Review all vocabulary, activities, and Self Tests, writing a correct answer for every wrong answer.

SELF TEST 3

Write the correct word from the list in each blank (each answer, 3 points).

hollow oxygen snakes
home radar south
meat reptiles tubes

- 3.01 Lizards are like _____ but have four legs.
3.02 God created the bat with a kind of _____.
3.03 The gas in the air that is necessary for animals to live is called _____.
3.04 Most bones of birds are _____.
3.05 Lions are _____-eaters.
3.06 Insects breathe through tiny _____ all over their bodies.
3.07 Green turtles travel hundreds of miles to return _____.
3.08 Crocodiles belong to the class of _____.

Write true or false (each answer, 2 points).

- 3.09 _____ A hive is a place where salmon spawn.
3.010 _____ The chirp of the cricket is made by whistling through its mouth.
3.011 _____ The bat is a small bird.
3.012 _____ God provides for His creation.
3.013 _____ The shrew is a very large animal.
3.014 _____ The whistling swans build nests in the Arctic.

Write the correct words in the blanks (each answer, 4 points).

- 3.015 A bird _____ is a place where birds can go for protection.
3.016 A Canadian who protected birds was Jack _____.
3.017 The _____ Society helps to protect birds.
3.018 We can help protect and care for _____ creation.
3.019 When a whistling swan takes leadership of a migrating flock, the other birds _____ him.

- 3.020 The teeth of sheep are especially made for eating _____.
- 3.021 Fish get their oxygen by means of _____.
- 3.022 The bird that has the record for long distance flying is the _____.
- 3.023 Something within animals that guides them is called _____.
- 3.024 The animal that has an ability like radar is the _____.

Select the correct answer and write the letter and the word in the blank (each answer, 3 points).

- 3.025 A lizard is a _____.
 a. reptile b. mammal c. fish
- 3.026 Snakes have no _____.
 a. tongue b. eyes c. legs
- 3.027 Most reptiles are _____.
 a. warm-blooded b. cold-blooded c. neither of these
- 3.028 When a fish swims, its side fins act as a _____.
 a. rudder b. propeller c. oar
- 3.029 Most mammals breathe by means of _____.
 a. lungs b. gills c. tubes
- 3.030 Reptiles such as snakes and turtles breathe with their _____.
 a. mouth b. lungs c. pores
- 3.031 A place where animals are safe from harm is called a _____.
 a. nest b. refuge c. breeding ground
- 3.032 Something that God has given to many animals to guide them is called _____.
 a. food b. flight c. instinct

| | | |
|---|---------------------|----------------|
|  | Possible Score 100 | My Score _____ |
| | Teacher check _____ | _____ |
| | Initial | Date |



Before taking the LIFE PAC Test, you may want to do one or more of these self checks.

1. _____ Read the objectives. See if you can do them.
2. _____ Restudy the material related to any objectives that you cannot do.
3. _____ Use the SQ3R study procedure to review the material.
4. _____ Review activities, Self Tests, and LIFE PAC vocabulary words.
5. _____ Restudy areas of weakness indicated by the last Self Test.

NOTES

SCIENCE

4 0 2

LIFEPAC TEST

Name _____

Date _____

Score _____

Possible Score _____ 100

SCIENCE 402: LIFE PAC TEST

Match these items (each answer, 2 points).

- | | | |
|-----------|-----------------|--------------------|
| 1. _____ | elephant tusk | a. oil |
| 2. _____ | largest mammal | b. spawning ground |
| 3. _____ | smallest mammal | c. wheatear |
| 4. _____ | sperm whale | d. cricket |
| 5. _____ | honeybee | e. unlearned |
| 6. _____ | largest bird | f. hive |
| 7. _____ | turtle | g. whale |
| 8. _____ | navigate | h. ostrich |
| 9. _____ | instinct | i. ivory |
| 10. _____ | salmon | j. bat |
| 11. _____ | rasper | k. refuge |
| 12. _____ | radar | l. shrew |
| | | m. reptile |

Answer true or false (each answer, 2 points).

13. _____ The ostrich is a slow-flying bird.
14. _____ Oxygen in the air and water makes it possible for life on this earth.
15. _____ Tigers are meat-eaters.
16. _____ Whales are cold-blooded animals because they live in the ocean.
17. _____ The whale is the largest animal.
18. _____ The male honeybee is called a drone.
19. _____ Crickets make a short, sharp sound called a chirp.
20. _____ *Armor* means *a protective covering*.
21. _____ The equator is a small one-celled amoeba.
22. _____ The bones of birds are heavy to make them strong.
23. _____ Most fish breathe through their pores.

Write the correct letter and word in each blank (each answer, 3 points).

24. Each hive of bees has only one _____.
a. worker b. drone c. queen
25. In the wilds of Africa, elephants usually travel _____
_____.
a. alone b. in flocks c. in herds
26. Meat-eating animals have teeth that are _____.
a. short b. sharp c. lacking
27. The bones of most birds are _____.
a. hollow b. very large c. heavy
28. The organs that help fish breathe are called _____.
a. pores b. fins c. gills
29. The migration instinct of birds and mammals is _____
_____.
a. learned b. lost c. provided by God

Complete this item (this item, 6 points).

30. Give the names of three kinds of honeybees that live in a hive.
a. _____
b. _____
c. _____

Answer these questions (each problem counts 6 points).

31. What two things must one do to tell the temperature of the air by listening to a cricket?
a. _____
b. _____
32. In what four ways are bats different from most other mammals?
a. _____
b. _____
c. _____
d. _____

33. In what ways does God show He is interested in animals?

34. What is man doing to show that he understands the importance of protecting wildlife?

35. What is unusual about the green turtle from the Ascension Island in the Atlantic Ocean?

NOTES