

Student Name: _____

Date: _____

PROGRAM COMPETENCY PROFILE FOR CAREER TECHNICAL EDUCATION
Career Cluster: Agriculture, Food and Natural Resources

Program Name: Animal Sciences, General
 National Standard: National Career Clusters

CIP: 010901

Effective 9/2015

Competencies (statement that provides the overview and defines the instructional area) Student will:	Knowledge, Content and Skills (what a student needs to know and be able to do and upon which they will be assessed) http://www.education.nh.gov/career/career/aaoi.htm http://www.careertech.org/career-ready-practices Student will:	<u>NH Common Core State Standards</u> – <ul style="list-style-type: none"> • English/Language Arts/Literacy: E • Mathematics: M 	Rating Scale -Sample Performance Assessments (Performance tasks the student needs to demonstrate in order to be rated proficient in meeting the competency) Student will:				
Understand the components, historical development, global implications and future trends to better prepare for a career in animal systems industry	1. Evaluate the development and implications of animal origin, domestication, distribution and role in a global society.	ELA: 2, 6, 7, 8, 9	<table border="1" style="width: 100%; text-align: center;"> <tr> <td style="width: 25%;">1</td> <td style="width: 25%;">2</td> <td style="width: 25%;">3</td> <td style="width: 25%;">4</td> </tr> </table> For example: As a new hire at Charmingfair Farm your supervisor has asked you to investigate a carnivore or herbivore and research its evolutionary patterns, domestication, and distribution in our world today. You will present your finding to your peers.	1	2	3	4
1	2	3	4				
	2. Differentiate between animal rights and animal welfare, and discuss the multiple perspectives on key issues concerning both. CRP: Communicate clearly and effectively and with reason.	ELA: 2, 4, 6, 7, 8, 9	<table border="1" style="width: 100%; text-align: center;"> <tr> <td style="width: 25%;">1</td> <td style="width: 25%;">2</td> <td style="width: 25%;">3</td> <td style="width: 25%;">4</td> </tr> </table> For example: You are a presenter at the State House and asked to present information on an animal welfare topic. It is your task to create a display representing both sides of this morally/ethically challenging issue.	1	2	3	4
1	2	3	4				
	3. Discuss and research career options within the animal science field.	ELA: 2, 6, 9 M: 1, 2	<table border="1" style="width: 100%; text-align: center;"> <tr> <td style="width: 25%;">1</td> <td style="width: 25%;">2</td> <td style="width: 25%;">3</td> <td style="width: 25%;">4</td> </tr> </table> For example: As a soon to be graduate, you are asked to investigate a career pathway of interest. Create a personalized plan which will address educational requirements, financial outlook, and employment requirements. Cont. to #5	1	2	3	4
1	2	3	4				

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	4. Compare and contrast post-secondary programs in regard to their effectiveness in preparing individuals for careers in animal science CRP: Plan education and career paths aligned to personal goals.		<table border="1" style="width: 100%; text-align: center;"> <tr> <td style="width: 25%;">1</td> <td style="width: 25%;">2</td> <td style="width: 25%;">3</td> <td style="width: 25%;">4</td> </tr> </table> For example:	1	2	3	4
1	2	3	4				
	5. Identify the necessary components of a personal educational plan. CRP: Attend to personal health and financial well-being.		<table border="1" style="width: 100%; text-align: center;"> <tr> <td style="width: 25%;">1</td> <td style="width: 25%;">2</td> <td style="width: 25%;">3</td> <td style="width: 25%;">4</td> </tr> </table> For example:	1	2	3	4
1	2	3	4				
Understand anatomy and physiology as applied to the production and/or management of animals in a domestic or natural environment.	6. Explain basic functions of animal anatomy and physiology using classification systems.	ELA: 2, 6, 8, 9	<table border="1" style="width: 100%; text-align: center;"> <tr> <td style="width: 25%;">1</td> <td style="width: 25%;">2</td> <td style="width: 25%;">3</td> <td style="width: 25%;">4</td> </tr> </table> For example: You are hired by a dairy farmer to purchase some new stock. You need to evaluate conformational traits and analyze performance data to choose the stock that will best improve his current herd by longevity and production. Report your findings back to the farmer. Cont. to #8	1	2	3	4
1	2	3	4				
	7. State how an animal’s anatomy and physiology interact and affect animal health. AAI 5. Underlying Principles of Technology: Explain through discussion the technological systems used within this industry.		<table border="1" style="width: 100%; text-align: center;"> <tr> <td style="width: 25%;">1</td> <td style="width: 25%;">2</td> <td style="width: 25%;">3</td> <td style="width: 25%;">4</td> </tr> </table> For example:	1	2	3	4
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Student will:	Student will:		Student will:				
	8. Analyze the health of subject animals and identify and recommend treatment options as necessary. AAI 4. Technical and Production Skills: Identify specific production and technical skills required for this industry.		<table border="1" style="width: 100%; text-align: center;"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> </table> For example:	1	2	3	4
1	2	3	4				
Understand animal behaviors in order to address safety issues for animals and humans	9. Discuss and explain the scope of normal animal behavior and be able to perform safe handling procedures when working with animals.	ELA: 4, 6, 8, 9	<table border="1" style="width: 100%; text-align: center;"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> </table> For example: You are interviewing for a job as a trainer to a local ASPCA shelter. The interviewer has asked you to evaluate a dog's behavior in a variety of situations, identify common problem behaviors, and design a training plan that will permit these animals to become good safe citizens for a family and their community. Cont. to #10	1	2	3	4
	1	2	3	4			
10. Develop a safety plan for working with specific animals and to insure that animal products are safe. AAI 8. Health, Safety, and Environment: Explain the health and safety laws and practices affecting the employee, the surrounding community, and the environment in this industry. CRP: Consider the environmental, social and economic impacts of decisions.		<table border="1" style="width: 100%; text-align: center;"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> </table> For example:	1	2	3	4	
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Understand principles of animal nutrition in order to maintain an animal's optimal health and performance	11. Examine animal developmental stages and the nutrient requirements of each stage.	ELA: 8 M: 6, 7	<table border="1" style="width: 100%; text-align: center;"> <tr> <td>1</td><td>2</td><td>3</td><td>4</td> </tr> </table> For example: You are the manager of a horse training facility. One of your job requirements is to purchase high quality feed for all horses found at the facility including foals to geriatric horses. You are to analyze various feedstuffs from three farms and justify your reasons for selection. Cont. to #12	1	2	3	4
	1	2	3	4			
12. Evaluate feedstuffs and the animal nutrient requirements and determine if a ration supports optimal health and performance. CRP: Employ valid and reliable research strategies.		<table border="1" style="width: 100%; text-align: center;"> <tr> <td>1</td><td>2</td><td>3</td><td>4</td> </tr> </table> For example:	1	2	3	4	
1	2	3	4				
Understand the factors that influence an animal's reproductive cycle to explain species response	13. Evaluate male and female reproductive systems and performance in selected animal species.	ELA: 5, 6,	<table border="1" style="width: 100%; text-align: center;"> <tr> <td>1</td><td>2</td><td>3</td><td>4</td> </tr> </table> For example: You are the owner of a rabbit (chickens, dogs, goats, etc.) breeding operation. Your animals are used for show, brood stock, and pets. You need to evaluate different parent pairing to determine ideal quality for each given area. Design a written breeding plan to meet each of these areas. Cont. to #15	1	2	3	4
	1	2	3	4			
	14. Evaluate animals for breeding readiness and soundness.		<table border="1" style="width: 100%; text-align: center;"> <tr> <td>1</td><td>2</td><td>3</td><td>4</td> </tr> </table> For example:	1	2	3	4
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15. Apply scientific principles in the selection and breeding of animals.		<table border="1" style="width: 100%; text-align: center;"> <tr> <td>1</td><td>2</td><td>3</td><td>4</td> </tr> </table> For example:	1	2	3	4	
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Student will:	Student will:		Student will:				
Understand the economic and environmental factors associated with an animal's performance, production and well-being.	16. Evaluate the role that economics play in animal performance for given species and well-being. CRP: Act as a responsible and contributing citizen and employee.	ELA: 2, 9	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">1</td> <td style="width: 20px; text-align: center;">2</td> <td style="width: 20px; text-align: center;">3</td> <td style="width: 20px; text-align: center;">4</td> </tr> </table> <p>For example: You are the SPCA adoption councilor and you are responsible for assessing the applications and critiquing the qualifications for a successful adoption that leads to a long term adoption status and life. Cont. to #18</p>	1	2	3	4
	1	2	3	4			
	17. Recognize optimum performance for a given animal species and given their intended purpose.		<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">1</td> <td style="width: 20px; text-align: center;">2</td> <td style="width: 20px; text-align: center;">3</td> <td style="width: 20px; text-align: center;">4</td> </tr> </table> <p>For example:</p>	1	2	3	4
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18. Outline efficient procedures to produce high-quality animals well-suited for their intended purpose. AAI 2. Management: Discuss the different forms of management and ownership within this industry. CRP: Apply appropriate academic and technical skills.		<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">1</td> <td style="width: 20px; text-align: center;">2</td> <td style="width: 20px; text-align: center;">3</td> <td style="width: 20px; text-align: center;">4</td> </tr> </table> <p>For example:</p>	1	2	3	4	
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Understand the fundamental concepts of entrepreneurship and how entrepreneurship influences the economy.	19. Discuss and assess business creation possibilities and identify the steps in planning the business. AAI 1. Planning: Explain the key elements of a long-term plan for a successful company. AAI 2. Management: Discuss the different forms of management and ownership within this industry. AAI 3. Finance: Explain the key components of financial management of a company. CRP: Demonstrate creativity and innovation.	ELA: 2, 6, 8, 9 M: 2	<table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> </table> For example: You have the opportunity to own your own dog grooming business. You have experience with viewing mobile and traditional grooming shops. You are to research the differences between the two and choose one. With your chosen facility you need to gather information on startup costs, business location, and potential cliental and business future outlook. You will meet and discuss your findings with the loan officer. Cont. to # 22	1	2	3	4
1	2	3	4				
	20. Identify the resources needed for business startup and operation. CRP: Utilize critical thinking to make sense of problems and persevere in solving them.		<table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> </table> For example:	1	2	3	4
1	2	3	4				
	21. Discuss the options in planning the business’s future (growth, development, demise). AAI 6. Labor Issues: Explain the employees’ and employers’ rights and responsibilities in this industry. AAI 7. Community Issues: Discuss the ways a company can impact its community and the ways a community can impact a company		<table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> </table> For example:	1	2	3	4
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	22. Discuss and identify the skills and behaviors of being a business owner /entrepreneur (passion, confidence, self-motivation, tenacity, leadership, management, etc.) CRP: Model integrity, ethical leadership and effective management		<table border="1" style="width: 100%; text-align: center;"> <tr> <td>1</td><td>2</td><td>3</td><td>4</td> </tr> </table> For example:	1	2	3	4
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Understand the necessary career readiness and employability skills in order to achieve success in today’s workplace	23. Demonstrate personal growth, community leadership, democratic principles and social responsibility by participating in activities/events offered through student organizations, professional organizations, and community service opportunities. AAI 7. Community Issues: Discuss the ways a company can impact its community and the ways a community can impact a company AAI 9. Personal Work Habits: Explain the work habits an employer looks for in an employee in this industry. CRP: Work productively in teams while using cultural global awareness.	ELA: 4, 7, 8, 9	<table border="1" style="width: 100%; text-align: center;"> <tr> <td>1</td><td>2</td><td>3</td><td>4</td> </tr> </table> For example: Part of your graduation requirement you are required to complete a community service project. This project must serve a need within the community. You will prepare a written report on the success of your project’s design and implementation.	1	2	3	4
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	<p>24. Identify and demonstrate the necessary technical skills required to work within the animal science industry.</p> <p>AAI 4. Technical and Production Skills: Identify specific production and technical skills required for this industry.</p> <p>CRP: Use technology to enhance productivity.</p>	<p>ELA: 2, 5, 9 M: 2</p>	<p>For example: Your school is hosting the state veterinary science Career Development Event. Using the National FFA guidelines, design a team event including veterinary equipment that will be needed to develop a veterinary problem scenario.</p>

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