

APB National AFNR Common Career Technical Core Standards Alignment

	Unit 1: Introduction to Biotechnology	Unit 2: DNA Technologies	Unit 3: Proteins	Unit 4: Agricultural Biotechnology	Unit 5: Research Methods
Career Ready Practices Content Standards					
1. Act as a responsible and contributing citizen and employee.	X				X
2. Apply appropriate academic and technical skills.				X	X
3. Attend to personal health and financial well-being.					
4. Communicate clearly, effectively and with reason.		X		X	X
5. Consider the environmental, social and economic impacts of decisions.				X	X
6. Demonstrate creativity and innovation.				X	X
7. Employ valid and reliable research strategies.		X		X	X
8. Utilize critical thinking to make sense of problems and persevere in solving them.	X			X	X
9. Model integrity, ethical leadership and effective management.					X
10. Plan education and career path aligned to personal goals.					
11. Use technology to enhance productivity.					
12. Work productively in teams while using cultural/global competence.					X
Agriculture, Food, and Natural Resources Career Cluster					
1. Analyze how issues, trends, technologies and public policies impact systems in the Agriculture, Food & Natural Resources Career Cluster.	X	X	X	X	X

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2. Evaluate the nature and scope of the Agriculture, Food & Natural Resources Career Cluster and the role agriculture, food and natural resources (AFNR) play in society and the economy.					
3. Examine and summarize importance of health, safety, and environmental management systems in AFNR organizations.	X				
4. Demonstrate stewardship of natural resources in AFNR activities.				X	
5. Describe career opportunities and means to achieve those opportunities in each of the AFNR career pathways.					X
6. Analyze the interaction among AFNR systems in the production, processing and management of food, fiber and fuel and the sustainable use of natural resources.					
Agribusiness Systems Career Pathway Content Standards					
1. Apply management planning principles in AFNR businesses enterprises.					
2. Use record keeping to accomplish AFNR business objectives, manage budgets and comply with laws and regulations.	X				
3. Manage cash budgets, credit budgets and credit for an AFNR business using generally accepted accounting principles.					
4. Develop a business plan for an AFNR enterprise or business unit.					X
5. Use sales and marketing principles common to agribusiness systems to accomplish AFNR business objectives.					
Animal Systems Career Pathway Content Standards					
1. Analyze historic and current trends impacting the animal systems industry.				X	
2. Utilize best practice protocols for husbandry and welfare based upon animal behaviors.					
3. Design and provide proper animal nutrition to achieve desired outcomes for performance, development, reproduction and/or economic production.					
4. Apply principles of animal reproduction given desired outcomes for performance, development and/or economic production.				X	

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5. Evaluate environmental factors affecting animal performance and implement procedures for enhancing performance and animal health.					
6. Classify, evaluate and select animals based on anatomical and physiological characteristics.					
7. Apply principles of effective animal health care.				X	
Biotechnology Systems Career Pathway Content Standards					
BS.01: Assess factors that have influenced the evolution of biotechnology in agriculture (e.g., historical events, societal trends, ethical and legal implications, etc.).	X			X	X
BS.02: Demonstrate proficiency by safely applying appropriate laboratory skills to complete tasks in a biotechnology research and development environment (e.g., standard operating procedures, record keeping, aseptic technique, equipment maintenance, etc.).	X	X	X	X	X
BS.03: Demonstrate the application of biotechnology to solve problems in AFNR systems (e.g., bioengineering, food processing, waste management, horticulture, forestry, livestock, crops, etc.).		X	X	X	
Plant Systems Career Pathway Content Standards					
1. Develop and implement a crop management plan for a given production goal that accounts for environmental factors.					
2. Apply principles of classification, plant anatomy, and plant physiology to plant production and management.					
3. Propagate, culture, and harvest plants and plant products based on current industry standards.				X	
4. Apply principles of design in plant systems to enhance an environment (e.g. floral, forest landscape, and farm).					