

CAFT Science Year B: Behavior and the seven Cs of Learning Image: Collaboration of the seven Cs of Learning Image: Collaboration of the seven Cs of Learning Image: Collaboration of the seven Cs of Learning Image: Collaboration of the seven Cs of Learning Image: Collaboration of the seven Cs of Learning Image: Collaboration of the seven Cs of Learning Image: Collaboration of the seven Cs of Learning Image: Collaboration of the seven Cs of Learning Image: Collaboration of the seven Cs of Learning Image: Collaboration of the seven Cs of Learning Image: Collaboration of the seven Cs of Learning Image: Collaboration of the seven Cs of Learning Image: Collaboration of the seven Cs of Learning Image: Collaboration of the seven Cs of Learning Image: Collaboration of the seven Cs of Learning Image: Collaboration of the seven Cs of Learning Image: Collaboration of the seven Cs of Learning Image: Collaboration of the seven Cs of Learning Image: Collaboration of the seven Cs of Learning Image: Collaboration of the seven Cs of Learning Image: Collaboration of the seven Cs of Learning Image: Collaboration of the seven Cs of Learning Image: Collaboration of the seven Cs of Learning Image: Collaboration of the seven Cs of Learning Image: Collaboration of the seven Cs of Learning Image: Collaboration of the seven Cs of Learning Image: Collaboration of the seven Cs of Learning		Collaboration Character Citizenship
Unit Titles	Length of Unit	
Introduction, Background, and Evolution of Behavior	3-4 weeks	
Survival Behavior	3-4 weeks	
Sexual Behavior	3-4 weeks	
Neonatal Behavior	2-3 weeks	
Social Behavior	4-5 weeks	
Species Specific Behavior	7-8 weeks	
Animal Training	4-5 weeks	
Explanation of Behavior	5-6 weeks	
Supervised Agricultural Experience (SAE) Proficiencies	1-2 weeks	



Strands	Course Level Expectations
Physical Preparedness	The student needs to come physically prepared to work in all weather conditions and with all species of animals. The students will need to be able to handle, restrain, and work with all species of animals.
Teamwork and Communication	Through the course of the year the class will need to utilize communication and teamwork skills to be able to work together to obtain goals. The students will be expected to work together to accomplish various tasks including but not limited to; sanitization procedures, animal management, and performance based assessments.
Animal Care and Management	Students will provide proper health care to animals by analyzing nutrition, physical exams, preventative maintenance and various other animal management techniques.

Unit Title	Introduction, Background, and Evolution of Behavior	Length of Unit	3-4 weeks

Inquiry Questions (Engaging & Debatable)	 Why do animals behave the way that they do? What is the difference between wild and domesticated animals? How has animal behavior changed over time with human development?
Standards*	Animal Systems (AS): AS.01.01.01.a. Identify and summarize the origin, significance, distribution and domestication of different animal species. AS.01.01.01.b. Evaluate and describe characteristics of animals that developed in response to the animal's environment and led to their domestication. AS.01.01.02.a. Research and summarize major components of animal systems (e.g., livestock, companion animal, etc.). AS.01.01.02.b. Describe the historical and scientific developments of different animal industries and summarize the products, services and careers associated with each. AS.01.01.02.c. Predict trends and implications of future developments within different animal industries on production practices and the environment. AS.01.02.03.a. Summarize the types, purposes, and characteristics of effective record keeping and documentation practices for animal systems enterprises (e.g., managing records for animal identification, feeding, breeding, treatment, income/expense, etc.).AS.01.02.03.b. Analyze and evaluate the accuracy and effectiveness of records used in an animal system business. AS.02.01.01.b. Design programs that assure the welfare of animals and prevent abuse or mistreatment. AS.02.01.02.a. Research and summarize the challenges involved in working with animals and resources available to overcome them (e.g., tools, technology, equipment, facilities, animal behavior signals, etc.). AS.02.01.02.b. Analyze and document animal welfare procedures used to ensure safety and maintain low stress when moving and restraining animals. AS.02.01.02.c. Devise, implement and evaluate safety procedures and plans for working with animals by species using information based on animal behavior and responses. AS.02.01.03.a. Distinguish between animal husbandry practices that promote animal welfare.
Unit Strands & Concepts	Behavior and Training Terminology, how to study behavior, observation techniques, domestication process, how animal behavior is influenced by humans, process of domestication, terminology, identifying normal behaviors seen in animals, human influence on animal, communication
Vocabulary	behavior, domestication, adaptation, innate, learned, wild, tame, ethogram, ethology

* The agriculture, food and natural resources (AFNR) industry standards

Unit Title	Introduction, Background, and Evolution of Behavior	Length of Unit	3-4 weeks

Critical Content:	Key Skills:
My students will Know	My students will be able to (Do)
 behavior and training terminology. the process of domestication. how human development has affected animal behavior and the evolution of behavior. 	 explain common terminology associated with animal behavior and training identify normal and abnormal behavior in various species describe how the ideology of evolution has impacted behavior identify innate and learned behavior identify body language cues and vocalization cues

Assessments:	 Various interim and formative assessments Unit Test Performance Assessments
Teacher Resources:	Various primary and industry resources

Unit Title	Survival Behavior	Length of Unit	3-4 weeks
Inquiry Questions (Engaging & Debatable) Unit Strands &	 What behaviors are necessary for survival? How do survival behaviors vary among species? How can humans differentiate between animals that are surviving and those that are thriving? Animal Systems (AS):		
Standards	AS.01.01.01.b. Evaluate and describe characteristics of animals that developed in response to the animal's environment and led to their domestication. AS.01.01.02.c. Predict trends and implications of future developments within different animal industries on production practices and the environment. AS.01.02.01.c. Evaluate the effectiveness of different production methods and defend the use of selected methods using data and evidence. AS.01.02.03.b. Analyze and evaluate the accuracy and effectiveness of records used in an animal system business. AS.01.02.04.a. Identify and summarize wildlife management methods. AS.01.03.01.a. Distinguish between the types of laws pertaining to animal systems. AS.02.01.01.b. Design programs that assure the welfare of animals and prevent abuse or mistreatment. AS.02.01.02.b. Analyze and document animal welfare procedures used to ensure safety and maintain low stress when moving and restraining animals. AS.02.01.02.c. Devise, implement and evaluate safety procedures and plans for working with animals by species using information based on animal behavior and responses. AS.02.01.03.b. Analyze and document animal husbandry practices that promote animal welfare and those that do not. AS.02.01.03.b. Analyze and document animal husbandry practices and their impact on animal welfare to help provide an abundant and safe food supply.		
Unit Strands & Concepts	Ingestive behaviors, drinking behaviors, elimination behaviors, habitat preferences,, digestive syste and behavior, hunting behaviors Survival needs, how survival needs vary interspecies and intraspecies, eating, drinking, shelter, elimination, male vs. female eliminative behaviors, hunting, gathering, animal welfare, animal communication		
Key Vocabulary	Welfare, rights, interspecies, intraspecies, omnivor ruminant, monogastric	e, carnivore, herbivore, rui	ninant, modified

Unit Title	Survival Behavior	Length of Unit	3-4 weeks
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Critical Content:	Key Skills:
My students will Know	My students will be able to (Do)
 how behavior has changed in animal species. how genotype can affect behavior. how extinction and adaptation can occur over time. why some animals are more prone to "fight" while others are prone to "flight". 	 identify various ingestive, drinking, and eliminative behaviors different species. identify normal and abnormal survival behavior. provide proper management for various animal species as determined by their survival behavior. use sensory information to modify animal behavior recognize and use animal communication techniques

Assessments:	 Various interim and formative assessments Performance assessments Unit Test
Teacher Resources:	 Various primary and industry resources

Unit Title	Sexual Behavior	Length of Unit	3-4 weeks		
Inquiry Questions	How do mating systems compare and contr				
(Engaging &	• How do courtship behaviors compare and o				
Debatable)	When is the best time to breed a female ani	mal?			
Standards	Animal Systems (AS): AS.01.01.01.b. Evaluate and describe characteristics of animals that developed in response to the animal's environment and led to their domestication.				
	 AS.01.01.02.c. Predict trends and implications of future developments within different animal industries on production practices and the environment. AS.01.02.01.c. Evaluate the effectiveness of different production methods and defend the use of selected methods using data and evidence. AS.01.02.03.b. Analyze and evaluate the accuracy and effectiveness of records used in an animal system business. AS.02.01.01.b. Design programs that assure the welfare of animals and prevent abuse or mistreatment. AS.02.01.02.b. Analyze and document animal welfare procedures used to ensure safety and maintain low stress when moving and restraining animals. AS.02.01.02.c. Devise, implement and evaluate safety procedures and plans for working with animals by species using information based on animal behavior and responses. AS.02.01.03.a. Distinguish between animal husbandry practices that promote animal 				
	welfare and those that do not. AS.02.01.03.b. Analyze and document animal husbandry practices and their impact on animal welfare.				
Unit Strands & Concepts	Endocrine system, hormones affecting behavior, mating systems, courtship behavior, animal communication, fertility, estrous behavior identification, puberty, mate preferences, adaptations, maternal behavior, genetic engineering in terms of mate selection, endocrinology, innate behavior, learned behavior, estrous, communication, puberty, mating systems, sexual choices in relation to species survival and adaptation, animal communication				
Key Vocabulary	Endocrinology, testosterone, estrous, estrogen, pheromones, flehmen response, artificial insemination, monogamous, polygamous, polyestrous, heat.				

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Unit Title	Sexual Behavior	Length of Unit	3-4 weeks

Critical Content:	Key Skills:
My students will Know	My students will be able to (Do)
 the effect of hormones on animal behavior. normal and abnormal sexual behavior appropriate behavior of animals who are receptive to mate. the aspects relating to artificial insemination 	 identify sexual body language, vocalizations, and nonverbal communication cues as demonstrated by animals. identify if an animal is receptive to mate. identify and describe appropriate mating systems and courtship behaviors describe the estrous cycle and how a female's behavior changes during that cycle. describe how male hormones affect behavior how to artificially inseminate an animal

Assessments:	 Various interim and formative assessments Performance assessments Unit Test
Teacher Resources:	 Various primary and industry resources

Unit Title	Neonatal Behavior	Length of Unit	2-3 weeks
Inquiry Questions	How does neonatal behavior compare and	l contrast between species	?
(Engaging &	• What does "neonatal behavior" mean?		
Debatable)	How do infants communicate with others	2	
Unit Strands &	Animal Systems (AS):		
Standards	AS.01.01.01.b. Evaluate and describe characteristics of animals that developed in response to the animal's environment and led to their domestication. AS.02.01.01.b. Design programs that assure the welfare of animals and prevent abuse or mistreatment. AS.02.01.02.a. Research and summarize the challenges involved in working with animals and resources available to overcome them (e.g., tools, technology, equipment, facilities, animal behavior signals, etc.). AS.02.01.02.b. Analyze and document animal welfare procedures used to ensure safety and maintain low stress when moving and restraining animals. AS.02.01.02.c. Devise, implement and evaluate safety procedures and plans for working with animals by species using information based on animal behavior and responses. AS.02.01.03.a. Distinguish between animal husbandry practices that promote animal welfare and those that do not. AS.02.01.03.b. Analyze and document animal husbandry practices and their impact on animal welfare. AS.02.02.01.a. Identify and categorize tools, technology and equipment used in animal husbandry and welfare to help provide an abundant and safe food supply.		
Concepts	Communication, mothering, nature vs. nurture, species specific neonatal behaviors, innate an learned behaviors, dependency, vocalizations, sibling behaviors, infanticide, territoriality, an communication, how behavior changes from infancy to adulthood Neonatal behavior, how behavior changes from infant to adulthood, mothering ability, nature		e, territoriality, animal
	nurture, innate behaviors, infanticide, territoriality , animal communication		
Key Vocabulary	Neonate, communication, mothering ability, nature, nurture, innate, instinct, dependency, infanticide, territoriality, development, body language, perception, recognition, deciphering		

Unit Title	Neonatal Behavior	Length of Unit	2-3weeks

Critical Content:	Key Skills:
My students will Know	My students will be able to (Do)
 the similarities and differences of infancy behaviors and adult behaviors. the aspects that contribute to the concepts of nature and nurture. what contributes to life stages and how that can alter animal behavior? 	 identify neonatal behavior in various species. identify common neonatal and mothering communications. describe how behavior changes within a species from infancy to adulthood. identify aspects of nature and nurture and how it can affect behavior in animals. identify what behaviors observed in animal species are innate and which are learned.

Assessments:	 Various interim and formative assessments Performance assessments Unit Test
Teacher Resources:	 Various Primary and Industry Resources

Unit Title	Social Behavior	Length of Unit	4-5 weeks
Inquiry Questions (Engaging & Debatable)	 Which species are social and which are independent? How does sleep, grooming, and exploratory behaviors affect animal welfare? How does social structure vary between species? 		
Standards	 Animal Systems (AS): AS.01.01.01.b. Evaluate and describe characteristics of animals that developed in response to the animal's environment and led to their domestication. AS.01.02.04.a. Identify and summarize wildlife management methods. AS.02.01.01.b. Design programs that assure the welfare of animals and prevent abuse or mistreatment. AS.02.01.02.a. Research and summarize the challenges involved in working with animals and resources available to overcome them (e.g., tools, technology, equipment, facilities, animal behavior signals, etc.). AS.02.01.02.b. Analyze and document animal welfare procedures used to ensure safety and maintain low stress when moving and restraining animals. AS.02.01.02.c. Devise, implement and evaluate safety procedures and plans for working with animals by species using information based on animal behavior and responses. AS.02.02.01.a. Identify and categorize tools, technology and equipment used in animal husbandry and welfare to help provide an abundant and safe food supply. 		
Unit Strands & Concepts	 Pack and herd Mentality, Species Specific Social Structures, Social Grooming, Sleeping behaviors, Exploratory Behaviors, Independence Behaviors, Cooperation, Hunting behaviors, social recognition, animal communication Pack mentality, social structures, social hierarchy, social behaviors, independent behavior, biological clock, exploratory behavior, flight vs. fight, animal communication 		
Key Vocabulary	Hierarchy, pack mentality, independent, REM cycle, crepuscular, nocturnal, biological clocks, symbiosis, territory, mutualism, body language, verbal language, nonverbal cues, perception, recognition		

Unit Title	Social Behavior	Length of Unit	4-5 weeks

Critical Content:	Key Skills:
My students will Know	My students will be able to (Do)
 how flight and fight instincts will affect sleeping behaviors various grooming techniques and tools how exploratory and social behavior affects animal welfare. how behavior is affected by herd and pack mentality ways that animals meet, greet, and recognize each other. how animals communicate together 	 identify which species are independent by nature. identify social hierarchy systems and social structures identify which animal within a social system is most dominant and which is least dominant. properly groom an animal identify what specific species need to feel safe when sleeping provide appropriate mental stimulation to satisfy animal exploratory behaviors design an animal enclosure based on specific species social needs. determine symbiotic relationships communicate with animals nonverbally and verbally

Assessments:	 Various interim and formative assessments Performance Assessment Unit Test
Teacher Resources:	 Various Primary and Industry Resources

Unit Title	Species Specific Behavior	Length of Unit	7-8 weeks
Inquiry Questions (Engaging & Debatable)	 Do all animals act similarly? What causes animals to behave how they do? How does genetics affect behavior? 		
Standards	 Animal Systems (AS): AS.01.01.01.a. Identify and summarize the origin, significance, distribution and domestication of different animal species. AS.01.01.01.b. Evaluate and describe characteristics of animals that developed in response to the animal's environment and led to their domestication. AS.01.02.04.a. Identify and summarize wildlife management methods. AS.01.03.01.a. Distinguish between the types of laws pertaining to animal systems. AS.02.01.01.b. Design programs that assure the welfare of animals and prevent abuse or mistreatment. AS.02.01.02.a. Research and summarize the challenges involved in working with animals and resources available to overcome them (e.g., tools, technology, equipment, facilities, animal behavior signals, etc.). AS.02.01.02.b. Analyze and document animal welfare procedures used to ensure safety and maintain low stress when moving and restraining animals. AS.02.01.02.c. Devise, implement and evaluate safety procedures and plans for working with animals by species using information based on animal behavior and responses. 		
Unit Strands & Concepts	migration, orientation, flock, navigation, non run ruminant behavior such as cattle, sheep and goa zones, ingestive behavior of each species, social each species, how domestication has changed be Anatomical comparisons, Fight vs. flight, non-ru ruminative behavior, ingestive behavior, social l feral animals, animal communication	ts, carnivore behavior such behavior of each species, ex ehavior in these species minative behavior, carnivo	as cats and dogs, flight as cats and dogs, flight as cats and dogs, flight as provided as the second s
Key Vocabulary	Migration, orientation, navigation, non-ruminan structure, herd mentality, tame, feral, wild, dom		

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Unit Title Species Specific Behavior		Length of Unit	7-8 weeks
Critical Content: My students will Know	Key Skills: My students will be able to (Do)		
 what is common for animals to do as a species and what is not how non-ruminants, ruminants, and carnivores perform survival behaviors such as ingestion, social behaviors, and exploratory behaviors how to properly observe animals how animal welfare can be assessed through ethograms 	 recognize normal behavior see carnivores analyze behavior seen in non-in recognize a grin response, gap perform an ethogram communicate with various special identify animal welfare aspect identify common stereotypies move an animal with a flight zet 	ruminants, ruminants e response and flehm ecies verbally and non s within an animal er	s, and carnivores nen response nverbally nclosure

Assessments:	 Various interim and formative assessments Performance assessments Unit Test
Teacher Resources:	 Various Primary and Industry Resources

Unit Title	Animal Training	Length of Unit	4-5 weeks
Inquiry Questions (Engaging & Debatable)	 How do we train animals? Are animals sentient and have feelings? How has Pryor, Pavlov, and Skinner altered the animal training industry? 		
Standards	Animal Systems (AS): AS.01.01.01.b. Evaluate and describe characteristics of animals that developed in response to the animal's environment and led to their domestication. AS.01.01.02.b. Describe the historical and scientific developments of different animal industries and summarize the products, services and careers associated with each. AS.01.01.02.c. Predict trends and implications of future developments within different animal industries on production practices and the environment. AS.02.01.01.b. Design programs that assure the welfare of animals and prevent abuse or mistreatment. AS.02.01.02.a. Research and summarize the challenges involved in working with animals and resources available to overcome them (e.g., tools, technology, equipment, facilities, animal behavior signals, etc.). AS.02.01.02.b. Analyze and document animal welfare procedures used to ensure safety and maintain low stress when moving and restraining animals. AS.02.01.02.c. Devise, implement and evaluate safety procedures and plans for working with animals by species using information based on animal behavior and responses.		be the historical and roducts, services and s of future ad the environment. vent abuse or lved in working with quipment, facilities, l welfare procedures animals. s for working with
Unit Strands &	Cognition, consciousness, emotion, learning, clic	ker training, positive reinfo	rcement, animal and
Concepts	human bond, problem solving, impulse control, anthropomorphism, concept of self, conflict resolution, fight or flight, intelligence, information recal, play, development Animal communication, animal temperament, consciousness, intelligence, training, behavior modification, problem solving, fight or flight, operant conditioning, classical conditioning		
Vocabulary	Sentient, temperament, anthropomorphism, stereotypies, displacement, redirection of behavior, Temple Grandin, Karen Pryor, Skinner, Pavlov, Operant Conditioning, Classical Conditioning		lirection of behavior,

Critical Content:	Key Skills:
My students will Know	My students will be able to (Do)
 various behavior modification techniques how we as humans can use the knowledge of cognition, emotion, and consciousness to alter behavior seen in animals and understand the behavior in various species. how Karen Pryor, Pavlov, and Skinner have affected animal training industries. the similarities and differences in operant and classical conditioning and clicker training. 	 train an animal using behavior modification techniques identify anthropomorphism within humans identify commonalities in animal behavior that can be used to describe animal temperament make an educated decision on the debate of if animals are sentient. use problem solving techniques to modify animal behavior communicate with animals using body language, nonverbal cues, and vocalizations. perform clicker training techniques properly handle and restrain animals identify and predict solutions to common animal behavioral issues through case studies

Length of Unit

4-5 weeks

Assessments:	 Various interim and formative assessments Performance assessments Unit Test
Teacher Resources:	 Various Primary and Industry Resources

Unit Title

Animal Training

Unit Title	Explanation of Behavior	Length of Unit	5-6 weeks
Inquiry Questions	• Why do all animals within a species not act		
(Engaging & Debatable)	 How does an animal's behavior change from Why do all animals not act the same? 	n infancy to adulthood?	
-			
Standards	 Animal Systems (AS): AS.01.01.01.a. Identify and summarize the origin, significance, distribution and domestication of different animal species. AS.01.01.01.b. Evaluate and describe characteristics of animals that developed in response to the animal's environment and led to their domestication. AS.01.01.02.a. Research and summarize major components of animal systems (e.g., livestock, companion animal, etc.). AS.01.02.01.c. Evaluate the effectiveness of different production methods and defend the use of selected methods using data and evidence. AS.01.02.04.a. Identify and summarize wildlife management methods. AS.01.03.01.a. Distinguish between the types of laws pertaining to animal systems. AS.02.01.01.b. Design programs that assure the welfare of animals and prevent abuse or mistreatment. AS.02.01.02.a. Research and summarize the challenges involved in working with animals and resources available to overcome them (e.g., tools, technology, equipment, facilities, animal behavior signals, etc.). AS.02.01.02.b. Analyze and document animal welfare procedures used to ensure safety and maintain low stress when moving and restraining animals. AS.02.01.02.c. Devise, implement and evaluate safety procedures and plans for working with animals by species using information based on animal behavior and responses. AS.02.01.03.a. Distinguish between animal husbandry practices that promote animal welfare and those that do not. 		
Unit Strands &	Nervous system, animal cycles, biological clocks, hormones, gender roles, species specific behavior,		
Concepts	ethograms, stereotypies, behavior displacement	-	-
	Understanding behavior, life stages, behavioral assessments, anatomy and physiology, endocrinology, puberty		
Vocabulary	Behavior, training, ethogram, behavioral assessments, operant conditioning, classical conditioning, castration, estrogen, testosterone, progesterone, endocrinology.		

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Unit Title	Explanation of Behavior	Length of Unit	5-6 weeks

Critical Content:	Key Skills:	
My students will Know	My students will be able to (Do)	
 how genetics can change behavior in animals how nature and nurture can change animal behavior how hormones affect animal behavior 	 use an ethogram to determine what stage of life an animal is in perform a behavioral assessment on an animal describe how hormones, anatomy, and physiology affect animal behavior within species. recognize and identify why animals behave how they do. 	

Assessments:	 Formative and Interim Assessments Unit test Performance Assessments
Teacher	 Various Primary and Industry Resources
Resources:	

Unit Title	SAE Proficiencies	Length of Unit	1 to 2 weeks
Inquiry Questions (Engaging & Debatable) Standards	 How does record keeping relate to evaluate How does a student quality growth? How does a student describe and docume Career Ready Practices (CRP): CRP.01. Act as a responsible and contributing CRP.01.01. Model personal responsibility in the CRP.01.02 Evaluate and consider the near-tere decisions on employers and community before CRP.01.03. Identify and act upon opportunities community. CRP.02. Apply appropriate academic and teche CRP.02.01. Use strategic thinking to connect a problems in the workplace and community. CRP.02.02. Use strategic thinking to connect a workplace and community. 	ent success? citizen and employee. he workplace and communi rm and long-term impacts of e taking action. es for professional and civic anical skills. and apply academic learning	f personal and professional service at work and in the g, knowledge and skills to solve
Unit Strands & Concepts	Learn the importance of accurate record keeping, personal responsibility, descriptive writing, and goal planning. Record keeping, Descriptive writing, Evaluation of goals and success.		
Vocabulary	Proficiency, financial report, income, expenses, career success, placement, scope, expenditures, gross earnings, net earnings, liabilities, net worth		. scope, expenditures, gross

Unit Title	SAE Proficiencies	Length of Unit	1 to 2 weeks

Critical Content:	Key Skills:
My students will Know	My students will be able to (DO)
 utilize AET describe and explain the student's' SAE calculate hours worked and money earned list skills and identify growth calculate gross and net income evaluate goals 	 create a comprehensive PowerPoint presentation create a expense report and earning report write descriptive paragraphs assemble a collage create a resume describe and quality success

Assessments:	 Formative and Interim Assessments Summative: Submission of Proficiency Application (National FFA Proficiency Rubric) Performance Assessment: SAE Presentation
Teacher Resources:	www.theaet.com and various other primary and industry sources.