

# WILDLIFE CONSERVATION

## INTRODUCTION

Before the 1900s, conservation of wildlife was of little concern to humans. People assumed that the taking of wildlife was a *birthright* and that animals would always be abundant. As we now know, the unregulated taking of wildlife, destruction of habitat, and environmental pollution can push wildlife populations toward extinction. Today, we recognize that human activity has an impact on wildlife. If we are to ensure survival of all the *diverse* species living on this planet, we must understand and pursue *conservation*.

*Wildlife conservation* consists of using scientific knowledge and practices to use, preserve, protect, conserve, limit, enhance, and control wildlife resources. People who are trained to do this work are called *wildlife biologists* or *wildlife managers*. Their job is difficult, requiring expertise in many different areas of study. They must understand *biology*, business, law, politics, math, history, communication, *forestry*, *oceanography*, *geology*, *geography*, *meteorology*, *sociology*, and many other subjects to be successful. They must attempt to manage both renewable and nonrenewable resources while balancing the needs of people with the needs of wildlife. They try to preserve the complicated web of *interdependence* between different species and their habitat and strive to enrich the *biodiversity* found throughout the planet.

To establish a wildlife conservation program successfully, a wildlife manager must:

- a. Determine what *responsibilities* humans have for wildlife conservation.
- b. Determine how the public feels.
- c. Set *goals* for the wildlife conservation program.
- d. Develop a plan and determine what technical methods will be used to *implement* the plan.
- e. Determine the overall cost to humans and other affected wildlife.
- f. Determine how the program will be funded.
- g. Implement and monitor the plan.
- h. Evaluate the success or failure of the program.

## OUR RESPONSIBILITIES FOR WILDLIFE CONSERVATION

Even though our physical survival skills are not as refined as those of some animals, humans have become the most efficient predators on Earth by using our unique mental abilities. It is a historic fact that we are capable of destroying, protecting, or creating habitat for ourselves and wildlife. Our unique ability to plan and predict probable outcomes of our decisions allows humans to affect wildlife populations. We effectively implement our decisions for the future through considered action as opposed to wildlife's passive reaction to events of the moment. Humans also realize the decisions they make today have consequences that impact the future of wildlife and its habitat.

*Because humans are intellectually capable of identifying and solving wildlife problems using scientific methods (and wildlife is not), humans must logically assume responsibility for wildlife conservation.*

## HOW DOES THE PUBLIC FEEL ABOUT WILDLIFE?

Most people agree that wildlife conservation is good for *society* and for wildlife. However, when wildlife conservation policies begin to restrict humans' jobs, housing, transportation, food, health, and safety, the planning and implementation of conservation programs becomes more difficult for the *public* to support. The public's acceptance of a wildlife conservation program increases when the plan is shown to be scientifically sound and to balance the needs of people with the needs of wildlife. Public meetings are used to get input from all interested parties and to explain the plan.



## UNIT EIGHT

# SETTING GOALS AND DEVELOPING THE PLAN

Wildlife managers set goals to solve a wildlife/habitat problem or to prevent a problem from developing. Because accurate wildlife data are difficult to obtain, wildlife managers must often rely on incomplete information to define the problem and set their goal.

The conservation plan requires the wildlife manager to consider a course of action that is scientifically proved and is acceptable to the public. This plan may include direct habitat restoration, public education, industry cooperation, or implementation of laws, restrictions, taxes, and *regulations* to achieve desired results. The different points of view about what the goals for wildlife conservation should be and about the methods to be used make development of a wildlife conservation plan challenging.

## WHO PAYS FOR WILDLIFE CONSERVATION?

Wildlife conservation costs money. Since 1923, hunters, trappers, and fishermen have paid most of the money for wildlife management and habitat restoration through the purchase of licenses, tags, hunting stamps, and fees. Even today, *sportsmen* provide 77% of the annual income for state fish and wildlife agencies. In 1937, enactment of a federal excise tax on the purchase of firearms and ammunition provided additional funding for ongoing conservation and hunter education programs. Recently, conservation organizations such as Ducks Unlimited, Safari Club International, Rocky Mountain Elks Foundation, Mule Deer Foundation, Wild Turkey Foundation, and many more *private* organizations are raising and spending money for wildlife conservation and habitat restoration.

It is not just sportsmen that pay for conservation programs. We all pay either directly or indirectly for wildlife conservation in some way or another. When humans decide to regulate an industry in response to wildlife or habitat needs, we pay the cost of these regulations via higher prices for goods and services. When humans require that public land be set aside exclusively for wildlife, we pay via higher taxes, via access fees, or via restrictions to entry and use of the land. When “extreme” wildlife restrictions, mandates, or laws are created, some humans pay by losing jobs, businesses pay by lower sales, and state and local government and schools pay through lower tax revenues. Wildlife conservation costs money.

## IMPLEMENTATION AND EVALUATION OF THE PROGRAM

Once a conservation program is in place, the wildlife manager must constantly monitor the results of the plan. This evaluation includes status of the habitat, population surveys, species health, cost to other wildlife and humans, and achievement of goals. If goals of the plan have been achieved, a decision must be made whether the program should continue or cease.

## A COMMENT

Wildlife conservation is a complicated process that is still an art rather than a science. It is hoped that teachers will use this information to help students make knowledgeable decisions about wildlife conservation and that both students and teachers will be motivated to use their diverse educational skills to advance understanding of the important issues affecting wildlife and humans in the future. With the power of knowledge, these people can use science to discover positive solutions for the conservation of wildlife.

## CLASSROOM DISCUSSION

- Before the 1900s, conservation of wildlife was of little concern to humans.
- Today, we understand that *conservation* is important to ensure survival of the diverse species living on this planet.
- *Wildlife conservation* is the use of scientific knowledge and practices to use, preserve, protect, conserve, limit, enhance, and control wildlife resources.
- People who are trained to do this work are called *wildlife biologists* or *wildlife managers*.
- To do this job well, these people must be educated in many different fields — *biology*, business, law, politics, math, history, communication, *forestry*, *oceanography*, *geology*, *meteorology*, *sociology*, and many more.
- These people must understand the value of renewable and nonrenewable resources, how to balance the needs of people with the needs of wildlife, how to preserve the web of *interdependence* between species, and how to enrich *biodiversity*.
- Humans are efficient predators capable of destroying, protecting, or creating habitat and plans for the future.
- Because humans are intellectually capable of identifying and solving problems, they must assume responsibility for wildlife conservation.
- The public supports wildlife conservation when it balances the needs of people with the needs of wildlife. People can be either positively or adversely affected by wildlife conservation programs.
- Wildlife managers must set goals and make plans for conservation. These plans may include direct habitat restoration, public education, industry cooperation, or the passing of laws, restrictions, *regulations*, and taxes.
- People have different points of view on the correct way to conserve wildlife.
- Wildlife conservation costs money.
- Since 1923, sportsmen have paid most of the money for conservation through the purchase of licenses, tags, hunting stamps, and fees, and through an excise tax on firearms and ammunition.
- Today, many conservation organizations also help pay the bill.
- We all pay either directly or indirectly for wildlife conservation through higher taxes, cost of goods and services, increased regulation and restrictions, and in some cases our jobs.
- By monitoring the plan we can decide if it was a success or failure and determine whether to continue or cease the program.
- Students should be encouraged to seek solutions through education. They should be reminded that they can make a difference for the future benefit of humans and wildlife alike.

## VOCABULARY WORDS

BIRTHRIGHT	DIVERSE	CONSERVATION	BIOLOGIST
MANAGER	BIOLOGY	OCEANOGRAPHY	FORESTRY
GEOLOGY	GEOGRAPHY	METEOROLOGY	SOCIOLOGY
BIODIVERSITY	RESPONSIBILITY	INTERDEPENDENCE	GOALS
PUBLIC	SOCIETY	REGULATION	SPORTSMEN
PRIVATE	TAX	WISE USE	



## UNIT EIGHT

### **CURRICULUM COVERED**

**Subjects:** Science, Social Studies, Communication, Career Education, Home Economics, Political Science

**Concepts:** Cause-Effect, Change, Cycle, Organism, Interaction, Order, System, Perception

**Processes:** Classify, Define Operationally, Infer, Interpret Data, Observe, Use Numbers

## IS IT A RENEWABLE OR NONRENEWABLE RESOURCE?

With more than ten million different species of life and more than six billion people living on Earth, we know that conservation of our natural resources is essential. Conservation is the wise use or protection of a natural resource to ensure that it will always be available. Wise use means that we use our knowledge to manage resources by not taking too much of them and not wasting what we take.

The two kinds of natural resources are called renewable resources and nonrenewable resources.

Renewable resources are living things that can grow or replenish themselves after some of them have been used or consumed. For a resource to be renewable, it must have good habitat to survive. Examples of renewable resources are trees, animals, fish, birds, insects, and plants. These renewable resources support most of the life on Earth. With appropriate conservation, these resources can be used forever.

Nonrenewable resources are nonliving things that cannot be replaced once they have been used. Examples of nonrenewable resources are oil, coal, rocks, minerals, gold, and copper. Humans use nonrenewable resources more than any other species on Earth because we have learned to change them into highly usable products. Oil is used to make gas, clothing, tires, and plastic. Rocks are used to make roads, buildings, and concrete. Minerals are used to make glass, metal, jewelry, and many other useful things. Because these resources can never be replaced, it is important we recycle and use them carefully.



1. What is a renewable resource? Use a complete sentence.  
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2. What is a nonrenewable resource? Use a complete sentence.  
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3. Look carefully at the pen or pencil that you are using to write the answers to these questions. List all the parts of your pen/pencil and whether the part was made from a renewable or nonrenewable resource.  
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4. Do you think it makes any difference for the future whether we make things from renewable or nonrenewable resources? Explain your decision.  
\_\_\_\_\_  
\_\_\_\_\_



## CHALLENGE 8-1

5. Give an example of a renewable and a nonrenewable resource that could be used to make each of the following items. The winter coat item below will show you how to proceed.

ITEM	RENEWABLE	NONRENEWABLE
Winter coat	<i>fur or wool</i>	<i>nylon or plastic</i>
Chair		
Football		
Roof		
Grocery bag		
Backpack		
Pillow		
Belt		
Baseball bat		
Sweater		

6. Are animals a renewable or nonrenewable resource? Explain why.

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7. Is oil a renewable or nonrenewable resource? Explain why.

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8. Did the fur samples in the **DISCOVER WILD** reference set come from a renewable or nonrenewable resource? Explain your answer.

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9. Why is it important for us to understand conservation and wise use of renewable resources?

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10. Why do you think humans use more nonrenewable resources than animals?

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## WILDLIFE CONSERVATION WORKS!

In the early 1900s, many species of U.S. animals were in trouble. Because people did not know about wildlife conservation and management, wildlife habitat was being destroyed and the animals were being hunted without without any laws to control how many animals could be taken. The numbers of Pronghorn Antelope, White-Tailed Deer, Rocky Mountain Elk, and Wild Turkey were very low. And in 1935, only 73 Trumpeter Swans were found living in the lower 48 states.

In the 1920s, people realized that if they were going to have wildlife around in the future, they must manage how these renewable resources were going to be used. They knew that if they did not begin to understand wildlife conservation today, the animals might not be around to use and enjoy in the future.

Wildlife managers came up with a plan. First, they would make laws that regulated when, how, and how many animals and fish could be taken by people. Next, they would charge people to hunt, fish, and trap wildlife by making them buy a license, tag, or hunting stamp. This money would be used to improve habitat and find out how to manage the wildlife better.

Some people thought this was a bad plan. They thought they should be able to take as many animals as they wanted, whenever they wanted to take them. Most of the hunters, trappers, and fishermen knew the money they spent for conservation would make sure the animals would be around in the future. They were right! Wildlife conservation was a big success thanks to the money collected from sportsmen for habitat programs and smart wildlife regulations.

The examples below show how wildlife management and conservation programs help wildlife and still allow people to use these renewable resources.



<u>SPECIES</u>	<u>POPULATION EARLY 1900s</u>	<u>POPULATION NOW</u>	<u>O.K. TO HUNT?</u>
Canada goose	1,100,000	2,320,000	Yes
White-Tailed Deer	500,000	12,000,000	Yes
Trumpeter Swan	73	1,000	No
Rocky Mountain Elk	41,000	520,000	Yes
Wild Turkey	650,000	2,000,000	Yes
Pronghorn Antelope	12,000	500,000	Yes

People can help animals by learning about them and their habitat. Once we know about them, we can begin to solve wildlife problems using effective science and wildlife management for the future benefit of both humans and wildlife.

1. Why were many species of animals in trouble in the early 1900s?  
\_\_\_\_\_
2. How are hunters, fishermen, and trappers helping animal populations increase?  
\_\_\_\_\_



## CHALLENGE 8-2

3. What will happen to wildlife if people do not learn about conservation? Explain your answer.

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4. When humans regulate wildlife they control how, when, and how many animals can be taken. Are regulations still a good idea today? Explain.

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5. Looking at the list above, do you think hunters should be allowed now to hunt Trumpeter Swans? Explain your decision using complete sentences.

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6. Why would hunters, fishermen, and trappers care about wildlife conservation?

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7. If people could not hunt, fish, or trap animals, do you think that wildlife populations would do better or worse in the future? Explain your decision.

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8. Looking at the column entitled Population Now in the example above, put the species in order starting with the species having the largest population.

1. _____	4. _____
2. _____	5. _____
3. _____	6. _____

# LOTS OF DIFFERENT CREATURES AND CRITTERS

Lots of different things live around us. This is called biodiversity. The reason we see so many different kinds of wildlife is that they need each other to survive. The worm and the insect need plants, birds need worms and insects, and the coyote and opossum need birds to survive. This need that each life form has for another life form is called interdependency. They are dependent on each other for survival. Wildlife biologists know that a healthy habitat is important to promote biodiversity and interdependency. The more kinds of different creatures and plants that crawl, fly, walk, and grow around an area the better. It means that the habitat and environment are healthy.



To help make biodiversity happen, we must know what eats what and how each of these different species depend on one another. Once we understand how each species relies on other species for their survival, we can help achieve biodiversity even in our own backyards. We can plant trees and shrubs that attract different kinds of birds and wildlife, we can provide cover by building bird and bat houses, and we can provide natural food and water for wildlife.

Whenever we provide wildlife with food, water, shelter, and space, we should be aware that even if they seem tame, we should never try to get close to them because they are really wild. Every wild animal can carry disease and can bite if you get close to them. **DO NOT TOUCH WILD BIRDS OR ANIMALS, THEY BITE!**

1. What does *biodiversity* mean?

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2. Why is it good to have a lot of biodiversity in an area?

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3. Draw lines between the species to connect who is dependent on whom for survival.

**Robin**

**Apple Tree**

**Coyote**

**Earthworm**

**Bullfrog**

**Grass**

**White-Tailed Deer**

**Mosquito**

**Tent Caterpillar**

**Cottontail Rabbit**



### CHALLENGE 8-3

4. Only two percent (2%) of all the species that *ever* lived on Earth still live today. Yet, there are more than 10 million different species living on the Earth today. This biodiversity is an important part of the success of this planet. Go into your backyard and list all the different species that you find living there. Turn over leaves, look under rocks, look at the stems and under the leaves of plants, dig in the ground, and notice the different weeds, trees, bushes, moss, birds, and crawly things living in your backyard. This will show you the biodiversity that lives all around us. If you do not know the name of the species, make one up.

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

5. Match 10 of the species you found in your backyard and show how they are dependent on each other for their survival.

\_\_\_\_\_ dependent on \_\_\_\_\_

\_\_\_\_\_ dependent on \_\_\_\_\_

\_\_\_\_\_ dependent on \_\_\_\_\_

\_\_\_\_\_ dependent on \_\_\_\_\_

\_\_\_\_\_ dependent on \_\_\_\_\_

6. When you look around your backyard, determine what you could do to help maintain the biodiversity of wildlife?

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\_\_\_\_\_

## WILDLIFE CONSERVATION IS A WAR OF IDEAS

All the wildlife in the United States is owned by the *public* (all the people). That means that even if wildlife is on your own property, it does not belong to you. You must obey all the public laws regulating wildlife.

Because all wildlife is owned by the public, wildlife biologists and public agencies must make conservation plans that the public approves. Sometimes the public does not always agree about the best way of conserving wildlife. As a result, the many groups of people that have an interest in wildlife conservation also have many different ideas about how to go about it. Listed below are some of the groups and their interest in wildlife.

<u>GROUP</u>	<u>INTEREST IN WILDLIFE</u>
Industry	The wise use of resources that balances the needs of wildlife with the needs of industry and people.
Sportsmen	Hunting, fishing, and trapping are useful wildlife management tools when properly regulated. Use conservation to use wildlife today and improve habitat and wildlife for now and in the future.
Scientific community	Use scientific knowledge, technical methods, education, and regulations to manage wildlife for the future.
Wildlife conservation groups	Group members are usually sportsmen that raise and spend money for wildlife habitat acquisition and restoration. Use conservation to preserve habitat and wildlife for now and in the future.
Environmental groups	The health of wildlife indicates the health of the environment. Protect wildlife and the environment by influencing public opinion and using the political, legal, and educational systems to improve wildlife and limit their use by people.
Native American Indian	The wise use of wildlife and the protection of Native Americans' treaty rights to use wildlife for cultural, religious, and economic purposes.
Animal welfare groups	Take and use wildlife by humane methods.
Animal rights groups	Animals have the same rights as humans. Humans do not have the right to use, manage, control, or kill animals for any reason. Stop all use of animals by humans now and in the future.

As you can see from the table above, people look at wildlife conservation in many different ways. Sometimes these different ideas cause wildlife managers to change their conservation plans trying to please everyone. Wildlife Conservation is a war of ideas; pleasing everyone is a difficult job.



CHALLENGE 8-4

1. All wildlife in the United States is owned by the public. What does that mean?

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2. Can people legally hunt, fish, or trap wildlife anytime they want on their own land? How do you feel about the law?

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Look at the table on the previous page, listing groups and their interest in wildlife, to answer the following questions.

3. Which groups think it is all right to use and manage animals?

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4. Which group(s) do not think it is all right for humans to use and manage animals?

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<hr/>	<hr/>
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<hr/>	<hr/>

5. Hunting, fishing, and trapping are regulated by government agencies. Do you think it is good wildlife conservation to allow hunting, fishing and trapping? Explain your answer.

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6. Some people do not think humans should kill animals for any reason. What do you think about this statement?

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7. Knowing what you do about habitat, carrying capacity, food chains, range, and populations, do you think wildlife conservation and management is something humans should do? Explain.

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8. How can wildlife conservation help wildlife? Use complete sentences.

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CHALLENGE 8-5

# VOCABULARY WORD SEARCH

Find and circle the 23 words camouflaged in the letters below. The words appear across or down.

Y G M A N A G E R Z J B F R X G  
 R E S P O N S I B I L I T Y F Y  
 B O O X C T A X I F G O Q K X O  
 I G C B E Z R Q O R C L T C B A  
 O R I I A C E V L J G O A L S C  
 D A O R N L G E O L O G Y K B T  
 I P L T O K U C G Q B Y C B X G  
 V H O H G C L W I S E U S E U F  
 E Y G R R U A V S O C I E T Y J  
 R P Y I A G T Q T D I V E R S E  
 S U Z G P R I V A T E T X Z V T  
 I B R H H F O R E S T R Y J B F  
 T L F T Y P N S P O R T S M E N  
 Y I N T E R D E P E N D E N C E  
 X C O N S E R V A T I O N C N A  
 M E T E O R O L O G Y F R V E U

- |                     |                       |                        |                  |
|---------------------|-----------------------|------------------------|------------------|
| <b>BIRTHRIGHT</b>   | <b>DIVERSE</b>        | <b>CONSERVATION</b>    | <b>BIOLOGIST</b> |
| <b>MANAGER</b>      | <b>BIOLOGY</b>        | <b>OCEANOGRAPHY</b>    | <b>FORESTRY</b>  |
| <b>GEOLOGY</b>      | <b>GEOGRAPHY</b>      | <b>METEOROLOGY</b>     | <b>SOCIOLOGY</b> |
| <b>BIODIVERSITY</b> | <b>RESPONSIBILITY</b> | <b>INTERDEPENDENCE</b> | <b>GOALS</b>     |
| <b>PUBLIC</b>       | <b>SOCIETY</b>        | <b>REGULATION</b>      | <b>SPORTSMEN</b> |



**UNIT EIGHT: WILDLIFE CONSERVATION****CHALLENGE 8-1 IS IT A RENEWABLE OR NONRENEWABLE RESOURCE?**

1. Renewable resources are living things that can grow or replenish themselves if conditions are favorable.
2. Nonrenewable resources are nonliving things that cannot be replaced once they have been used.
3. PENCIL wood - renewable, lead (graphite and clay) - nonrenewable, paint (petroleum based), metal holder for the eraser, eraser (pumice and petroleum). PEN plastic (petroleum based) - nonrenewable, metal, ink (aniline dye/petroleum based).
4. Student's choice. Usually it is considered wiser to use renewable rather than nonrenewable resources, as long as a resource is not permanently damaged. Nonrenewable resources may be abundant now; however, if we use them unwisely, they may not be abundant in the future.

5. <u>ITEM</u>	<u>RENEWABLE</u>	<u>NONRENEWABLE</u>
Chair	Wood and wool	Metal and vinyl
Football	Pig leather	Plastic
Roof	Wood shakes or tile	Metal or asphalt composition
Grocery bag	Paper	Plastic
Backpack	Cotton, wool, or leather	Nylon
Pillow	Bird down	Petroleum based foam rubber
Belt	Leather	Plastic
Baseball bat	Wood	Metal
Sweater	Cotton or wool	Acrylic or synthetic fibers

6. Animals are a renewable resource because they can replenish their kind if managed properly.
7. Oil is a nonrenewable resource. Once oil is used, it cannot be replenished for thousands of years.
8. All of the fur samples in the **DISCOVER WILD** set came from animals that are not threatened or endangered and are all controlled and managed by state and federal agencies.
9. It is important to understand conservation and use in order to make a difference in the ecosystems of the world. Understanding the science of wildlife management and conservation will help us improve habitat and wildlife populations. Through knowledgeable planning and implementation, renewable resources should be here for all to enjoy and use in the future.
10. The simple answer to this question is because we know how to use them and animals do not. As an example, animals do not need to know and do not know how to drill for oil and fabricate it for their use. Humans have found it useful to convert nonrenewable resources into products to help them survive and enjoy life.

**CHALLENGE 8-2 WILDLIFE CONSERVATION WORKS!**

1. Unregulated use of wildlife and poor understanding about the cause and effects of human activity on wildlife habitat caused many populations of species to decline in the early 1990s.



## APPENDIX A — UNIT EIGHT

- Hunters, fishermen, and trappers have paid for habitat restoration and wildlife conservation education through license fees, tags, stamps, and excise taxes on firearms and ammunition. This has helped the populations of those species increase.
- Management of wildlife resources needs to be based on understanding of conservation if we are going to make a significant difference to wildlife. Because politics plays a role in management of wildlife and the political process is driven by the wants of the people, it follows that an educated citizenry would make better decisions for wildlife than an uneducated one.
- Yes. There must be laws regulating the use and taking of wildlife. Regulations are a valuable tool of wildlife managers to control, enhance, limit, preserve, protect, and use wildlife according to a conservation plan.
- No. Even though the population of Trumpeter Swans is on the rise, the population is not yet large enough to support hunting without endangering the future of the swan.
- Hunters, fishermen, and trappers enjoy their sport and the outdoors. They understand if they take the last animal, fish, or bird and do not participate in wildlife conservation, they may not be able to enjoy these activities in the future. Also the more abundant the wildlife and the better the habitat, the more opportunity they will have to go out in the wilds to pursue their sport.
- Student's decision. However, recent history shows that those species hunted, fished, or trapped are the ones that are best managed and generally have the healthiest populations. Humans tend to put their intellectual resources to work on those things that will give them a benefit. If we cannot use the resource, we may not choose to put effort and resources into its management.
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|----------------------|-----------------------|
| 1. White-Tailed Deer | 4. Rocky Mountain Elk |
| 2. Canada Goose      | 5. Pronghorn Antelope |
| 3. Wild Turkey       | 6. Trumpeter Swan     |

### CHALLENGE 8-3 LOTS OF DIFFERENT CREATURES AND CRITTERS

- The word biodiversity is made up of the word *bio* meaning life and the word *diversity* meaning many different things. Biodiversity means there are many different life forms living in the same area.
- Biodiversity of an area allows many different life forms to survive in the same community. This diversity gives other species an opportunity to add to the health of the community by finding a niche in the system. As the diversity increases, so does the abundance of wildlife.
- |                   |                   |
|-------------------|-------------------|
| Robin             | Apple Tree        |
| Coyote            | Earthworm         |
| Bullfrog          | Grass             |
| White-Tailed Deer | Mosquito          |
| Tent Caterpillar  | Cottontail Rabbit |
- By looking carefully in their backyards, they will find the abundance of biodiversity living there.
- Evaluate if the concept of dependency is understood.
- Planting different species of vegetation and trees and providing feeders and houses for birds.

**CHALLENGE 8-4 WILDLIFE CONSERVATION IS A WAR OF IDEAS**

1. Wildlife in the United States is owned by all the people. A bird that flies into your yard does not belong to you, and a deer that wanders onto your private land is not yours for the taking. People must use wildlife according to the laws and regulations established by government agencies.
2. No. Regulations are a good way to manage and conserve wildlife.
3. All groups listed except Animal Rights Groups and some Environmental Groups.
4. Animal Rights Groups and some Environmental Groups.
5. Student's choice. Hunting, fishing, and trapping generate funding for habitat and conservation programs, as well as provide a tool for wildlife management to regulate wildlife populations.
6. Student's choice. Usually the student will think about the killing of a deer or duck when answering this question. However, if we say that we should not kill animals for any reason, ask some tough questions to stimulate students' thinking about the issue. For example, is it acceptable to kill an animal if a researcher is trying to find a cure for a disease that is threatening your mother's life? Is it okay to kill a slug in the backyard? You can think of many more examples.
7. Student's choice. Is the answer logical?
8. Wildlife conservation helps wildlife by gathering data, developing plans, and working to implement those plans. Wildlife gains when we understand more about the species.

**CHALLENGE 8-5 VOCABULARY WORD SEARCH**

Y	G	M	A	N	A	G	E	R	Z	J	B	F	R	X	G
R	E	S	P	O	N	S	I	B	I	L	I	T	Y	F	Y
B	O	O	X	C	T	A	X	I	F	G	O	Q	K	X	O
I	G	C	B	E	Z	R	Q	O	R	C	L	T	C	B	A
O	R	I	I	A	C	E	V	L	J	G	O	A	L	S	C
D	A	O	R	N	L	G	E	O	L	O	G	Y	K	B	T
I	P	L	T	O	K	U	C	G	Q	B	Y	C	B	X	G
V	H	O	H	G	C	L	W	I	S	E	U	S	E	U	F
E	Y	G	R	R	U	A	V	S	O	C	I	E	T	Y	J
R	P	Y	I	A	G	T	Q	T	D	I	V	E	R	S	E
S	U	Z	G	P	R	I	V	A	T	E	T	X	Z	V	T
I	B	R	H	H	F	O	R	E	S	T	R	Y	J	B	F
T	L	F	T	Y	P	N	S	P	O	R	T	S	M	E	N
Y	I	N	T	E	R	D	E	P	E	N	D	E	N	C	E
X	C	O	N	S	E	R	V	A	T	I	O	N	C	N	A
M	E	T	E	O	R	O	L	O	G	Y	F	R	V	E	U