5th Grade Lessons Table of Content

Unit I: Food Webs

Unit II: Predator and Prey

Unit III: Animal Adaptations

Science Activity 1: Food Webs

Strand II: Content of Science
Standard II: (Life Science) Understand the properties, structures, and processes of living things and the
           interdependence of living things and their environments.
5-8 Benchmark 1: Explain the diverse structures and functions of living things and the complex relationships
           between living things and their environments.
5th Grade Performance Standards: 2 Understand how food webs depict relationships between different
           organisms.

Objective: The students will place picture cards of Chihuahuan Desert plants and animals in proper order to complete food chains and food webs.

Materials:
"A Chihuahuan Desert Food Web" PowerPoint.
Pictures of Chihuahuan Desert plants and animals from the "Food Chain/Food Web" packet.
Plants and Animals of the Chihuahuan Desert" booklet, and arrows from the "Food Chain/Food Web" packet.

Procedure:
Show and discuss the PowerPoint "A Chihuahuan Desert Food Web."   Hand out the "Food Chain/ Food Web" packets. Instruct the students to use the booklet to help them create food chains and food webs. The arrow's point should be pointed to the animal that is doing the eating.

Answers will vary.

If you do not want to prepare the booklets and Animal Information Papers, a docent from the Zoo can present this activity to your class. We have sets of pictures and the booklets already prepared. You may call 575-887-5516 to set up a time.)

Science Activity 2: Mexican Gray Wolves
Living Desert Zoo and Gardens State Park Docent Classroom Visit Activity

Strand II: Content of Science
Standard II (Life Science): Understand the properties, structures, and processes of living things and the interdependence of living things and their environments.
5-8 Benchmark II: Understand how traits are passed from one generation to the next and how species evolve.
Performance Standards
   2. Identify characteristics of an organism that are inherited from its parents (e.g., eye color in humans, flower color in plants) and other characteristics that are learned or result from interactions with the environment.

Objective: The students will become familiar with major characteristics of wolves, some of their adaptations, and their niche in the food chain/food web.

A docent from the Living Desert Zoo and Gardens State Park presents this activity. This activity includes a wolf power point and the chance for students to see and touch a Mexican gray wolf skull. The docent will also bring a wolf mask pattern that the teacher may use at a later date. The activity takes about 50 minutes. Since a lot of emphasis is placed on wolves thought out the 5th grade lessons, you may find this activity very useful. The students should have completed the "Food Web" science activity before the docent comes. If you wish to have a docent bring this activity to your classroom, please call the park at (575) 887-5516.

Language Art Activity 1: Fact or Opinion

STRAND 1: Reading and Listening for Comprehension
Content Standard 1: Students will apply strategies and skills to comprehend information that is read, heard, and viewed.
5-8 Benchmark 1-C Apply critical thinking skills to analyze information.
5th Grade Performance Standards
    6.   **Distinguish between fact and opinion.**

Objective: The student will determine if a statement is a fact or an opinion.

Materials:
Wolf Fact or Opinion Worksheet

Procedure:
Discuss what makes a statement a fact or an opinion. Give the students some examples, and then have the students give a few examples. Have students complete the Wolf Fact or Opinion Worksheet.

Answers
    1. **O**
    2. **F**
    3. **F**
    4. **F**
    5. **O**
    6. **F**
    7. **F**
    8. **O**
    9. **F**
  10. **O**

Wolf Fact or Opinion Worksheet   Name_____

Place an F on the line if the statement is a FACT.
Place an O on the line if the statement is an OPINION.

_____1. Wolves are beautiful animals.

_____2. Wolves are carnivores.

_____3. During the winter, wolves have two types of fur- outer fur that helps
         keep them dry and inner fur that helps keep them warm.
_____4. Wolves have canine teeth.

_____5. Wolves are dangerous animals, and people should kill all of them.

_____6. Wolf pups have blue eyes when they are born.

_____7. Wolves that live in the wilderness eat mostly elk and deer.

_____8. People should leave wolves alone and not bother them.

_____9. An adult wolf can eat about 20 pounds of meat at one time.

_____10. Wolf pups are cute.

Science Activity 1: Predator and Prey

Strand II: Content of Science
Standard II (Life Science): Understand the properties, structures, and processes of living things and the
                              interdependence of living things and their environments.
5-8 Benchmark 1: Explain the diverse structures and functions of living things and the complex relationships
                  between living things and their environments.
Performance Standards
   1. Identify the components of habitats and ecosystems (producers, consumers, decomposers, predators).

Objective: The students will identify Chihuahuan Desert animals as predators or prey using the physical adaptation characteristics of the animals.

Materials:
"Predator-Prey" PowerPoint
Pictures from the "Food Chain/ Food Web" packets
"Plants and Animals of the Chihuahuan Desert" booklet in "Food Chain/ Food Web" packets
2 per group 8 ½ x 11" papers- the first one with "Predator" written on it, the second one with "Prey" written on it

Procedure:
Show and discuss the "Predator-Prey PowerPoint.

Hand out the "Food Chain/ Food Web" packets. Write the following list of animals on the board:

badger	**kangaroo rat**
black bear	**kit fox**
black-chinned hummingbird	**mice/rats**
bobcat	**mountain lion**
coyote	**mule deer**
desert cottontail rabbit	**prairie dog**
elk	**pronghorn**
golden eagle	**raccoon**
great horned owl	**red-tailed hawk**
javelina	**ringtail**
	scaled quail

Continued on the next page

Science Activity 1: Continued

Have the students pull out the pictures of the animals that are listed on the board. Instruct them to look at the pictures and place them on the correct papers that are labeled: "Predators" and "Prey." They may use the "Plants and Animals of the Chihuahuan Desert" booklets. Tell the students that in this exercise, animals that eat other animals are predators even if some of them can become prey to other predators.

Answers:

Prey:	Predators:
Black-chinned hummingbird	badger
desert cottontail rabbit	black bear
elk	bobcat
javelina	coyote
kangaroo rat	golden eagle
mice/rats	great horned owl
mule deer	kit fox
prairie dog	Mexican gray wolf
pronghorn	mountain lion
scaled quail	raccoon
	red-tailed hawk
	ringtail

Science Activity 2: Predator and Prey
Living Desert Zoo and Gardens State Park Field Trip:

Strand II: Content of Science
Standard II (Life Science): Understand the properties, structures, and processes of living things and the
                    interdependence of living things and their environments.
5-8 Benchmark 1: Explain the diverse structures and functions of living things and the complex relationships
                between living things and their environments.
Performance Standards
   1.   **Identify the components of habitats and ecosystems (producers, consumers, decomposers, predators).**

Objective: The students will identify Chihuahuan Desert animals as predators or prey using the physical adaptation characteristics of the animals.

We have a "Predator-Prey Activity Page" that the students can complete as they walk through our park. They will be able to personally see the animals and use the eye and foot clues to determine if the animals are predators or prey. Please call the park at (575) 887-5516 so we can have the papers available when you arrive. You may also request to have a docent take your class through the park. We will do our best to provide one.

Math Activity 1: Predator, Predator and Prey, Prey Venn Diagrams

Strand: DATA ANALYSIS AND PROBABILITY
Standard: Students will understand how to formulate questions, analyze data, and determine probabilities.
5-8 Benchmark D.1: Formulate questions that can be addressed with data and collect, organize, and display
                    relevant data to answer them.
Performance Standard: Grade 5
5.D.1.2 Construct, interpret, and analyze data from graphical representations and draw simple conclusions using
        bar graphs, line graphs, circle graphs, frequency tables, and Venn diagrams.

Objective: Students will use a Venn diagram to correctly place Chihuahuan Desert animals in three categories.

Materials:
Venn diagrams with Predators, Predator and Prey, and Prey titles

Procedure:
Give each student a Venn diagram form.
Place these animals' names on the board:

bobcats	**mountain lions (adults)**
coyotes	**mule deer**
desert cottontail rabbits	**red-tailed hawk**
desert tarantulas	**roadrunners**
golden eagles	**snakes**

Let the students use their "Plants and Animals of the Chihuahuan Desert" booklets to fill in the Venn diagram.

Answers:

| <u>Predators</u>	<u>Both Predators and Prey</u>	<u>Prey</u>
golden eagle	**bobcat**	**desert cottontail rabbits**
mountain lions	**coyote**	**mule deer**
red-tailed hawk	**desert tarantulas**	
	roadrunner	
	snakes	

Note: Students will need the completed Venn diagram when they do Unit II, Math Activity 2 and Unit II, Language Arts Activity I.

Name_____

Venn Diagram- Predators and Prey

Prey

Animals that
are Both
Predators and Prey

Predators
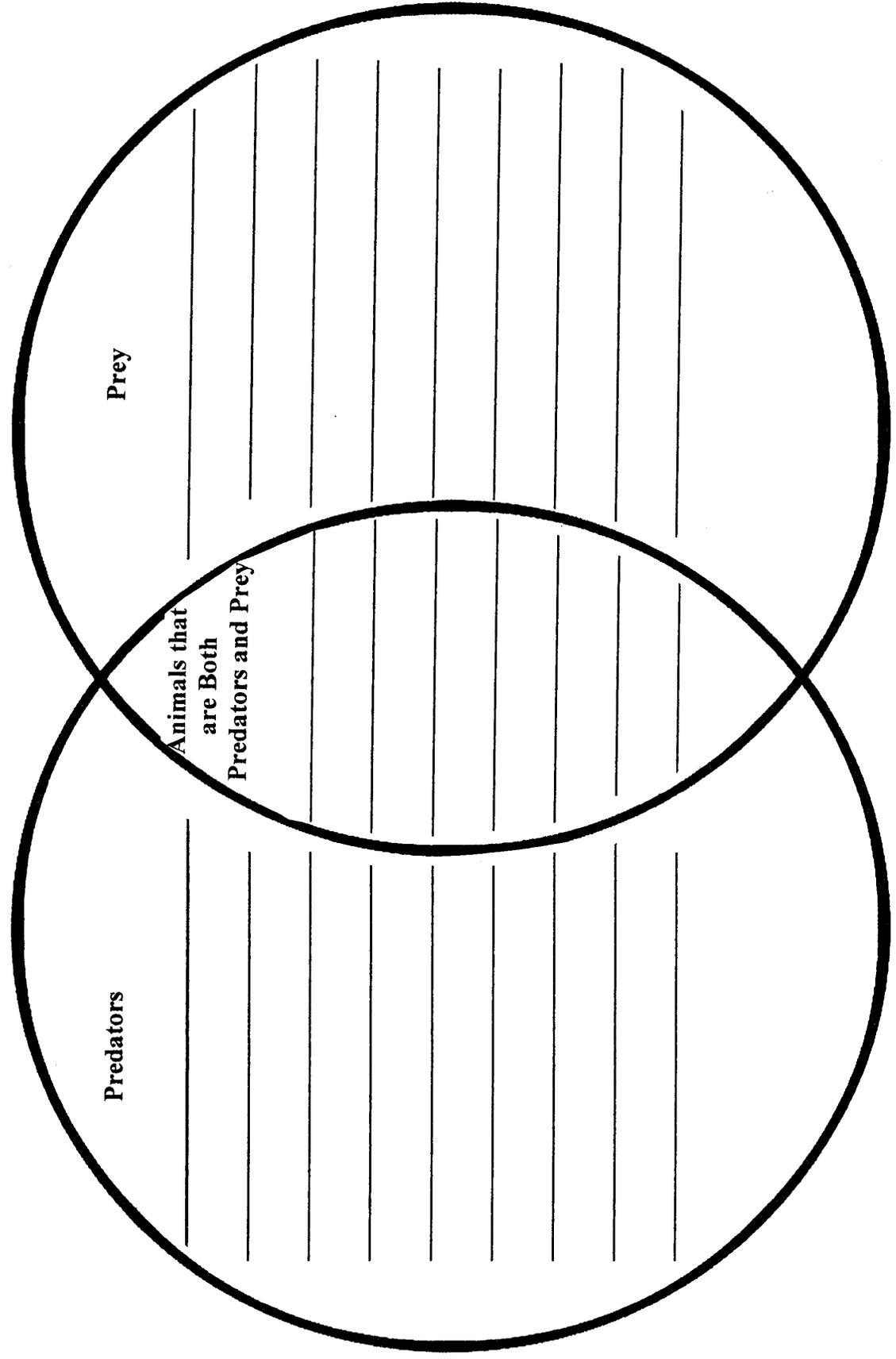
Math Activity 2: Finding Fractions and Converting the Fractions to Decimals and Percents

Strand: NUMBER AND OPERATIONS
Standard: Students will understand numerical concepts and mathematical operations.
Benchmark N. 1: Understand numbers, ways of representing numbers, relationships among numbers, and number systems.
Performance Standards: Grade 5
5.N.1.4 **Interpret percents as part of a hundred (i.e., find decimal and percent equivalents for common fractions, explain how they represent the same value, and compute a given percent of a whole number).**

Objective:
Using the information from their Venn diagrams, the students will write the fraction, percent, and equivalent decimal of the animals that are prey, predator and prey, and predators.

Materials:
Completed Venn diagram from Unit II, Math Activity 1

Procedure:
Have students write the fraction for each of the three categories from their Venn diagrams. Once they have written the fractions have them write the equivalent percent and decimal of each fraction.

Answers:
<u>Predators</u> – 3/10, 30%, 0.30
<u>Both Predators and Prey</u> - 5/10, 50%, 0.50
<u>Prey</u> - 2/10, 20%, 0.20

Math Activity 3: Wolf Graph

Strand: DATA ANALYSIS AND PROBABILITY
Standard: Students will understand how to formulate questions, analyze data, and determine probabilities.
5-8 Benchmark D.1: Formulate questions that can be addressed with data and collect, organize, and display
                   relevant data to answer them.
Performance Standards
5.D.1.1 Construct, read, analyze, and interpret tables, charts, graphs, and data plots.
5.D.1.2 Construct, interpret, and analyze data from graphical representations and draw simple conclusions using
        bar graphs, line graphs, circle graphs, frequency tables, and Venn diagrams.

Objective: The students will make a graph with information they have gathered and tallied.

Materials:
Paper for making graphs

Procedure: Have the students vote on "I like wolves" or "I don't like wolves." They should use tally marks to record the votes. Have them make a graph either on the computer or on paper to show the results of the vote.

Note: Students will need the completed Wolf Graph when they do Unit II, Language Arts Activity 1.

Language Arts Activity 1: Bias and Stereotyping

STRAND 1: Reading and Listening for Comprehension
Content Standard 1: Students will apply strategies and skills to comprehend information that is read, heard, and viewed.
5-8 Benchmark 1-C Apply critical thinking skills to analyze information.
5th Grade Performance Standards
**   4. Make informed judgments about bias, propaganda, stereotyping, and media techniques.**

Strand II: Writing and Speaking for Expression
Content Standard II: Students will communicate effectively through speaking and writing.
5-8 Benchmark II-A: Use speaking as an interpersonal communication tool.
5th Grade Performance Standards
**   2. Use language to:**
**   b. evaluate information and ideas;**
**   c. present and support arguments; and**
**   d. influence the thinking of others**

Objective: Students will recognize that authors can use stereotyping and bias to sway opinions and then verbally express their own ideas about wolves.

Materials:
Completed Venn diagram from Unit II, Math Activity 3 "Wolf Graph"
A traditional story of The Three Little Pigs

Procedure: After reading a traditional story of The Three Little Pigs, discuss how the author makes people feel about wolves and pigs. Discuss how the author's stereotyping of wolves might have an affect on what people think about wolves. Using the graph the students completed in Math Activity 3, look at the attitudes of the students. Ask if the ones that had voted that they didn't like wolves wish to share why they feel the way they do. The teacher should share with the students that there have been no known cases of a wolf attacking people and that wolves are actually afraid of people. After discussing these facts, students can share their feelings about wolves again. You might want to have the students vote again on whether they like wolves or not.

Language Arts Activity 2: Writing a "Big Bad Wolf" Paragraph

Strand II: Writing and Speaking for Expression
Content Standard II: Students will communicate effectively through speaking and writing.
5-8 Benchmark II-B: Apply grammatical and language conventions to communicate
5th Grade Performance Standards
   1.   Write sentences that use:
        a.   independent and dependent clauses;
        b.   transitions; and
        c.   conjunctions to connect ideas.
   2.   Identify and correctly use verbs that are often misused.
   3.   Use colons and quotation marks correctly.
   4.   Spell most commonly used words accurately using a multi-strategy approach to learn new spellings.
   5.   Edit final products for grammar, language conventions, and format.

Strand II: Writing and Speaking for Expression
Content Standard II: Students will communicate effectively through speaking and writing.
5-8 Benchmarks II-C: Demonstrate competence in the skills and strategies of the writing process.
5th Grade Performance Standards
   2. Apply writing process through:
        a.   pre-writing;
        b.   creating a rough draft;
        c.   revising for clarity of thought and focused communication;
        d.   editing; and publishing and sharing of final product.

Objective: The students will write a properly punctuated, grammatically correct paragraph supporting their ideas of whether they think the "Big Bad Wolf" is really "bad."

Materials: Copy(ies) of <u>The True Story of the Three Little Pigs by A. Wolf</u> by Jon Scieszka

Procedure:
Read to the students, or have them read <u>The True Story of the Three Little Pigs by A. Wolf.</u> Discuss what wolves eat in the wild and that they are carnivores. Have the students write a paragraph telling if they think the "Big Bad Wolf" really is "bad." They need to support their reason(s).

Language Arts Activity 3: Compare and Contrast <u>The Three Little Javelinas</u> and <u>The True Story of the Three Little Pigs by A. Wolf</u>

STRAND 1: Reading and Listening for Comprehension
Content Standard 1: Students will apply strategies and skills to comprehend information that is read, heard, and viewed.
5-8 Benchmark 1-A Listen to, read, react to and interpret information
5th Grade Performance Standards
   2. Make connections between texts by recognizing similarities and differences based on a common theme, lesson, or message.
STRAND 1: Reading and Listening for Comprehension
Content Standard 1: Students will apply strategies and skills to comprehend information that is read, heard, and viewed.
5-8 Benchmark 1-C Apply critical thinking skills to analyze information.
5th Grade Performance Standards
   3. Respond to fiction, non-fiction, poetry, and drama using interpretive, critical, and evaluation processes by:
      d. examining alternative perspectives.
    5. Analyze cause and effect relationships, compare and contrast information, facts, characters, and objects to predict a logical outcome.
Strand III: Literature and Media
Content Standard III: Students will use literature and media to develop an understanding of people, societies, and the self.
5-8 Benchmarks III B: Identify ideas and make connections among literary works.
5th Grade Performance Standards
   2. Contrast the actions and motives of characters in literary works.

Objective: The students will compare and contrast <u>The Three Little Javelinas</u> and <u>The True Story of the Three Little Pigs by A. Wolf</u>.

Materials: Copy(ies) of <u>The Three Little Javelinas</u> by Susan Lowell
        Copy(ies) <u>The True Story of the Three Little Pigs by A. Wolf</u>
           by Jon Scieszka

Procedure: Read or have students read <u>The Three Little Javelinas</u> and <u>The True Story of the Three Little Pigs by A. Wolf</u>. Discuss the two stories and what is the same and different about them.

Math Activity 4: <u>The Three Little Javelinas</u> and <u>The True Story of the Three Little Pigs by A. Wolf</u> Venn Diagram

Strand: DATA ANALYSIS AND PROBABILITY
Standard: Students will understand how to formulate questions, analyze data, and determine probabilities.
5-8 Benchmark D.1: Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them.
5.D.1.2 Construct, interpret, and analyze data from graphical representations and draw simple conclusions using bar graphs, line graphs, circle graphs, frequency tables, and Venn diagrams.

Objective: Students will use a Venn diagram to correctly place information from the books: <u>The Three Little Javelinas</u> and <u>The True Story of the Three Little Pigs by A. Wolf</u> into three categories.

Materials: Copy(ies) of <u>The Three Little Javelinas</u> by Susan Lowell
           Copy(ies) <u>The True Story of the Three Little Pigs by A. Wolf</u> by Jon Scieszka
           Copies of the Venn diagram: Comparing Stories

Procedure: After students have read and compare and contrasted the two stories, have them place information under each of the three categories on the Venn diagram.

Answers: Accept reasonable answers, such as:

<u>The Three Little Javelinas:</u>
Pigs lived in a tumbleweed house, an adobe house, and a saguaro sticks.
Has a coyote instead of a wolf
The pigs were not eaten
It tells why the coyote howls
The coyote gets its tail burned
They live in the Sonoran Desert

<u>Both Stories:</u>
Had three pigs
the pigs' houses were blown down

<u>The True Story of the Three Little Pigs by A. Wolf:</u>
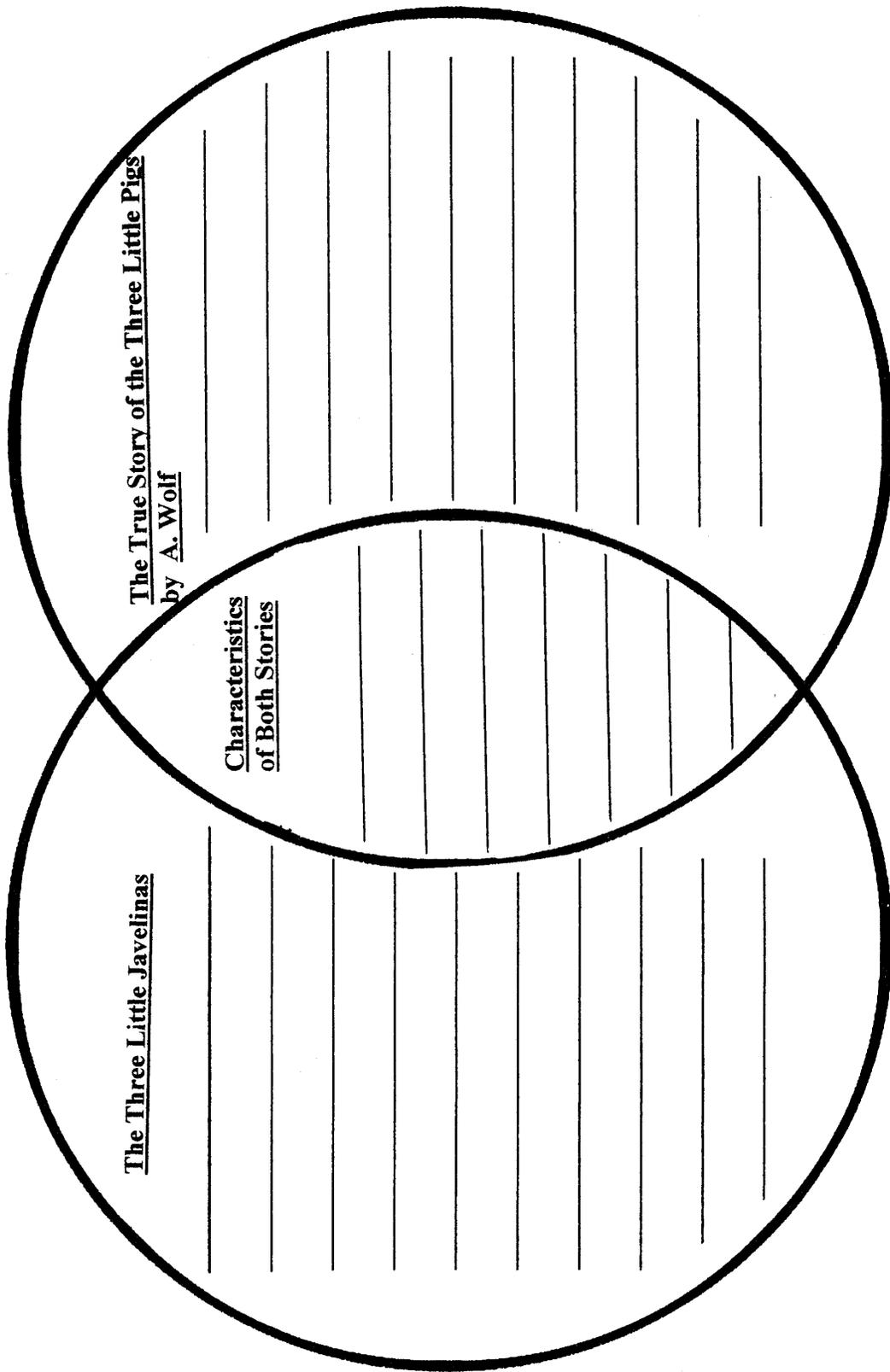**Has a wolf instead of a coyote**
Told by the wolf (point of view)
Wolf was put in jail
Wolf claimed he was innocent

Name _____

Venn Diagram- Comparing Stories

The True Story of the Three Little Pigs
by A. Wolf

Characteristics
of Both Stories

The Three Little Javelinas

Language Arts Activity 4: Writing a Letter to A. Wolf

STRAND 1: Reading and Listening for Comprehension
Content Standard 1: Students will apply strategies and skills to comprehend information that is read, heard, and viewed.
5-8 Benchmark 1-A Listen to, read, react to and interpret information
5th Grade Performance Standards

6. **Listen actively and critically by:**
    a. **asking questions**
    b. **delving deeper into the topic**
    c. **elaborating on the information and the ideas presented**
    d. **evaluating information and ideas**
    e. **making inferences and drawing conclusions**
    f. **making judgments**

Strand II: Writing and Speaking for Expression
Content Standard II: Students will communicate effectively through speaking and writing.
5-8 Benchmark II-B: Apply grammatical and language conventions to communicate
5th Grade Performance Standards

1. **Write sentences that use:**
    g. **independent and dependent clauses;**
    h. **transitions; and**
    i. **conjunctions to connect ideas.**
2. **Identify and correctly use verbs that are often misused.**
3. **Use colons and quotation marks correctly.**
4. **Spell most commonly used words accurately using a multi-strategy approach to learn new spellings.**
5. **Edit final products for grammar, language conventions, and format.**

Strand II: Writing and Speaking for Expression
Content Standard II: Students will communicate effectively through speaking and writing.
5-8 Benchmarks II-C: Demonstrate competence in the skills and strategies of the writing process.
5th Grade Performance Standards

2. **Apply writing process through:**
    a. **pre-writing;**
    b. **creating a rough draft;**
    c. **revising for clarity of thought and focused communication;**
    d. **editing; and**
    e. **publishing and sharing of final product.**
3. **Create journals, notes, stories, reports, and letters using appropriate formats and multimedia technologies to communicate to an audience for a specific purpose.**

Objective: The students will write a properly punctuated, grammatically correct, properly formatted, and well-composed letter.

Materials: Copies of The True Story of the Three Little Pigs by A. Wolf

Procedures: Discuss that The True Story of the Three Little Pigs by A. Wolf is told from the wolf's point of view. Have the students think about what the wolf was saying and if they were or were not convinced by his version of the story. Do they think the wolf seems trustworthy? Have students write a letter to A. Wolf in jail. Have them tell the wolf if they believe the wolf's story or not. Have them give reasons for their beliefs.

Science Activity 1: Animal Adaptations - Time of Activity

Strand II: Content of Science
Standard II (Life Science): Understand the properties, structures, and processes of living things and the
                                   interdependence of living things and their environments.
5-8 Benchmark II: Understand how traits are passed from one generation to the next and how species evolve.
Performance Standards
    2. Identify characteristics of an organism that are inherited from its parents (e.g., eye color in humans, flower
       color in plants) and other characteristics that are learned or result from interactions with the environment.

Objective: The students will identify some physical and behavioral characteristics of Chihuahuan Desert animals.

Materials:
"Animal Adaptations" PowerPoint
One large sheet of construction paper for each group (2-3 students)
Pictures from "Food Chain/ Food Web" packets
"Plants and Animals of the Chihuahuan Desert" booklets from their packets

Procedure:
Show and discuss "Animal Adaptations" PowerPoint.
Discuss that the animals' time of activity is a behavioral adaptation and that some of the animals change their time of activity when the seasons change. Some animals, like snakes, frogs, and turtles may hibernate during the cold winter.
Hand out the "Food Chain/ Food Web" packets to each group.
Hand out a large sheet of construction paper to each group.
Have the students divide the paper into thirds and head them with:

                         Time of Activity
Nocturnal   **Crepuscular**   **Diurnal**

Tell the students to use their "Plants and Animals of the Chihuahuan Desert" booklets to determine which animals belong under each category. They should place the pictures from their "Food Chain/ Food Web" packets under the correct category. Tell them that animals that have different times of activity can be placed in whichever category they select. You can have the groups write their answers on a piece of paper if you want to grade their work.

The answers are on the next page.

Science Activity 1: Continued

Answers:

Nocturnal	Crepuscular	Diurnal
badger	black bear	badger
bobcat	bobcat	black bear
coyote	coyote	coyote
desert cottontail rabbit	desert cottontail rabbit	elk
hog-nosed skunk	elk	golden eagle
kangaroo rat	javelina	javelina
kit fox	kit fox	mule deer
mice/rats	Mexican grey wolf	prairie dog
mountain lion	mountain lion	pronghorn
porcupine	mule deer	red-tailed hawk
pronghorn	porcupine	roadrunner
raccoon	scaled quail	snakes
ringtail	snakes	turkey vulture
snakes (in summer)		whiptail lizard

Science Activity 2: Classroom Visit
Living Desert Zoo and Gardens State Park Docent Classroom
Activity: CSI: Who Killed the Rabbit?

Strand: II: Content of Science
Strand II: Content of Science
Standard II (Life Science): Understand the properties, structures, and processes of living things and the
**　　　　　　　　　　　interdependence of living things and their environments.**
5-8 Benchmark II: Understand how traits are passed from one generation to the next and how species evolve.
Performance Standards
**　2. Identify characteristics of an organism that are inherited from its parents (e.g., eye color in humans, flower**
**　　color in plants) and other characteristics that are learned or result from interactions with the environment.**

Objective: Using the animals' physical and behavioral adaptations, the students will determine which Chihuahuan Desert mammal killed the rabbit.

A docent from the Living Desert Zoo and Gardens State Park presents this activity. This is an enjoyable activity that uses the information from the "Animal Adaptations" PowerPoint and lets students investigate clues of animals' feet, diet, and time of activity to determine which animal killed the rabbit. The activity takes about 50 to 60 minutes. The students should have completed the "Animal Adaptations" activities before the docent comes. If you wish to have a docent bring this activity to your classroom, please call the park at (575) 887-5516.