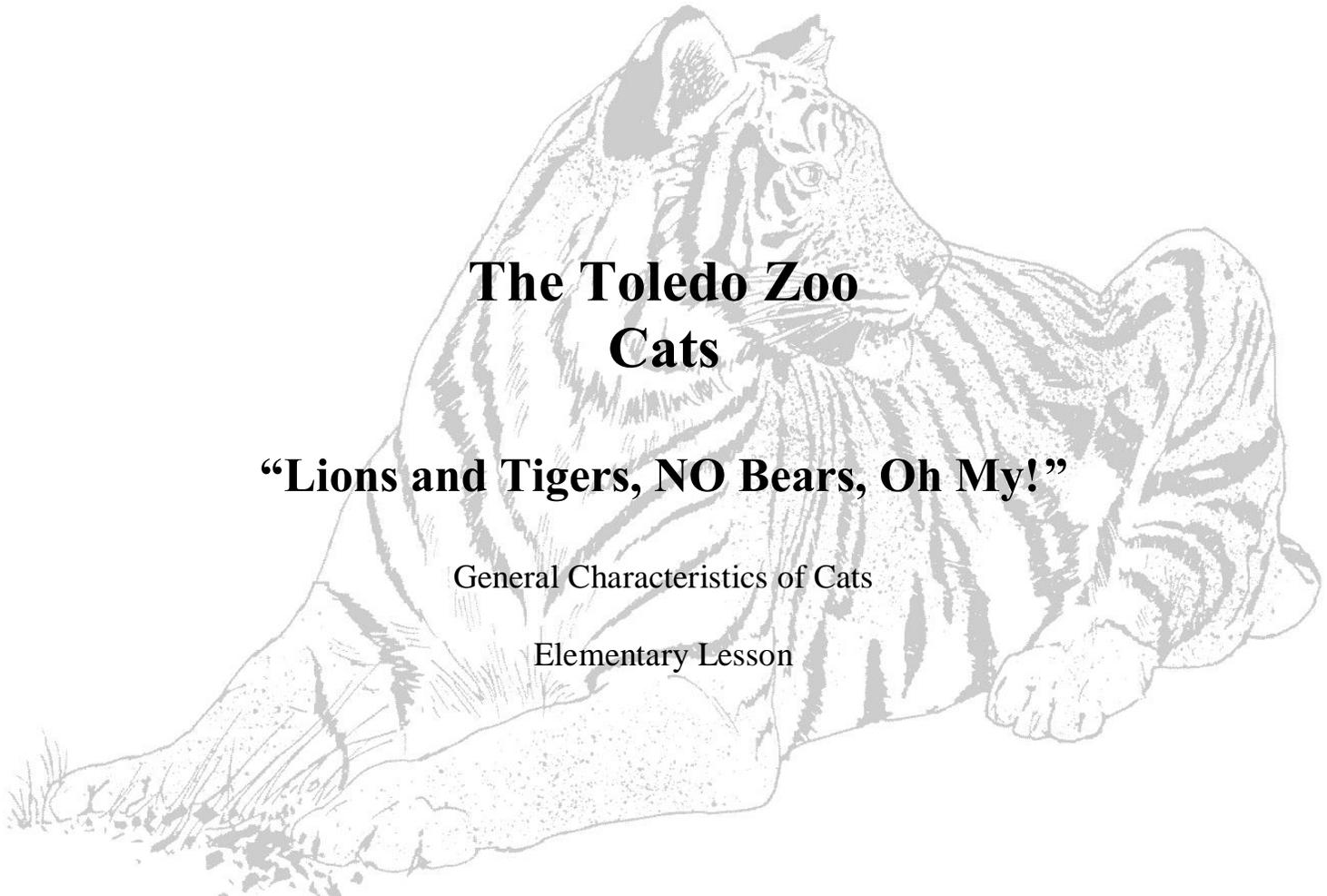**THINKINGWORKS**®

TOLEDO ZOO®

The Toledo Zoo
Cats

"Lions and Tigers, NO Bears, Oh My!"

General Characteristics of Cats

Elementary Lesson
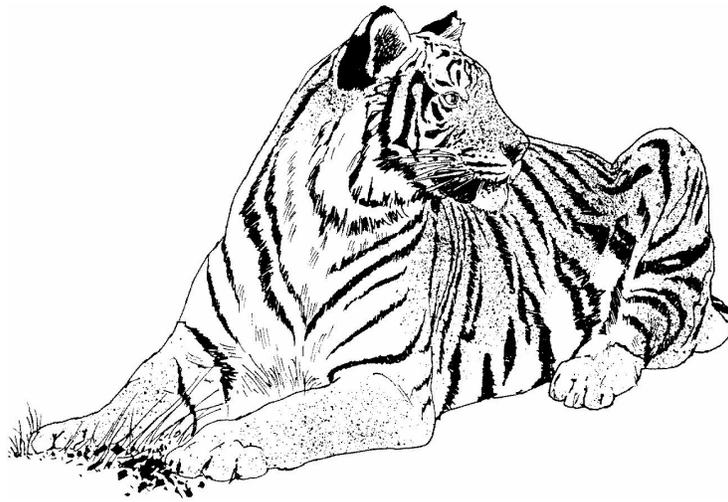
Learning Strategies

Background Knowledge	Vocabulary	Comprehension	Application/ Extension
Experience Text Relationship	Semantic Feature Analysis	About Point Notetaking	Proposition Support Outline

Experience Text Relationship

<u>Teacher Directions</u>: Before your Zoo visit, discuss the following information with your students. You can supplement the discussion with visual materials pertaining to the topic. As an additional activity, write down any questions that the class develops and record student answers. After the Zoo visit, add to, refine and correct studentsø responses to the questions using the information they learned at the Zoo.

<u>Class Discussion</u>
Domesticated cats make wonderful and safe pets. However, they are members of the same family as lions, snow leopards, tigers and cheetahs.

Think about how a pet cat resembles the cats at the Zoo. For example, both are mammals with claws. Now think about some of the ways in which a pet cat and the wild cats at the Zoo are different. For example, they may differ in size or diet. At the Zoo, we will be doing some field investigations to learn more about the wild cats that live there.

<u>Question Activity</u>
Would a pet cat be able to survive in the wild? What questions could we develop to find out about how the characteristics of wild cats help them survive in the wild? When we come back from our Zoo visit, we will compare our ideas to new information learned at the Zoo.
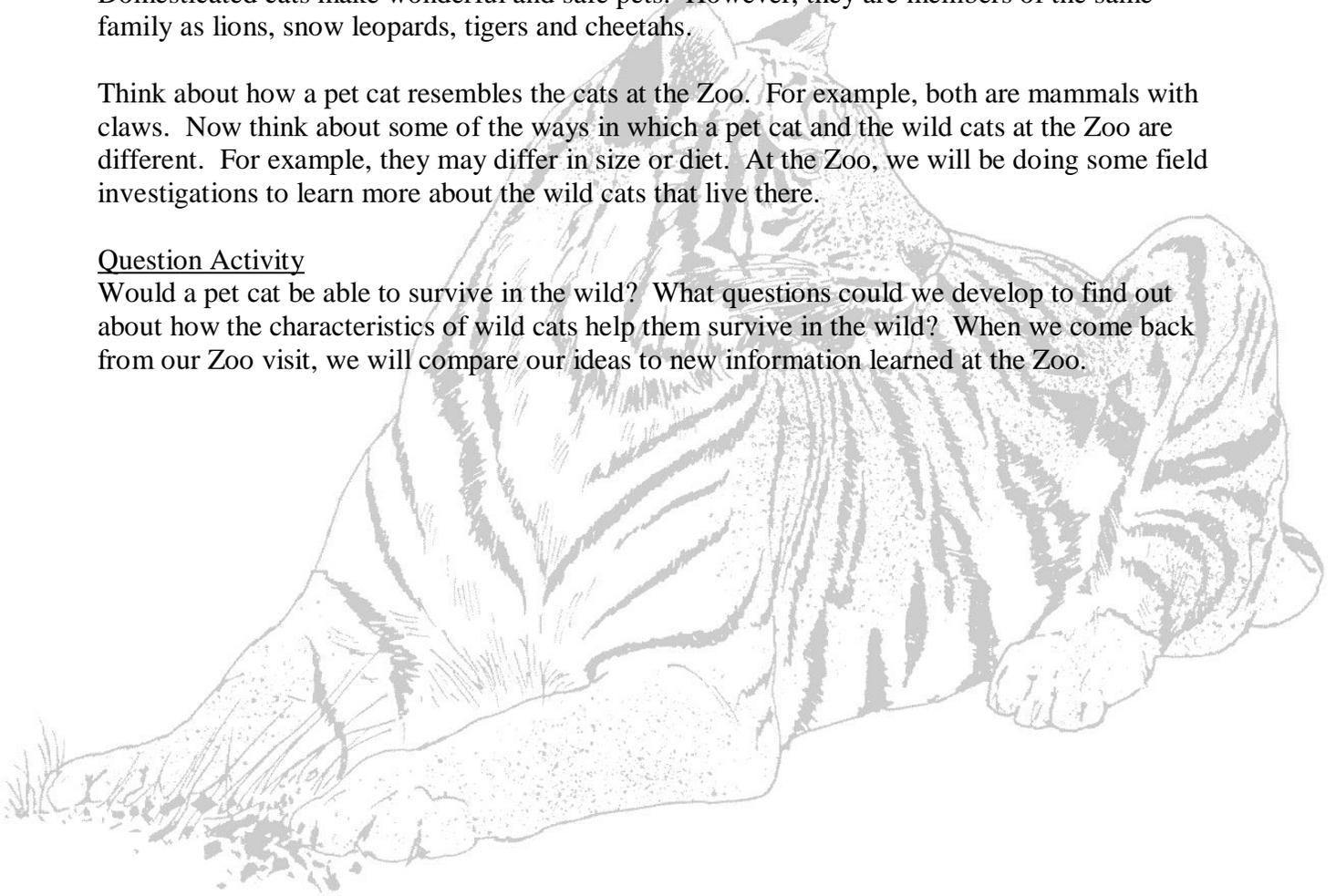
Semantic Feature Analysis

Teacher Directions: After your Zoo visit, have students complete the Semantic Features Analysis Guide. Discuss with students the characteristics of each animal listed in the left column. Review with them the words or concepts across the top of the grid. Then, as a class or in small groups, have students mark each box on the grid with a check if the cat has the characteristic.

	canine teeth	retractable claws	disruptive coloration	cryptic coloration	hard foot pads
lion					
tiger					
snow leopard					
cheetah					

About Point Notetaking

<u>Teacher Directions:</u> After you visit the Zoo, have students complete the About Point Notetaking Outline. They can then use it for studying by folding over everything but the õAbouts.ö Students can use information from their notes to write a paragraph or summary for each section of text.

About: Cats	**Point:** are mammals that share characteristics with other mammals. **Details:** 1. 2.
About: Catsø furry coats	**Point:** provide insulation from temperature extremes and help hide them from their prey in several ways. **Details:** 1. 2.

About:
Catsø senses
	Point: help them hunt prey.
	Details:
	
	sight
	  1.
	
	  2.
	
	hearing
	  1.
	
	  2.
	
	whiskers
	  1.
	
	  2.

About Point Notetaking (continued)

About: Catsø bodies	**Point:** have a number of special features that help them catch their prey. **Details:** claws 1. 2. teeth 1. 2. eyes 1. 2.
About: Catsø hunting strategies	**Point:** are suited to catching prey. **Details:** 1. 2.
About: Cat populations	**Point:** are threatened for several reasons. **Details:** 1. 2.

Proposition Support Outline

<u>Teacher Directions:</u> After your Zoo visit, discuss in class the reasons that cats are endangered. Have students complete the Proposition Support Outline by filling in information to support and refute the proposition. They can then select one position and use the information in the outline to write a summary.

Proposition	Support	Refute
A small village near a tiger refuge is overcrowded and people are beginning to build houses in the tigersø habitat. This presents a danger to the people. The tigers that bother the people in the village should be shot.		

Student Summary: Support

Student Summary: Refute

State of Ohio Benchmarks for Language Arts in the Early Grades

	ThinkingWorks Lesson			
Cats	**Background Knowledge**	**Vocabulary**	**Comprehension**	**Application/ Extension**
	Experience Text Relationship	Semantic Feature Analysis	About Point Notetaking	Proposition Support Outline
Acquisition of Vocabulary				
Use context clues to determine the meaning of new vocabulary.				
Read accurately high-frequency sight words.		✓		
Apply structural analysis skills to build and extend vocabulary and to determine word meaning.		✓		
Know the meaning of specialized vocabulary by applying knowledge of word parts, relationships and meanings.		✓		
Use resources to determine the meanings and pronunciations of unknown words.				
Concepts of Print, Comprehension Strategies and Self-Monitoring Strategies				
Establish a purpose for reading and use a range of reading comprehension strategies to understand literary passages and text.	✓		✓	
Make predictions from text clues and cite specific examples to support predictions.				
Draw conclusions from information in text.			✓	✓
Apply reading skills and strategies to summarize and compare and contrast information in text, between text and across subject areas.			✓	✓
Demonstrate comprehension by responding to questions (e.g., literal, informal and evaluative).				
Apply and adjust self-monitoring strategies to assess understanding of text.			✓	✓
Informational, Technical and Persuasive Text				
Use text features and structures to organize content, draw conclusions and build text knowledge.				
Ask clarifying questions concerning essential elements of informational text.				
Identify the central ideas and supporting details of informational text.			✓	✓
Use visual aids as sources to gain additional information for text.				
Evaluate two- and three-step directions for proper sequencing and completeness.				
Literary Text				
Compare and contrast plot across literary works.				
Use supporting details to identify and describe main ideas, characters and setting.				
Recognize the defining characteristics and features of different types of literary forms and genres.				
Explain how an author's word choice and use of methods influences the reader.				
Identify the theme of a literary text.				

ThinkingWorks Lesson

Cats	Background Knowledge	Vocabulary	Comprehension	Application/ Extension
	Experience Text Relationship	Semantic Feature Analysis	About Point Notetaking	Proposition Support Outline
Writing Process				
Generate ideas for written compositions.				✓
Develop audience and purpose for self-selected and assigned writing tasks.				✓
Use organizers to clarify ideas for writing assignments.				✓
Use revision strategies and resources to improve ideas and content, organization, word choice and detail.				✓
Edit to improve sentence fluency, grammar and usage.				✓
Apply tools to judge the quality of writing.				
Publish writing samples for display or sharing with others, using techniques such as electronic resources and graphics.				
Writing Applications				
Compose writings that convey a clear message and include well-chosen details.				✓
Write responses to literature that demonstrate an understanding of a literary work.				
Write friendly letters and invitations complete with date, salutation, body, closing and signature.				
Writing Conventions				
Print legibly using appropriate spacing.				✓
Spell grade-appropriate words correctly.				✓
Use conventions of punctuation and capitalization in written work.				✓
Use grammatical structures in written work.				✓
Research				
Generate questions for investigation and gather information from a variety of sources.				
Retell important details and findings.				✓
Communications: Oral and Visual				
Use active listening strategies to identify the main idea and to gain information from oral presentations.				
Connect prior experiences, insights and ideas to those of a speaker.				
Follow multi-step directions.				
Speak clearly and at an appropriate pace and volume.				
Deliver a variety of presentations that include relevant information and a clear sense of purpose.				

National Science Education Standards
Grades K-4

	ThinkingWorks Lesson			
Cats	**Background Knowledge**	**Vocabulary**	**Comprehension**	**Application/ Extension**
	Experience Text Relationship	Semantic Feature Analysis	About Point Notetaking	Proposition Support Outline
Science as Inquiry				
Abilities necessary to do scientific inquiry				
Ask a question about objects, organisms, and events in the environment.	✓			
Plan and conduct a simple investigation.				
Employ simple equipment and tools to gather data and extend the senses.				
Use data to construct a reasonable explanation.		✓	✓	✓
Communicate investigations and explanations.			✓	✓
Understanding about scientific inquiry				
Scientific investigations involve asking and answering a question and comparing the answer with what scientists already know about the world.	✓			
Scientists use different kinds of investigations depending on the questions they are trying to answer. Types of investigations include describing objects, events, and organisms; classifying them, and doing a fair test (experimenting).	✓	✓	✓	✓
Simple instruments, such as magnifiers, thermometers, and rulers, provide more information than scientists obtain using only their senses.				
Scientists develop explanations using observations (evidence) and what they already know about the world (scientific knowledge). Good explanations are based on evidence from investigations.		✓	✓	✓
Scientists make the results of their investigations public; they describe the investigations in ways that enable others to repeat the investigations.			✓	✓
Scientists review and ask questions about the results of other scientistsø work.				
Life Science				
The characteristics of organisms				
Organisms have basic needs. For example, animals need air, water, and food; plants require air, water, nutrients, and light. Organisms can survive only in environments in which their needs can be met. The world has many different environments, and distinct environments support the life of different types of organisms.				✓
Each plant or animal has different structures that serve different functions in growth, survival, and reproduction. For example, humans have distinct body structures for walking, holding, seeing, and talking.		✓	✓	

ThinkingWorks Lesson

Cats	Background Knowledge	Vocabulary	Comprehension	Application/ Extension
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Life Science				
The behavior of individual organisms is influenced by internal cues (such as hunger) and by external cues (such as a change in environment). Humans and other organisms have senses that help them detect internal and external cues.				✓
Life cycles of organisms				
Plants and animals have life cycles that include being born, developing into adults, reproducing, and eventually dying. The details of this life cycle are different for different organisms.				
Plants and animals closely resemble their parents.		✓		
Many characteristics of an organism are inherited from the parents of the organism, but other characteristics result from an individualøs interaction with the environment. Inherited characteristics included the color of flowers and the number of limbs of an animal. Other features, such as the ability to ride a bicycle, are learned through interactions with the environment and cannot be passed on to the next generation.		✓	✓	
Organisms and environments				
All animals depend on plants. Some animals eat plants for food. Other animals eat animals that eat the plants.				✓
An organismøs patterns of behavior are related to the nature of that organismøs environment, including the kinds and numbers of other organisms present, the availability of food and resources, and the physical characteristics of the environment. When the environment changes, some plants and animals survive and reproduce, and others die or move to new locations.				✓
All organisms cause changes in the environment where they live. Some of these changes are detrimental to the organisms or other organisms, whereas others are beneficial.				✓
Humans depend on their natural and constructed environments. Humans change environments in ways that can be either beneficial or detrimental for themselves and other organisms.				✓