Knob Noster R-VIII School District

We exist to empower learning through success for every student.

Career Education Curriculum

Table of Contents

- activity that increases income or job opportunities is affected by the expected benefits and costs of such an activity. Income is also obtained from other sources such as interest, rents, capital gains, dividends and profits.
- Buying Goods and Services: People cannot buy or make all the goods and services they want; as a result, people choose to buy some goods and services and not buy others. People can improve their economic well-being by making informed spending decisions, which entails collecting information, planning and budgeting.

Accounting I Year At-A-Glance:

Accounting 1

- Complete the steps in the accounting cycle in order to prepare the financial statements (NBEA V)
- Apply appropriate accounting practices to payroll. (NBEA VII.C)

Digital Media Year At-A-Glance:

Digital Media

- Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)
- Prerequisite Standards: (Based on Missouri Learning Standards / CLEs / GLEs)
- Learning Target
- Assessment Methods:
- Instructional Activities & Assignments
- Use organizational skills to plan multimedia products
- CCSS: WHST.11-12.2a NBEA: COMM.I.B.2.8, COMM.I.B.4.5
- Using graphic arts/desktop publishing software to create a variety of business publications such as video, flyers, brochures, newsletters, etc.

Digital Production/Yearbook Year At-A-Glance:

Digital Production/Yearbook

- Use organizational skills to plan multimedia products
- CCSS: WHST.11-12.2a NBEA: COMM.I.B.2.8, COMM.I.B.4.5
- Using graphic arts/desktop publishing software to create a 112 page yearbook

Intro to Business Year At-A-Glance:

Introduction to Business

- How business works in today's society
  - Learning Targets Demonstrate knowledge of business structures
  - Evaluate economic impact of businesses in local area.
  - Explore and identify various business roles and activities.
    - Formative and Summative Assessments– Project based learning
      - Lesson Plan
      - https://docs.google.com/document/d/1bYSsrrPjQSKWGBz7QQFIoXStA8zCTIBozdn5Bf5PZlY/edit?usp=sharing
      - Students select a vocabulary word and add a photo or two. (limit 2) that helps to define the word.
- Determine foundation skills necessary in various business career fields.
  - Simulate Business Activities

Business and Personal Law (Semester) At-A-Glance:

Business and Personal Law

- Describe sources of the law, the structure of the court system, different classifications of procedural, and different classifications of substantive law. (NBEA - BL I)
  - Identify sources of the law

- Law journal
  - Analyze the role and importance of agency law, and employment law as they relate to the conduct of business. (NBEA - BL III)

- Agriculture Priority Standard (Quick Look)
  - Introduction to Agriculture Year At-A-Glance:
  - Introduction to Agriculture
    - The student will demonstrate competence in the application of
    - leadership, personal growth and career success skills necessary for a chosen profession while effectively contributing to society
    - The student will demonstrate competence in the application of principles and techniques for the development and management of agribusiness systems.
    - The student will demonstrate competence in the application of scientific principles and practices to the production and management of animals and plants.
    - The student will demonstrate competence in the application of scientific principles, practices and techniques in the processing, storage, and development of food products.
    - The student will demonstrate competence in the application of principles and techniques for the development and management of power, structural and technical systems.
  - Greenhouse Year At-A-Glance:
  - Greenhouse
    - The student will demonstrate competence in the safe use of chemicals in the greenhouse.
    - The student will demonstrate competence in the application of scientific principles and practices in the greenhouse industry
    - The student will demonstrate competence in the application of principles and techniques for the development and management of agribusiness systems.
  - Natural Resources and Conservation Year At-A-Glance:
  - Natural Resources and Conservation
    - Analyze grassland management practices to determine a grassland management plan.
    - Explain how naturally-occuring living organisms benefit humans and the environment.
    - Explain conservations and ecological principles and how they apply to fish and wildlife management, including the use of land and wildlife for recreation.
    - Prepare a management plan for fish and/or wildlife.
    - The student will demonstrate competence in the application of principles and techniques for the development and management of agribusiness systems.
  - Animal Science Year At-A-Glance:
  - Animal Science
    - Describe the role of animals on the planet including the history and use of animals, the classification of animals, and animal handling and safety.
    - Describe the basic life processes of animals including cells and tissues, animal digestion, reproduction and genetics.
    - Describe animal products, marketing and selection.
    - The student will demonstrate competence in the application of principles and techniques for the development and management of agribusiness systems.
  - Exploratory Agriculture 1 Year At-A-Glance:
  - Exploratory Agriculture 1
    - Understand basic agriculture perceptions, products and consumer knowledge.
    - Identify basic concepts of entomology including the importance of insects, careers in entomology, insect collection, identification and control.
    - Describe historical and emerging agricultural technology, research and sustainability
    - Describe all aspects of fruit and vegetable production including financial planning, marketing, selecting and planning for production, characteristics of vegetable crops, small fruits and tree fruits.
    - Apply foundational and life skills learned through agriculture in the school and community setting.
  - Exploratory Agriculture 2 Year At-A-Glance:

Career Education Curriculum

Exploratory Agriculture 2

- Define and describe the role of agriculture in the world, the United States, Missouri, and the community including advances in agricultural technology and its implications.
- Describe the basics of plant science including their effect on our lives, major processes, growing mediums, care, current and emerging technologies.
- Describe the basics of animals in society including their importance, responsibility of ownership, selection, current and emerging technology
- Describe products from agriculture including the food chain, food from plants, food from animals, food processing and safety, fiber products and non food products.
- Describe natural resources and conservation including the importance of animal resources, soil conservation, water quality, air quality, wildlife management and conservation issues.

Farm Business Management Year At-A-Glance:

Farm Business Management

- Describe the concepts of agribusiness in today's agriculture industry.
- Describe economic principles in agribusiness.
- Describe the factors involved in agribusiness planning, analysis and management.
- Describe the factors in retail agribusiness sales.
- Outline personal skills necessary for success in agricultural businesses
- The student will demonstrate competence in the application of principles and techniques for the development and management of agribusiness systems.

Agriculture Structures Year At-A-Glance:

Agriculture Structures

- Apply safety procedures for working with agricultural structures, construction and mechanics.
- Working with plans and farmstead planning
- Building Construction, Concrete, Plumbing, Electricity, and Fencing
- The student will demonstrate competence in the application of principles and techniques for the development and management of agribusiness systems.

Landscaping and Turfgrass Year At-A-Glance:

Landscaping and Turfgrass

- Landscape and turf plant identification, landscape and turf installation, plant growth and maintenance
- Landscape Design Concepts, creating and landscape design
- Careers in the landscape and turf industry
- The student will demonstrate competence in the application of principles and techniques for the development and management of agribusiness systems.

Crop Science Year At-A-Glance:

Crop Science

- Describe Missouri crops and their uses, the importance of crops, careers in crop science and the government influence and current trends in crop production
- Describe plant biology including physiology and plant growth and nutrient needs.
- Describe soil fertility and management
- Identify and Select crops and seeds and describe specific crop production methods for corn, grain sorghum, soybean, wheat and small grains, forage, cotton, and rice.
- Identify safety, environment and Legal Issues in Crop Production
- The student will demonstrate competence in the application of principles and techniques for the development and management of agribusiness systems.

Agriculture Communication and Leadership Year At-A-Glance:

Agriculture Communication and Leadership

- Develop knowledge of ethics in media, and gather and analyze research and analyze agricultural issues

- Develop Leadership SKills including written and oral communication.
- Create Public Relations, advertising and marketing and utilize multimedia
- Prepare for Careers and Employment and analyze the SAE program
- The student will demonstrate competence in the application of principles and techniques for the development and management of agribusiness systems.

Floriculture Year At-A-Glance:

Floriculture

- Describe the floristry industry.
- Identify floriculture plants
- Describe post-harvesting handling techniques and the mechanics of floral design.
- Describe the basic principles of floral design and the types of floral designs
- Describe floral shop operations.
- The student will demonstrate competence in the application of principles and techniques for the development and management of agribusiness systems.

Food Science Year At-A-Glance:

Food Science

- Define the principles of food preservation
- Describe food processing.
- Describe the biochemistry of foods
- Describe food selection and consumer health.
- The student will demonstrate competence in the application of principles and techniques for the development and management of agribusiness systems.

FACS Priority Standard (Quick Look)

Middle School FACS 1

MS FCS Courses Year At-A-Glance: Pacing Guides

Middle School FACS

- 1.2 Demonstrate transferable employability skills in school, community and workplace settings
- 2.1 Demonstrate management of individual and family resources such as food, clothing, shelter, health care, recreation, transportation, time, and human capital

Career and Family Year At-A-Glance:

Career and Family

- 1.2 Demonstrate transferable employability skills in school, community and workplace settings
- 2.1 Demonstrate management of individual and family resources such as food, clothing, shelter, health care, recreation, transportation, time, and human capital

Child Development Year At-A-Glance:

Child Development

- 12.0 Analyze factors that influence human growth and development
- 15.0 Evaluate the effects of parenting roles and responsibilities on strengthening the well-being of individuals and families

Advanced Child Development Year At-A-Glance:

Advanced Child Development

- 4.0 Integrate knowledge, skills, and practices required for careers in early childhood, education, and services
- 1.2 Demonstrate transferable and employability skills in school, community and workplace

- Nutrition and Wellness Year At-A-Glance:
- Nutrition and Wellness
  - 8.5 Demonstrate professional food preparation methods and techniques for all menu categories to produce A variety of food products that meet customer needs
- International and Speciality Cuisine Year At-A-Glance:
- International and Speciality Cuisine
  - 8.5 Demonstrate professional food preparation methods and techniques for all menu categories to produce A variety of food products that meet customer needs
  - Students will apply the cooking skills necessary to prepare and serve designated food products in international and specialty cuisine.

Industrial Tech Priority Standard (Quick Look)

- CTE/Engineering and Technology Material Processing I & II 7-8 Grade Year At-A-Glance:
- CTE/Engineering and Technology Education/Material Processing/7-8
  - 1. Safety
  - 2. Machine and Tool Processes
  - 3. Workplace Skills
  - 4. Fundamentals of Construction
  - 5. Finishing
  - 6. Creative Problem Solving
- CTE/Engineering and Technology Material Processing I Year At-A-Glance:
- CTE/Engineering and Technology Education/Material Processing I/9-12
  - 1. Safety
  - 2. Machine and Tool Processes
  - 3. Fundamentals of Construction
  - 4. Workplace Skills
  - 5. Finishing
- CTE/Engineering and Technology Material Processing II Year At-A-Glance:
- CTE/Engineering and Technology Education/Material Processing II/9-12
  - 1. Safety
  - MP2 Safety SBG
  - 2. Advanced Machine and Tool Processes
  - MP2 AMTP SBG
  - 3. Workplace Skills
  - MP2 WS SBG
  - 4. Maintenance and Planning
  - MP2 M&P SBG
- CTE/Engineering and Technology Introduction To Engineering Design Year At-A-Glance:
- CTE/Engineering and Technology Education/Introduction to Engineering Design/9-12
  - Unit 1 Design Process
  - Unit 1 Design Process

- Unit 2 Technical Sketching and Drawing
- Unit 2 Technical Sketching and Drawing
- Unit 3 Measurement and statistics
- Unit 3 Measurement and statistics
- Unit 4 Modeling Skills
- Unit 4 Modeling Skills
- Unit 4 Modeling Skills
- Unit 4 Modeling Skills
- Unit 5 – Geometry of Design
- Unit 5 – Geometry of Design
- Unit 6 – Reverse Engineering
- Unit 6 – Reverse Engineering
- Unit 7 – Documentation
- Unit 7 – Documentation
- Unit 7 – Documentation
- Unit 8 – Advanced Computer Modeling
- Unit 8 – Advanced Computer Modeling
- Unit 8 – Advanced Computer Modeling
- Unit 9 – Design Team
- Unit 9 – Design Team
- Unit 9 – Design Team
- Unit 9 – Design Team
- Unit 9 – Design Team
- Unit 9 – Design Team

CTE/Engineering and Technology Education/Principles of Engineering /9-12

- Energy and Power
- Unit 1.1 Mechanisms
- Energy and Power
- Unit 1.1 Mechanisms
- Energy and Power
- Unit 1.1 Mechanisms
- Condensing/ Converting Format From PLTW

CTE/Engineering and Technology Education/Engineering Design and Development /12

- Condensing/ Converting Format From PLTW Curriculum

AFJROTC Priority Standard (Quick Look)

- Leadership Education 100 Year At-A-Glance:
- Lesson Plans

- LE 100 Lesson plans
- Aerospace Science 100 Year At-A-Glance:
- AS 100/9-12/Aerospace Science: A Journey Into Aviation History
- AS 100 Lesson Plans
- Leadership Education 200 Year At-A-Glance:
- AS 200/9-12/Leadership Education 200: Communication, Awareness, and Leadership
- Lesson Plans
- Aerospace Science 200 Year At-A-Glance:
- AS 200/9-12/Aerospace Science 200: The Science of Flight: A Gateway to New Horizons
- Leadership Education 300 Year At-A-Glance:
- AS 300/9-12/Leadership Education 300: Life Skills & Career Opportunities
- Lesson Plans, PBL, Rubric, Standards
- Aerospace Science 300 Year At-A-Glance:
- AS 300/9-12/Aerospace Science 300: Exploring Space: The High Frontier
- Aerospace Science 400 Year At-A-Glance:
- AS 400/12/Aerospace Studies 400: Management of the Cadet Corps

STEM Priority Standard (Quick Look)

- STEM Year At-A-Glance:
- NSTL Standard 9
- NSTL Standard 10
- NSTL Standard 11
- Review All
- STEM Teaching
  - NSTL Standard 9. Students will develop an understanding of engineering design.
  - NSTL Standard 10. Students will develop an understanding of the role of troubleshooting, research and development, invention and innovation, and experimentation in problem solving.
  - NSTL Standard 11. Students will develop the abilities to apply the design process.

Business Ed Priority Standard ***(Quick Look)***	K	1	2	3	4	5	6	7	8	9	10	11	12
Business Technology													

BTPS1: Analyze and determine appropriate software applications for specific tasks IT.V.1.1 4 2.										I,R	I,R	I,R	I,R
BTPS2: Apply critical software application skills needed for success in the 21st century for word processing, spreadsheets and presentations.										I,R	I,R	I,R	I,R
Accounting I													
APS1: Complete the steps in the accounting cycle in order to prepare financial statements. (NBEA A-V)											I,R	I,R	I,R
APS2: Apply appropriate accounting practices to payroll (NBEA A-VIII.C)											I,R	I,R	I,R
Digital Media													
DMPS1: Develop the qualities, knowledge, and skills necessary for creating work for business											I,R	I,R	I,R,M
DMPS2: Using graphic arts/desktop publishing software to create a variety of business publications such as video, flyers, brochures, newsletters,social media etc.											I,R	I,R	I,R,M
Digital Production (Yearbook)													
DPLS1: Use organizational skills to plan multimedia products CCSS: WHST.11-12.2a NBEA: COMM.I.B.2.8, COMM.I.B.4.5										I,R	I,R	I,R	I,R,M
DPLS2: Demonstrate design and production work ethic for following theme and meeting deadlines.										I,R	I,R	I,R	I,R,M
Intro to Business													

IBPS1: Analyze and determine appropriate software applications for specific tasks IT.V.1.1 4 2.										I,R	I,R		
IBPS2: How business works in today's society										I,R	I,R		
Business and Personal Law													
BPLPS1: Describe sources of the law, the structure of the court system, different classifications of procedural, and different classifications of substantive law. (NBEA - BL I)												I,R	I,R
BPLPS2: Analyze the role and importance of agency law, and employment law as they relate to the conduct of business. (NBEA - BL III)												I,R	I,R

I – Introduce *R – Reinforce* *M – Mastery* *o – Optional for grade level*

Business Technology Year At-A-Glance:

Quarter 1	Quarter 2
• File Management • Word (Documents)	• EXCEL
Quarter 3	**Quarter 4**
• WORD & EXCEL integration • Mail Merge	• PowerPoint (Presentations) • Google

Business Technology			Last Revised (December 14, 2016/Neva Allen):	
Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs; NBEA)	Prerequisite Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Learning Target	Assessment Methods:	Instructional Activities & Assignments
Exhibit attributes of a consummate professional CCSS: SL.11-12.3 WHST.11-12.4 RST.11-12.3 NBEA: CD.III.A.1.1		• Demonstrate initiative • Punctuality • Responsibility • Dependability • Honesty	Formative and Summative Assessments– Project based learning	Coordinate and host reception. Perform daily activities demonstrating professional attributes.
Apply critical software application skills needed for success in the 21st century for word processing, spreadsheets and presentations. NBAE: IT.V.1.1, COMM.IV.3.8 COMM.IV.2.5	Keyboarding skills at 20 WPM Computer usage experience	Word- mail merge, envelopes and labels, tables, reports, Excel- formulas and functions, graphs and charts Powerpoint, sound bites, animation, transition, image download or import, video Google Drive and applications equivalent to the Microsoft Office applications		Training, Applications,Tests and Capstone available with license: Shelly Cashman Series® Microsoft® Office 365 & Office 2016: Introductory 1st MindTap Word: Cengage Mindtap

Personal Finance Priority Standard *(Quick Look)*	K	1	2	3	4	5	6	7	8	9	10	11	12
Personal Finance													

Financial Decision Making											I, M	I, M	I, M
Earning Income											I, M	I, M	I, M
Buying Goods and Services											I, M	I, M	I, M

I – Introduce *R – Reinforce* *M – Mastery* *o – Optional for grade level*

Personal Finance Year At-A-Glance:

Quarter 1 and 3 (semester course)	Quarter 2 and 4 (semester course)
• Money In Your Life • Financial Decisions • Setting Financial Goals • Depository Institutions • Checks • Taxes	• Career Exploration • Getting Paid • Perez Family • Credit • Credit Cards • Fraud • Insurance • Major Expenditures

Personal Finance			Last Revised: 1/7/19 Veronica Barnes	
Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Prerequisite Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Learning Target	Assessment Methods:	Instructional Activities & Assignments

Financial Decision Making: Choice is the central principle of financial decision making for individuals, businesses and government. People make many choices every day in markets where buyers and sellers interact. This interaction determines market prices and allocates scarce goods and services based on supply and demand. Every decision incurs an opportunity cost. Opportunity cost is the next-best alternative when a decision is made; it is what is given up.	None	Financial Well Being	• Student Independent Work • Summative Test	**Money In Your Life** • Lesson Plan with Student Workbook Pages • Answer Key • Powerpoint **Financial Decisions** • Lesson Plan with Student Workbook Pages • Answer Key • Powerpoint **Setting Financial Goals** • Lesson Plan with Student Workbook Pages • Answer Key • Powerpoint Collage of My Life
		Managing Your Money		**Depository Institutions** • Lesson Plan with Student Workbook Pages • Answer Key • Powerpoint **Checkbook Simulation** Check Writing Notes and Guided Notes **The Basics of Taxes** • Lesson Plan with Student Workbook Pages • Answer Key • Powerpoint

Earning Income: For most people, income is determined by their work ethic, their education and the market value of their labor paid as wages and salaries. People can increase their income and job opportunities by performing well and choosing to acquire more education, skill building and work experience. The decision to undertake an activity that increases income or job opportunities is affected by the expected benefits and costs of such an activity. Income is also obtained from other sources such as interest, rents, capital gains, dividends and profits.		Earning/Receiving		**Getting Paid** • Lesson Plan with Student Workbook Pages • Answer Key • Powerpoint **Perez Family** Powerpoint **with** answer key **and** Student Workbook **Career Exploration** Budget Forensics

Buying Goods and Services: People cannot buy or make all the goods and services they want; as a result, people choose to buy some goods and services and not buy others. People can improve their economic well-being by making informed spending decisions, which entails collecting information, planning and budgeting.		Spending		**Credit Basics** • Lesson Plan with Student Workbook Pages • Answer Key • Powerpoint **Understanding Credit Card** • Lesson Plan with Student Workbook Pages • Answer Key • Powerpoint **Protecting Yourself From Fraud** • Lesson Plan with Student Workbook Pages • Answer Key • Powerpoint **Major Expendurates** • Lesson Plan with Student Workbook Pages • Answer Key • Powerpoint • Purchasing an Automobile Lesson Plan and Student Workbook **Insurance** • Lesson Plan with Student Workbook Pages • Answer Key • Powerpoint

Accounting I Year At-A-Glance:

Quarter 1	Quarter 2
• Accounting Equation • Analyzing Transactions • Journalizing Transactions	• Posting to a General Ledger • Cash Control Systems • Worksheet and Adjusting Entries on a worksheet
Quarter 3	**Quarter 4**
• Sales and Cash Receipts • Transactions Using a General Journal • Preparing Payroll Records	• Financial Statements for a Proprietorship • Recording Closing Entries and Preparing a Post-Closing Trial Balance for a Service Business • Accounting for Purchases and Cash Payment

Accounting 1			Last Revised (March 15, 2017: Neva Allen)	
Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Prerequisite Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Learning Target	Assessment Methods:	Instructional Activities & Assignments

Complete the steps in the accounting cycle in order to prepare the financial statements (NBEA V)		Accounting for a Service Business Organized as a Proprietorship	Cengage Learning General Journal 21st Century Accounting Mindtap APLIA MindTap® Century 21 Accounting: General Journal (Cengage)	Cengage Learning General Journal 21st Century Accounting Speakers
Apply appropriate accounting practices to payroll. (NBEA VII.C)		Accounting for a Merchandising Business Organized as a Corporation through preparation of payroll	MindTap® Century 21 Accounting: General Journal	Cengage Learning General Journal 21st Century Accounting Speakers Introduction to EXCEL Business Plans (FBLA) Market Research

Digital Media Year At-A-Glance:

Quarter 1	Quarter 2

• Introduction to media equipment and software
  ○ Broadcasting equipment
  ○ Photoshop, Publisher, EXCEL and Google Slides
• Website article research and writing
• Complete problems presented under supervision
  ○ Website article
  ○ Event broadcasting
	• Basic applications of media equipment and software
	  ○ Photoshop: Interface, selection and layers
	  ○ Illustrator: Interface and pen tool
	  ○ ADOBE Spark Post and Video
	• Complete problems presented under minimal supervision
	  ○ Sport schedules
	  ○ Senior posters

Quarter 3	**Quarter 4**

• Intermediate applications of media equipment and software
  ○ Recording interviews
  ○ Video Editing
• Complete problems presented under minimal supervision
	• Selection and application of media equipment and software appropriate to the problem presented.
	  ○ Advanced article
	  ○ Live recording and editing

Career Education Curriculum

Digital Media			Last Revised (December 14, 2016: Neva Allen)	
Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Prerequisite Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Learning Target	Assessment Methods:	Instructional Activities & Assignments
Use organizational skills to plan multimedia products CCSS: WHST.11-12.2a NBEA: COMM.I.B.2.8, COMM.I.B.4.5	Business Technology preferred	Storyboarding Outlining Scripting Task delegation Response to feedback	Formative and Summative Assessments– Project based learning Newspaper Article	Article research and writing. Camera Checkout Equipment operation Teamwork
Using graphic arts/desktop publishing software to create a variety of business publications such as video, flyers, brochures, newsletters, etc.	Keyboarding skills at 20 WPM Computer usage experience	Premiere Pro to develop integrate Title, B-roll, and audio for 1-2 minute video PhotoShop and merge 2 images resulting in large format poster Publisher for creation of programs Presentation software for banner presentations (monitors) Update of website		• Spark: Design for Non-Designers • Convert EXCEL to usable format • Intro to Photoshop CC • Pt 1-8 depending on previous experience. • Adobe Illustrator • Design a Logo • Illustrator Basics for new users. • Glowforge • Designs for Glowforge • Premiere Pro • Introduction to Premiere Pro • How to Shoot and Interview 5 video tips & tricks • InDesign • Intro to InDesign CC • Magazine Spread Using InDesign CC • Wrapping Text

Digital Production/Yearbook Year At-A-Glance:

Quarter 1	Quarter 2
• Introduction to media equipment and software • Conducting and tracking sales • Photography process from shoot to layout	• Color and typography theory and applications • Layout • Following Photography process
Quarter 3	**Quarter 4**
• Meeting photography and production goals	• Meeting photography and production goals

Digital Production/Yearbook			Last Revised (March 15, 2017: Neva Allen)	
Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Prerequisite Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Learning Target	Assessment Methods:	Instructional Activities & Assignments

Use organizational skills to plan multimedia products CCSS: WHST.11-12.2a NBEA: COMM.I.B.2.8, COMM.I.B.4.5		-Photography using Digital Camera -File development and management using Lightroom and Jostens Yearbook Avenue -Complete event coverage	Formative and Summative Assessments– Project based learning Students submit monthly photography assignments demonstrating various levels of skill proficiency Student photograph assigned events, sort and upload 25-50 appropriate selections.	Camera operation and checkout: Classroom and event introduction to event coverage and equipment usage. Students submit monthly photography assignments demonstrating various levels of skill proficiency Student photograph assigned events, sort and upload 25-50 appropriate selections.
Using graphic arts/desktop publishing software to create a 112 page yearbook	Keyboarding skills at 30 WPM Computer usage experience Photography experience	-Use event photos and writing skill to design yearbook spreads as assigned. -Use appropriate software (Photoshop, Lightroom) to edit photos for desired product. -Design marketing materials as necessary.	Meeting deadlines while demonstrating color, font and layout theory.	Yearbook Avenue Digital Classroom materials

Intro to Business Year At-A-Glance:

Quarter 1	Quarter 2
• Business Organization and Management	• Business Operations, Management and Technology
Quarter 3	**Quarter 4**
•	•

Introduction to Business			Last Revised (Dec 29, 2018/Neva Allen):	
Priority Standards	Prerequisite	Learning Target	Assessment Methods:	Instructional Activities & Assignments
How business works in today's society	none	• Learning Targets Demonstrate knowledge of business structures • Evaluate economic impact of businesses in local area. • Explore and identify various business roles and activities.	• Formative and Summative Assessments– Project based learning	• Lesson Plan • https://docs.google.com/document/d/1bYSsrrPjQSKWGBz7QQFIoXStA8zCTIBozdn5Bf5PZlY/edit?usp=sharing • Students select a vocabulary word and add a photo or two. (limit 2) that helps to define the word.
Determine foundation skills necessary in various business career fields.	none	Simulate Business Activities Creating Ideas Hiring and Training Employees Maintaining Records Producing a good or service Marketing a good or service		Career Research: Career Research Innovation Product Experience: Innovation Product Experience Manufacturing Tour and Production Simulation: Production and Manufacturing Notes: **Manufacturing Tour and Production Simulation: Production and Manufacturing Notes** **Accounting Experience:** **Business Models:** **Accounting Experience and Business Models** **Business Models A:** **Business Models A** **Business Models B:** **Business Models B** **Technology:** **Technology**

Business and Personal Law (Semester) At-A-Glance:

Quarter 1	Quarter 2
• The Court System • Our Criminal Laws • Personal Injury Laws	• Contract Law • Employment Law
Quarter 3	**Quarter 4**
•	•

Business and Personal Law			Last Revised (Jan 4, 2019 /Neva Allen):	
Priority Standards	Prerequisite	Learning Target	Assessment Methods:	Instructional Activities & Assignments

Describe sources of the law, the structure of the court system, different classifications of procedural, and different classifications of substantive law. (NBEA - BL I)	Social Studies	Identify sources of the law Explain the function of the court and distinguish between the roles of the legal professionals. Differentiate between categories of crime. Identify different areas of civil law that impact businesses. (e.g., tort, contract and property law) Explain the nature, the components and responsibilities of the contractual relationship.	Formative and Project Based.	• *Law journal* • Case evaluation • Evaluate and write a contract. • Summarize legal concepts. • Visit of county court while in session.
Analyze the role and importance of agency law, and employment law as they relate to the conduct of business. (NBEA - BL III)		Identify the duties and responsibilities of the employer and the employee. Describe appropriate interactions among co-workers.		Prepare questions and participate in an employment interview as employer and employee. Role play appropriate behavior when responding to offensive behavior. After viewing video - a Matter of Respect. Research state and federal agencies that protect employers and employees.

Agriculture Priority Standard (Quick Look)	K	1	2	3	4	5	6	7	8	9	10	11	12
Introduction to Agriculture													
The student will demonstrate competence in the application of leadership, personal growth and career success skills necessary for a chosen profession while effectively contributing to society										I , R, M	I , R, M	I , R, M	I , R, M
The student will demonstrate competence in the application of principles and techniques for the development and management of agribusiness systems.										I , R, M	I , R, M	I , R, M	I , R, M
The student will demonstrate competence in the application of scientific principles and practices to the production and management of animals and plants.										I , R, M	I , R, M	I , R, M	I , R, M
The student will demonstrate competence in the application of principles and techniques for the development and management of power, structural and technical systems.										I , R, M	I , R, M	I , R, M	I , R, M
Greenhouse													
The student will demonstrate competence in the safe use of chemicals in the greenhouse.											I , R, M	I , R, M	I , R, M

The student will demonstrate competence in the application of scientific principles and practices in the greenhouse industry											I , R, M	I , R, M	I , R, M
The student will demonstrate competence in the application of scientific principles and practices to the production of greenhouse plants.											I , R, M	I , R, M	I , R, M
The student will demonstrate competence in the application of principles and techniques for the development and management of agribusiness systems.											R, M	R, M	R, M
Natural Resources and Conservation													
Analyze grassland management practices to determine a grassland management plan.											I , R, M	I , R, M	I , R, M
Explain how naturally-occuring living organisms benefit humans and the environment.											I , R, M	I , R, M	I , R, M
Explain ecological principles and how they apply to fish and wildlife management.											I , R, M	I , R, M	I , R, M

Prepare a management plan for fish and/or wildlife.											I , R, M	I , R, M	I , R, M
The student will demonstrate competence in the application of principles and techniques for the development and management of agribusiness systems.											R, M	R, M	R, M
Animal Science													
Describe the role of animals on the planet including the history and use of animals, the classification of animals, and animal handling and safety.											I , R, M	I , R, M	I , R, M
Describe the basic life processes of animals including cells and tissues, animal digestion, reproduction and genetics.											I , R, M	I , R, M	I , R, M
Describe animal products, marking and selection.											I , R, M	I , R, M	I , R, M
The student will demonstrate competence in the application of principles and techniques for the development and management of agribusiness systems.											R, M	R,M	R,M
Exploratory Agriculture 1													
Understand basic agriculture perceptions, products and consumer knowledge.								I , R, M	I , R, M				
Identify basic concepts of entomology including the importance of insects, careers in entomology, insect collection, identification and control.								I , R, M	I , R, M				

Describe historical and emerging agricultural technology and research.								I , R, M	I , R, M				
Describe all aspects of fruit and vegetable production including financial planning, marketing, selecting and planning for production, characteristics of vegetable crops, small fruits and tree fruits.								I , R, M	I , R, M				
Apply foundational and life skills learned through agriculture in the school and community setting.								I , R, M	I , R, M				
Exploratory Agriculture 2													
Define and describe the role of agriculture in the world, the United States, Missouri, and the community including advances in agricultural technology and its implications.								I , R, M	I , R, M				
Describe the basics of plant science including their effect on our lives, major processes, growing mediums, care, current and emerging technologies.								I , R, M	I , R, M				
Describe the basics of animals in society including their importance, responsibility of ownership, selection, current and emerging technology								I , R, M	I , R, M				
Describe products from agriculture including the food chain, food from plants, food from animals, food processing and safety, fiber products and non food products.								I , R, M	I , R, M				
Describe natural resources and conservation including the importance of animal resources, soil conservation,								I , R, M	I , R, M				

water quality, air quality, wildlife management and conservation issues.													
Farm Business Management													
Describe the concepts of agribusiness in today's agriculture industry.											I , R, M	I , R, M	I , R, M
Describe economic principles in agribusiness.											I , R, M	I , R, M	I , R, M
Describe the factors involved in agribusiness planning, analysis and management.											I , R, M	I , R, M	I , R, M
Describe the factors in retail agribusiness sales.											I , R, M	I , R, M	I , R, M
The student will demonstrate competence in the application of principles and techniques for the development and management of agribusiness systems.											R,M	R,M	R,M
Agricultural Structures													
Apply safety procedures for working with agricultural structures, construction and mechanics.											I , R, M	I , R, M	I , R, M
Working with plans and farmstead planning											I , R, M	I , R, M	I , R, M
Apply principles of building Construction, Concrete, Plumbing, Electricity, and Fencing											I , R, M	I , R, M	I , R, M
The student will demonstrate competence in the application of principles and techniques for the development and management of agribusiness systems.											R,M	R,M	R,M

Landscaping and Turf Management													
Landscape and turf plant identification, landscape and turf installation, plant growth and maintenance											I , R, M	I , R, M	I , R, M
Landscape Design Concepts, creating and landscape design											I , R, M	I , R, M	I , R, M
Careers in the landscape and turf industry											I , R, M	I , R, M	I , R, M
The student will demonstrate competence in the application of principles and techniques for the development and management of agribusiness systems.											R,M	R,M	R,M
Crop Science													
Describe Missouri crops and their uses, the importance of crops, careers in crop science and the government influence and current trends in crop production											I , R, M	I , R, M	I , R, M
Describe plant biology including physiology and plant growth and nutrient needs.											I , R, M	I , R, M	I , R, M
Describe soil fertility and management											I , R, M	I , R, M	I , R, M
Identify and Select crops and seeds and describe specific crop production methods for corn, grain sorghum, soybean, wheat and small grains, forage, cotton, and rice.											I , R, M	I , R, M	I , R, M
Identify safety, environment and Legal Issues in Crop Production											I , R, M	I , R, M	I , R, M
The student will demonstrate competence in the application of principles and techniques for the											R,M	R,M	R,M

development and management of agribusiness systems.													
Agriculture Communication and Leadership													
Develop knowledge of ethics in media, and gather and analyze research and analyze agricultural issues											I , R, M	I , R, M	I , R, M
Develop Leadership Skills including written and oral communication.											I , R, M	I , R, M	I , R, M
Create Public Relations, advertising and marketing and utilize multimedia											I , R, M	I , R, M	I , R, M
Prepare for Careers and Employment and analyze the SAE program											I , R, M	I , R, M	I , R, M
The student will demonstrate competence in the application of principles and techniques for the development and management of agribusiness systems.											R,M	R,M	R,M
Floriculture													
Describe the floristry industry.											I , R, M	I , R, M	I , R, M
Identify floriculture plants											I , R, M	I , R, M	I , R, M
Describe post-harvesting handling techniques and the mechanics of floral design.											I , R, M	I , R, M	I , R, M
Describe the basic principles of floral design and the types of floral designs											I , R, M	I , R, M	I , R, M
Describe floral shop operations.											I , R, M	I , R, M	I , R, M
The student will demonstrate competence in the application of principles and techniques for the											R,M	R,M	R,M

development and management of agribusiness systems.													
Food Science and Technology													
Define the principles of food preservation											I , R, M	I , R, M	I , R, M
Describe food processing.											I , R, M	I , R, M	I , R, M
Describe the biochemistry of foods											I , R, M	I , R, M	I , R, M
Describe food selection and consumer health.											I , R, M	I , R, M	I , R, M
The student will demonstrate competence in the application of principles and techniques for the development and management of agribusiness systems.											R, M	R, M	R,M

I – Introduce *R – Reinforce* *M – Mastery* *o – Optional for grade level*

Introduction to Agriculture Year At-A-Glance:

Quarter 1	Quarter 2
• History of the FFA/ Ag Education • Public Speaking/Leadership (Creed) • Parliamentary Procedure	• Shop Safety • SMAW - Stick Welding
Quarter 3	**Quarter 4**
• The Science of Agriculture • The World Around Us	• Plants and Animals • Looking Ahead

Career Education Curriculum

Introduction to Agriculture			Last Revised	
Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Prerequisite Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Learning Target	Assessment Methods:	Instructional Activities & Assignments

The student will demonstrate competence in the application of leadership, personal growth and career success skills necessary for a chosen profession while effectively contributing to society		Identify FFA, SAE, and classroom instruction as an intracurricular part of the agricultural education program. Modify their personal plan of study for their Agricultural Education Program including classroom instruction, FFA and SAE. Demonstrate knowledge of FFA history and traditions (e.g., mission, vision). Identify FFA organization structure and activities. Demonstrate effective public speaking and communication skills (e.g., recitation of the FFA Creed, Motto, Salute, Mission Statement). Demonstrate skills needed for participation in meetings. Identify styles and characteristics of effective leadership. CS.02.01 Develop and implement an appropriate SAE program for the individual student. CS.02.03 Professional Growth: Develop awareness and apply skills necessary for achieving career success.	Project Based Learning Formative Assessments: questioning, observations, check-list, self-evaluations Summative Assessments: unit test, research Rubrics	• FFA Essentials • MYCAERT FFA • Recitation of the FFA Creed - Creed Rubric • SAE Resource • SAE Plan • Parliamentary Procedures Basics • Activities • Problem 7.1.1 • Project 7.1.2 • Project 7.1.3

The student will demonstrate competence in the application of principles and techniques for the development and management of agribusiness systems.		ABS.02 Utilize appropriate management planning principles in AFNR business enterprises. ABS.03 Utilize record keeping to accomplish AFNR business objectives while complying with laws and regulations. ABS.04 Apply generally accepted accounting principles and skills to manage cash budgets, credit budgets and credit for AFNR businesses.	Project Based Learning	Record Book • Practice Scenarios 1 • Practice Book 1 • Practice Scenarios 2 • Practice Book 2 • Personal Record book

The student will demonstrate competence in the application of scientific principles and practices to the production and management of animals and plants.		CS.01. Performance Element: Premier Leadership: Acquire the skills necessary to positively influence others. CS.03. Performance Element: Career Success: Demonstrate those qualities, attributes and skills necessary to succeed in, or further prepare for, a chosen career while effectively contributing to society. CS.05. Performance Element: Systems: Identify how key organizational structures and processes affect organizational performance and the quality of products and services. CS.06. Performance Element: Examine the importance of health, safety, and environmental management systems in organizations and their importance to performance and regulatory compliance. CS.07. Performance Element: Safety, Health, and Environmental: Demonstrate appropriate health and safety procedures for AFNR occupations. CS.08. Performance Element: Technical Skills: Use tools, equipment, machinery and technology appropriate to work within areas related to AFNR. CS.09. Performance Element: Technical Skills: Compare and contrast issues affecting the AFNR industry.	Project Based Learning Formative Assessments: questioning, observations, check-list, self-evaluations Summative Assessments: unit test, research Rubrics	• 3.1 Glossary • Activity 3.1.1 • Safety is an Attitude • Activity 3.1.2 • The Process of Science • Activity 3.1.3 • Project 3.1.4 • 3.1.4 Rubric • 3.1 Check for Understanding • 3.2 Glossary • What is pH? • Activity 3.2.1 • Activity 3.2.2 • Lab Report Template • Lab Report Rubric • 3.2 Check for Understanding • 3.3 Glossary • AFNR Lab Safety Manual • Activity 3.3.2 • Activity 3.3.3 • DNA • Activity 3.3.4 • Activity 3.3.5 • Project 3.3.6 • 3.3.6 Rubric • 3.3 Check for Understanding • 3.4 Glossary • Activity 3.4.1 • Activity 3.4.2 • What Am I Note Cards • Project 3.4.3 • 3.4.3 Rubric • Dichotomous Keys • Activity 3.4.4 • 3.4 Check for Understanding • Career Profile • 4.1 Glossary • Activity 4.1.1 • What's In Soil • Activity 4.1.2 • How Soils Are Formed • Activity 4.1.3 • 4.1 Check for Understanding • 4.2 Glossary

		CS.11. Performance Element: Scientific Inquiry: Utilize scientific inquiry as an investigative method. AS.01 Examine the components, historical development, global implications and future trends of the animal systems industry. AS.02. Performance Element: Classify, evaluate, select, and manage animals based on anatomical and physiological characteristics. AS.05. Performance Element: Evaluate and select animals based on scientific principles of animal production. AS.08. Performance Element: Analyze environmental factors associated with animal production. BS.02. Performance Element: Demonstrate laboratory skills as applied to biotechnology. FPP.01. Performance Element: Examine components of the food industry and historical development of food products and processing. FPP.02. Performance Element: Apply safety principles, recommended equipment and facility management techniques		• The Size of the Matter • Activity 4.2.1 • Activity 4.2.2 • Into the Depths • Activity 4.2.3 • 4.2.3 Soil Analysis Card • 4.2 Check for Understanding • 4.3 Glossary • The Water Cycle • Project 4.3.1 • 4.3.1 Rubric • Activity 4.3.2 • Activity 4.3.3 • Understanding Water Quality • Activity 4.3.4 • Project 4.3.5 • 4.3 Check for Understanding • 4.4 Glossary • Activity 4.4.1 • Activity 4.4.2 • Project 4.4.3 • 4.4.3 Rubric • Activity 4.4.4 • 4.4 Checking for Understanding • 5.2 Glossary • Activity 5.2.1 • All in a Flower • Project 5.2.2 • 5.2.2 Rubric • Seeds of Germination • Activity 5.2.3 • Activity 5.2.4 • Activity 5.2.5 • 5.2 Check for Understanding • 5.3 Glossary • Activity 5.3.1 • Activity 5.3.2 • Activity 5.3.3 • Project 5.3.4 • 5.3.4 Rubric • 5.3 Check for Understanding • 5.4 Glossary • Project 5.4.1

		to the food products and processing industry. PS.01. Performance Element: Apply knowledge of plant classification, plant anatomy and plant physiology to the production and management of plants. PS.02. Performance Element: Prepare and implement a plant management plan that addresses the influence of environmental factors, nutrients, and soil on plant growth.		• 5.4.1 Rubric • Activity 5.4.2 • Some Pig • Activity 5.4.3 • 5.4 Check for Understanding • 5.5 Glossary • Activity 5.5.1 • Activity 5.5.2 • Animal Behavior • Activity 5.5.3 • Problem 5.5.4 • Speaking Evaluation Rubric • 5.5 Check for Understanding

The student will demonstrate competence in the application of scientific principles, practices and techniques in the processing, storage, and development of food products.		FPP.04.01.01.a Identify quality and yield grades of food products. FPP.04.01.01.b Discuss factors that affect quality and yield grades of food products. FPP.04.01.03.a Identify and describe accepted animal treatment and harvesting techniques. FPP.04.02 Evaluate, grade and classify processed food products.	Project Based Learning Formative Assessments: questioning, observations, check-list, self-evaluations Summative Assessments: unit test, research Rubrics	• 5.1 Glossary • Activity 5.1.1 • Safety in Food • Activity 5.1.2 • Delivering Ag Goods • Project 5.1.3 • 5.1.3 Rubric • Problem 5.1.4 • Guide to Assessing Problems • 5.1 Check for Understanding
The student will demonstrate competence in the application of principles and techniques for the development and management of power, structural and technical systems.		PST.04.04.01.a Develop skills for working with wood and/or metal. PST.04.04.07.b Distinguish welding processes, positions, and materials preparation. Identify common woodworking and/or metal working tools.	Formative Assessments: questioning, observations, check-list, self-evaluations Summative Assessments: unit test, research Rubrics	• Safety in the Shop • Weld Rubric

Greenhouse Year At-A-Glance:

Quarter 1	Quarter 2
• Introduction to Greenhouse • Greenhouse Safety • Pesticide Safety • Mum Sales • Introduction to Floriculture	• Propagation Methods • Bedding Plant Planning
Quarter 3	**Quarter 4**
• Sexual Propagation • Asexual Propagation • Planting Calendar	• Plant Care and Growth • Plant Sale

Greenhouse			Last Revised (Date & Name):	
Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Prerequisite Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Learning Target	Assessment Methods:	Instructional Activities & Assignments

The student will demonstrate competence in the safe use of chemicals in the greenhouse.		Identifying major greenhouse pests
		
		Determining Kinds of Pests
		
		Using Pesticides Safely
			Formative Assessments: questioning, observations, check-list, self-evaluations
			
			Summative Assessments: unit test, research
				• General Greenhouse Safety
				• Major Greenhouse Pests
				• Determining Kinds of Pests
				• Identifying Major Greenhouse Pests
				• Chemical Labels
				  ○ Sample Chemical Labels
				• Chemical Safety
				• Pesticide Labels
				  ○ Practicing Horticulture Safety
				  ○ Applying Pesticides
				  ○ Determining the Kinds of Pesticides
				  ○ ID Major Greenhouse Pests
				  ○ Interpreting Pesticide Labels
				• Using Pesticides Safely
				  ○ Pesticide Safety Vocabulary
				  ○ Pesticide Review Game
				  ○ GOM 5 Student Activities

				○ GOM 5 PPT
The student will demonstrate competence in the application of scientific principles and practices in the greenhouse industry		Greenhouse Business Management Growing Structures The Greenhouse Industry	Project Based Learning Formative Assessments: questioning, observations, check-list, self-evaluations Summative Assessments: unit test, research Rubrics	• Greenhouse Structures • GOM1 Student Activities • Greenhouse Structures • Scale model greenhouse • GOM 1 PPT • GOM 6 Student Activities • GOM 6 PPT • Cost Analysis and Marketing Plan • GOM 7 Student Activities • GOM 7 PPT • Greenhouse career industry presentation
The student will demonstrate competence in the application of scientific principles and practices to the production of greenhouse plants.		Plant Growth Plant Health Plant Propagation Plant Science Basics	Project Based Learning Formative Assessments: questioning, observations, check-list, self-evaluations Summative Assessments: unit test, research Rubrics Demonstrate an understanding of the basic plant processes of germination and photosynthesis by conducting a seed germination experiment and writing a summary of their findings. Demonstrate an understanding of a plant pest and disease by writing a report on each that describes the	• Text ○ Roots ○ Stems ○ Leaves ○ Flowers • Roots and Stems • Plant Growth Lab • Plant Media Lab • Leaves • Flowers • Flower Dissection Lab • Plant Science Review • Text ○ Cuttings ○ Examining Sexual Reproduction ○ Grafting and Budding ○ Plant Reproduction ○ Cuttings Lab ○ Grafting ○ Lab • Text ○ Growing Hydro ○ Hydroponics • Hydroponics • Aquaponics • GOM 2 Student Activities • GOM 2 PPT • GOM 3 Student Activities

			pest and disease and identifies the control method Apply principles of plant propagation by properly propagating a plant and describing the process in written form. Demonstrate an understanding of plant science by creating a plant collection in which plants will be identified and labeled as to the type of root, leaf shape, leaf margin, leaf attachment, and venation Demonstrate an understanding of a plant pest and disease by writing a report on each that describes the pest and disease and identifies the control method.	• GOM 3 PPT • Potting Media Lab • Proper Mix Lab • Soilless MediaLab • GOM 4 Students Activities • GOM 4 PPT • Comparing Nutrients Lab • Irrigation Guidelines • Seed Starting - Open Flats • Seed Starting - Plug Tray • Planting Chart • Propagation Rubric

The student will demonstrate competence in the application of principles and techniques for the development and management of agribusiness systems.		ABS.02 Utilize appropriate management planning principles in AFNR business enterprises. ABS.03 Utilize record keeping to accomplish AFNR business objectives while complying with laws and regulations. ABS.04 Apply generally accepted accounting principles and skills to manage cash budgets, credit budgets and credit for AFNR businesses.	Project Based Learning	Personal Record book

Natural Resources and Conservation Year At-A-Glance:

Quarter 1	Quarter 2
• Grassland Evaluation • Ecology (Nature Unbound)	• Ecology (Continued) • Quality Whitetail Deer Assurance
Quarter 3	**Quarter 4**
• Fish and WIldlife Management	• Forest Management • Taxidermy

Natural Resources and Conservation			Last Revised (Date & Name):	
Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Prerequisite Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Learning Target	Assessment Methods:	Instructional Activities & Assignments
Analyze grassland management practices to determine a grassland management plan.		Identify different types of grasslands and explain factors that create them. Identify plant classifications found in grasslands. Recognize the characteristics of grassland plants that are used in plant identification. Appraise the current conditions of the grassland. Interpret soil test information. Interpret soil survey manuals and recommend plants for a soil type. Analyze the nutrient needs of livestock.	Project Based Learning Formative Assessments: questioning, observations, check-list, self-evaluations Summative Assessments: unit test, research Rubrics	Grasslands Unit 1 IN Grassland Evaluation Contest Study Guide Grassland Evaluation Student Reference

		Determine the optimal grazing methods for a grassland. Determine methods for harvesting and storing forage crops. Develop a better understanding of the management practices needed to manage both livestock and wildlife on grasslands. Develop a grassland management plan.		
Explain how naturally-occuring living organisms benefit humans and the environment.		EC.1.A All populations living together within a community interact with one another and with their environment in order to survive and maintain a balanced ecosystem. EC.1.B.a Identify and explain the limiting factors (biotic and abiotic) that may affect the carrying capacity of a population within an ecosystem. DOK2 EC.1.D.a Predict the impact (beneficial or harmful) a natural environmental event (e.g., forest fire, fl ood,) or human caused change (e.g., acid rain, global warming, pollution, deforestation, introduction of an exotic species) may have on the diversity of different species in an ecosystem IN.1.A.a Formulate testable questions and hypotheses. IN.1.A.c Design and conduct a valid experiment.	Project Based Learning Formative Assessments: questioning, observations, check-list, self-evaluations Summative Assessments: unit test, research Rubrics	MDC Nature Unbound

		IN.1.B.a Make qualitative and quantitative observations using the appropriate senses, tools and equipment to gather data (e.g., thermometers, analog and digital meters, computers, metric rulers). IN.1.C.a Use quantitative and qualitative data as support for reasonable explanations (conclusions). ST.2.B Scientific theories are developed based on the body of knowledge that exists at any particular time and must be rigorously questioned and tested for validity ST.3.A People, alone or in groups, are always making discoveries about nature and inventing new ways to solve problems and get work done. EC.1.C.b Predict and explain how natural or human caused changes (biological, chemical and/or physical) in one ecosystem may affect other ecosystems due to natural mechanisms (e.g., global wind patterns, water cycle, ocean currents). EC.3.B.b Explain the importance of reproduction to the survival of a species (i.e., the failure of a species to reproduce will lead to extinction of that species). EC.3.C Natural selection is the process of sorting individuals based on their ability to survive and reproduce within their ecosystem.		

		EC.3.C.a Identify examples of adaptations that may have resulted from variations favored by natural selection and describe how that variation may have provided populations an advantage for survival. EC.3.C.b Explain how genetic homogeneity may cause a population to be more susceptible to extinction (e.g., succumbing to a disease for which there is no natural resistance EC.3.C.c Explain how environmental factors (e.g., habitat loss, climate change, pollution, introduction of non-native species) can be agents of natural selection. EC.3.C.d Given a scenario describing an environmental change, hypothesize why a given species was unable to survive LO.3.A.a Distinguish between asexual (i.e., binary fission, budding, cloning) and sexual reproduction LO.3.D There is heritable variation within every species of organism LO.3.D.a Describe the advantages and disadvantages of asexual and sexual reproduction with regard to variation within a population LO.3.D.c Recognize that new heritable characteristics can only result from new		

		combinations of existing genes or from mutations of genes in an organism's sex cells. IN.1.C.b Analyze experimental data to determine patterns, relationships, perspectives, and credibility of explanations (e.g., predict/extrapolate data, explain the relationship between the independent and dependent variable). IN.1.B.e Calculate the range, average/ mean, percent, and ratios for sets of data. IN.1.B.f Recognize observation is biased by the experiences and knowledge of the observer (e.g., strong beliefs about what should happen in particular circumstances can prevent the detection of other results). EC.1.A.c Explain why no two species can occupy the same niche in a community. EC.1.B.b Predict how populations within an ecosystem may change in number and/ or structure in response to hypothesized changes in biotic and/or abiotic factors EC.1.C.a Devise a multi-step plan to restore the stability and/or biodiversity of an ecosystem when given a scenario describing the possible adverse effects of human interactions with that ecosystem (e.g., destruction caused by direct harvesting, pollution, atmospheric changes).		

		EC.1.D.b Describe possible causes of extinction of a population. IN.1.A.b Analyzing an experiment, identify the components (i.e., independent variable, dependent variables, control of constants, multiple trials) and explain their importance to the design of a valid experiment ME.1.I.a Compare the mass of the reactants to the mass of the products in a chemical reaction or physical change (e.g., biochemical processes, carbon dioxide oxygen cycle, nitrogen cycle, decomposition and synthesis reactions involved in a food web) as support for the Law of Conservation of Mass. ME.2.A. Forms of energy have a source, a means of transfer (work and heat), and a receiver. ME.2.F.a Describe the transfer of energy as it changes from kinetic to potential, while the total amount of energy remains constant, within a system (i.e., biochemical, oxygen cycle, nitrogen cycle, food web). EC.2.A As energy flows through the ecosystem, all organisms capture a portion of that energy and transform it to a form they can use. EC.2.A.a Illustrate and describe the flow of energy within a food web.		

		EC.2.A.b Explain why there are generally more producers than consumers in an energy pyramid. EC.2.A.c Predict how the use and flow of energy will be altered due to changes in a food web. EC.2.B.b Explain the importance of the recycling of nitrogen, oxygen, and carbon within an ecosystem.		
Explain conservations and ecological principles and how they apply to fish and wildlife management, including the use of land and wildlife for recreation.		Define and describe natural resource conservation Compare historical fish and wildlife trends and the public's response Outline the variety of jobs in conservation organizations, educational requirements, employment opportunities, and how to prepare for a professional conservation career Distinguish the difference between basic fish and wildlife legalities and ethics Calculate the commercial value of fish and wildlife resources and how it can benefit the economy and landowners List the different recreational values of fish and wildlife resources Describe the social values and benefits associated with fish and wildlife resources	Project Based Learning Formative Assessments: questioning, observations, check-list, self-evaluations Summative Assessments: unit test, research Rubrics	

		Describe the aesthetic value of fish and wildlife resources Describe the scientific and educational values of fish and wildlife resources Evaluate the negative impacts wild animals have on humans and the objective of wildlife damage control Assess how forest management can be used to improve wildlife habitat Define and describe wetlands and their importance Describe stream behavior and relate how it affects fish and wildlife habitat Outline life history of the bobwhite quail Outline life history of the white-tailed deer Outline life history of the largemouth bass Outline life history of the bald eagle Relate the reasons for fish and wildlife regulations and describe how they are made and enforced in Missouri Describe the legal process associated with fish and wildlife violations Demonstrate techniques used to prepare an educational wildlife mount.		

Prepare a management plan for fish and/or wildlife.		Design a cropland management plan for wildlife Plan a pond using appropriate construction and management techniques Describe the government conservation assistance available to Missouri landowners	Project Based Learning Formative Assessments: questioning, observations, check-list, self-evaluations Summative Assessments: unit test, research Rubrics	
The student will demonstrate competence in the application of principles and techniques for the development and management of agribusiness systems.		ABS.02 Utilize appropriate management planning principles in AFNR business enterprises. ABS.03 Utilize record keeping to accomplish AFNR business objectives while complying with laws and regulations. ABS.04 Apply generally accepted accounting principles and skills to manage cash budgets, credit budgets and credit for AFNR businesses.	Project Based Learning	Personal Record book

Animal Science Year At-A-Glance:

Quarter 1	Quarter 2
• Worlds of Opportunity • History and Use of Animals • Animal Handling	• Animal Handling • Cells and Tissues
Quarter 3	**Quarter 4**

• Cells and Tissues • Animal Nutrition • Animal Reproduction	• Genetics • Animal Health • Animal Products, Marketing and Selection

Animal Science			Last Revised:	
Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Prerequisite Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Learning Target	Assessment Methods:	Instructional Activities & Assignments
Describe the role of animals on the planet including the history and use of animals, the classification of animals, and animal handling and safety.		AS.01. Performance Element: Examine the components, historical development, global implications, and future trends of the animal systems industry AS.06. Performance Element: Prepare and implement animal handling procedures for the safety of animals, producers, and consumers of animal products. AS.07. Performance Element: Select animal facilities and equipment that provide for the safe and efficient production, housing, and handling of anima AS.08. Performance Element: Analyze environmental factors associated with animal production. CS.06. Performance Element: Examine the importance of health, safety, and environmental management systems in organizations and their importance to	Project Based Learning Formative Assessments: questioning, observations, check-list, self-evaluations Summative Assessments: unit test, research Rubrics	• 1.1 Glossary • Go Get It Cards • Animals In Our Lives • Activity 1.1.2 • Activity 1.1.3 • Project 1.1.4 • 1.1 Check for Understanding • 2.1 Glossary • Domestication • Activity 2.1.1 • Project 2.1.2 • 2.1.2 Rubric • 2.1 Check for Understanding • 2.2 Glossary • Activity 2.2.1 • Scientific Classification and Taxonomy • Activity 2.2.2 • Breed Recognition • Project 2.2.3 • 2.2.3 Rubric • 2.2 Check for Understanding • 3.1 Glossary • Activity 3.1.1 • Welfarist or RIghtist? • Activity 3.1.2 • Animal Issues

		performance and regulatory compliance. CS.07. Performance Element: Safety, Health, and Environmental: Demonstrate appropriate health and safety procedures for AFNR occupations. CS.08. Performance Element: Technical Skills: Use tools, equipment, machinery and technology appropriate to work within areas related to AFNR. CS.09. Performance Element: Technical Skills: Compare and contrast issues affecting the AFNR industry.		• Activity 3.1.3 • Guidelines for Using Animals in Education • Project 3.1.4 • 3.1.4 Rubric • 3.1 Check for Understanding • 3.2 Glossary • Activity 3.2.1 • Lab Report Template • Animal Behavior and Handling • Project 3.2.2 • 3.2.2 Rubric • 3.2 Check for Understanding • 3.3 Glossary • Creature Comforts • Activity 3.3.1 • Biosecurity • Activity 3.3.2 • Activity 3.3.3 • Animal Facilities • Project 3.3.4 • 3.3.4 Rubric • 3.3 Check for Understanding
Describe the basic life processes of animals including cells and tissues, animal digestion, reproduction and genetics.		AS.02. Performance Element: Classify, evaluate, select, and manage animals based on anatomical and physiological characteristics. AS.03. Performance Element: Provide for the proper health care of animals. AS.04. Performance Element: Apply principles of animal nutrition to ensure the proper growth, development, reproduction, and economic production of animals. CS.11. Performance Element: Scientific Inquiry: Utilize	Project Based Learning Formative Assessments: questioning, observations, check-list, self-evaluations Summative Assessments: unit test, research Rubrics	• 4.1 Glossary • Project 4.1.1 • 4.1.1 Scoring Guide • Activity 4.1.2 • Cell Respiration • Activity 4.1.3 • Feeding Cells • Activity 4.1.4 • 4.1 Check for Understanding • 4.2 Glossary • Activity 4.2.1 • Tissues • Activity 4.2.2 • Activity 4.2.3 • 4.2 Check for Understanding • 4.3 Glossary • Activity 4.3.1

		scientific inquiry as an investigative method.		• Respiratory and Circulatory Anatomy • Physiology of Respiration and Circulation • Activity 4.3.2 • Project 4.3.3 • 4.3.3 Rubric • Activity 4.3.4 • 4.3.4 Rubric • 4.3 Check for Understanding • 4.4 Glossary • Nerves, Hormones, ad Kidneys • Activity 4.4.1 • 4.4 Check for Understanding • 5.1 Glossary • Activity 5.1.1 • Activity 5.1.2 • Activity 5.1.3 • Project 5.1.4 • 5.1.4 Rubric • 5.1 Check for Understanding • 5.2 Glossary • Activity 5.2.1 • Activity 5.2.2 • 5.2 Check for Understanding • 5.3 Glossary • Activity 5.3.1 • Feedstuffs • Activity 5.3.2 • Activity 5.3.3 • Reading Labels • 5.3 Check for Understanding • 5.4 Glossary • Nutritional Disorders • Project 5.4.1 • 5.4.1 Template • 5.4.1 Rubric • Activity 5.4.2 • 5.4 Check for Understanding • 5.5 Glossary • Activity 5.5.1 • Activity 5.5.2

				• Activity 5.5.3 • Activity 5.5.4 • 5.5.4 Spreadsheet • 5.5 Check for Understanding • 6.1 Glossary • Activity 6.1.1 • Activity 6.1.2 • Activity 6.1.3 • 6.1 Check for Understanding • 6.2 Glossary • Livestock Breeding Systems • Activity 6.2.1 • Activity 6.2.2 • 6.2 Check for Understanding • 6.3 Glossary • Stages of Reproduction • Activity 6.3.1 • Activity 6.3.2 • Problem 6.3.3 • Guide to Assessing Problems • 6.3 Check for Understanding • 7.1 Glossary • In the Beginning • Activity 7.1.1 • Drosophila Genetic Lab • Genetic Fun-de-Mendels • Activity 7.1.2 • Activity 7.1.3 • 7.1 Check for Understanding • 7.2 Glossary • Heritability and the Environment • Activity 7.2.1 • Activity 7.2.2 • Activity 7.2.3 • Expected Progeny Differences • Pedigrees • Activity 7.2.4 • 7.2 Check for Understanding • 8.1 Glossary

				• What is a disease? • Activity 8.1.1 • Infectious Disease Causing Agents • Activity 8.1.2 • Project 8.1.3 • 8.1.3 Rubric • 8.1 Check for Understanding • 8.2 Glossary • Signs of Health • Activity 8.2.1 • Activity 8.2.2 • 8.2.2 Rubric • Project 8.2.3 • 8.2 Check for Understanding • 8.3 Glossary • Parasites • Activity 8.3.1 • Activity 8.3.2 • 8.3 Check for Understanding • 8.4 Glossary • Disease Prevention • Activity 8.4.1 • Project 8.4.2 • 8.4.2 Rubric • 8.4 Check for Understanding
Describe animal products, marketing and selection.		AS.05. Performance Element: Evaluate and select animals based on scientific principles of animal production. ABS.06. Performance Element: Use industry-accepted marketing principles to accomplish AFNR business objectives. CS.01. Performance Element: Premier Leadership: Acquire the skills necessary to positively influence others	Project Based Learning Formative Assessments: questioning, observations, check-list, self-evaluations Summative Assessments: unit test, research Rubrics	9.1 Glossary Project 9.1.1 9.1.1 Rubric Activity 9.1.2 Activity 9.1.3 Activity 9.1.4 9.1.4 Egg Grading Guide 9.1 Check for Understanding 9.2 Glossary Activity 9.2.1 9.2.1 Criteria Guide Animal Conformation Project 9.2.2 9.2.2 Rubric Problem 9.2.3 9.2 Check for Understanding 9.3 Glossary Marketing 101

		CS.02. Performance Element: Personal Growth: Develop a skill set to enhance the positive evolution of the whole person. CS.03. Performance Element: Career Success: Demonstrate those qualities, attributes and skills necessary to succeed in, or further prepare for, a chosen career while effectively contributing to society. CS.04. Performance Element: Systems: Examine roles within teams, work units, departments, organizations, inter-organizational systems, and the larger environment. CS.05. Performance Element: Systems: Identify how key organizational structures and processes affect organizational performance and the quality of products and services. CS.10. Performance Element: Technical Skills: Envision emerging technology and globalization to project its influence on widespread markets.		Activity 9.3.1 Project 9.3.2 9.3.2 Rubric Problem 9.3.3 9.3 Check for Understanding

The student will demonstrate competence in the application of principles and techniques for the development and management of agribusiness systems.		ABS.02 Utilize appropriate management planning principles in AFNR business enterprises. ABS.03 Utilize record keeping to accomplish AFNR business objectives while complying with laws and regulations. ABS.04 Apply generally accepted accounting principles and skills to manage cash budgets, credit budgets and credit for AFNR businesses.	Project Based Learning	Personal Record book

Exploratory Agriculture 1 Year At-A-Glance:

Quarter 1	Quarter 2
• Agriculture Perceptions • Agriculture Products • Consumer Knowledge	• Entomology • History of Ag Innovations
Quarter 3	**Quarter 4**
• Agriculture Research • Biotechnology in Agriculture • Emerging Technology in Agriculture	• Sustainability • Fruit and Vegetable Production • Leadership and Life Skills

Exploratory Agriculture 1			Last Revised:	
Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Prerequisite Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Learning Target	Assessment Methods:	Instructional Activities & Assignments

Understand basic agriculture perceptions, products and consumer knowledge.		The student will analyze common agriculture perceptions, differentiate between perceptions versus reality, cite three examples of how views or opinions are created, identify three characteristics of a modern agriculturalist, describe the rationale behind standard agriculture industry practice. The student will recognize local, state, national and global scope of agriculture, identify ten locally grown agricultural commodities, list the top five agricultural commodities in your Missouri, locate the top five agricultural commodities nationally, compare importing and exporting practices related to agricultural commodities. The student will create informed, educational and confident consumers of agricultural products, recognize agricultural product labeling, identify consumer's role in safe, home agricultural product use. The students will recognize the importance of animal product uses and consumer product awareness, dispel common animal agricultural myths, identify appropriate agencies focusing on consumer awareness. The students will recognize the importance of plant uses and consumer product awareness and identify plant uses and byproducts.	Project Based Learning Formative Assessments: questioning, observations, check-list, self-evaluations Summative Assessments: unit test, research Rubrics	National FFA Middle School Food and Ag Literacy Curriculum Imports and Exports
Identify basic concepts of entomology including the importance of insects,		DIscuss the significance of entomology	Project Based Learning	Student Reference

careers in entomology, insect collection, identification and control.		Prepare and insect collection Describe the procedure for classifying insects to order Describe methods of pest control Describe the factors in the selection and application of insecticides Identify safety guidelines for insecticide use. Outline an IPM plan	Formative Assessments: questioning, observations, check-list, self-evaluations Summative Assessments: unit test, research Rubrics	Glossary Insect Collection Lesson 1 PPT Lesson 2 PPT Lesson 3 PPT Lesson 4 PPT Lesson 5 PPT Lesson 6 PPT Lesson 7 PPT
Describe historical and emerging agricultural technology, research and sustainability		The students will identify key developments in the progression of agriculture, list five agricultural inventions and explain their impact on agriculture and society, identify key developments in the progression of agriculture, discuss the progression of agricultural research and technology and its impact on society. The students will discuss agricultural research, identify science, math and language applications in agriculture. The students will discuss agricultural research ill recognize three outcomes of agricultural research, analyze how agriculture research has benefited the Consumer, explain the five steps involved in scientific research Method, identify one way the scientific method is used in agriculture research, apply research methods to investigate an agricultural problem, design	Project Based Learning Formative Assessments: questioning, observations, check-list, self-evaluations Summative Assessments: unit test, research Rubrics	National FFA Middle School Food and Ag Literacy Curriculum

		an agricultural research project using the scientific method, form conclusions based on collected data, understand the role of market research in Agriculture. The students will discuss concepts and issues related to biotechnology, define biotechnology, identify five examples of agriculture-related Biotechnology, discuss the influence of biotechnology on agriculture, investigate current applications of biotechnology in agriculture. The students will recognize the significance of emerging technology in agriculture, cite five examples and applications of emerging agricultural technologies, identify pros and cons of robotics innovations in agriculture, research emerging technologies and the opportunities they may create within agriculture. The students will identify environmental impacts related to animal production, identify various ways that animal production impacts the environment, identify how animal production stewardship has a positive impact on the environment, outline methods of reducing the effects of animal agriculture on the environment.		
Describe all aspects of fruit and vegetable production including financial planning, marketing, selecting and planning for		Explain the importance of financial planning in fruit and vegetable production.	Project Based Learning	Fruit and Vegetable Production Unit Student Reference

production, characteristics of vegetable crops, small fruits and tree fruits.		Describe approaches for the marketing of fresh fruits and vegetables. Classify characteristics of selecting and planning for fruit and vegetable production. Explain management practices for pest control. Identify characteristics of cool season, long season, and warm season vegetable crops. Identify characteristics of small fruits and tree fruits.	Formative Assessments: questioning, observations, check-list, self-evaluations Summative Assessments: unit test, research Rubrics	
Apply foundational and life skills learned through agriculture in the school and community setting.		The student will apply foundational and life skills learned through agriculture in the school and community setting, utilize communication skills to collaborate in a group Setting, demonstrate compromise, consensus, and community building concepts for carrying out different tasks, assignments, and projects.. demonstrate oral and written communications, define experiential learning, list two examples of experiential learning opportunities, describe three agricultural leadership opportunities, develop a plan that includes specific goals for leadership and personal growth.	Project Based Learning Formative Assessments: questioning, observations, check-list, self-evaluations Summative Assessments: unit test, research Rubrics	National FFA Middle School Food and Ag Literacy Curriculum

Exploratory Agriculture 2 Year At-A-Glance:

Quarter 1	Quarter 2
• Introduction to Agriculture	• Plant Science

	• Animals in Society
Quarter 3	**Quarter 4**
• Products from Agriculture	• Natural Resources and Conservation

Exploratory Agriculture 2			Last Revised:	
Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Prerequisite Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Learning Target	Assessment Methods:	Instructional Activities & Assignments
Define and describe the role of agriculture in the world, the United States, Missouri, and the community including advances in agricultural technology and its implications.		Define agriculture and identify career opportunities in agriculture. Describe the role of agriculture in the world. Describe the role of agriculture in the United States. Describe agriculture in Missouri. Identify advances in agricultural technology and their implications.	Project Based Learning Formative Assessments: questioning, observations, check-list, self-evaluations Summative Assessments: unit test, research Rubrics	
Describe the basics of plant science including their effect on our lives, major processes, growing mediums, care, current and emerging technologies.		Describe how plants affect our lives. Describe the parts of a plant and major processes. Describe the importance of the growing medium to plants.	Project Based Learning Formative Assessments: questioning, observations, check-list, self-evaluations Summative Assessments: unit test, research Rubrics	

		Identify the important factors to consider in caring for plants. Identify current and emerging technologies of plant agriculture		
Describe the basics of animals in society including their importance, responsibility of ownership, selection, current and emerging technology		Describe the importance of animals. Describe the responsibilities of animal ownership. Identify factors in selecting an animal. Identify current and emerging technologies of animal agriculture,	Project Based Learning Formative Assessments: questioning, observations, check-list, self-evaluations Summative Assessments: unit test, research Rubrics	
Describe products from agriculture including the food chain, food from plants, food from animals, food processing and safety, fiber products and non food products.		Describe the role of agriculture in the food chain. Identify food products from plants. Identify food products from animals. Describe the importance of food processing and safety. Identify fiber products from agriculture. Describe non- food products from agriculture.	Project Based Learning Formative Assessments: questioning, observations, check-list, self-evaluations Summative Assessments: unit test, research Rubrics	
Describe natural resources and conservation including the importance of animal resources, soil conservation, water quality, air quality, wildlife management and conservation issues.		Describe the importance of natural resources. Describe the importance of soil conservation. Describe the importance of water quality.	Project Based Learning Formative Assessments: questioning, observations, check-list, self-evaluations Summative Assessments: unit test, research	

		Describe the importance of air quality. Describe the importance of wildlife management and complete the Missouri Department on Conservation Hunter Education. Describe how conservation issues affect agriculture.	Rubrics	

Farm Business Management Year At-A-Glance:

Quarter 1	Quarter 2
• Agribusiness in Today's Agriculture Industry • Economic Principles in Agribusiness	• Economic Principles in Agribusiness • Agribusiness Planning and Analysis
Quarter 3	**Quarter 4**
• Agribusiness Management	• Retail Agribusiness Sales • Career Development

Farm Business Management			Last Revised:	
Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Prerequisite Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Learning Target	Assessment Methods:	Instructional Activities & Assignments
Describe the concepts of agribusiness in today's agriculture industry.		Describe the concept of utility and identify the five sectors of agriculture and how they fit together within the industry. Identify at least five careers available in agribusiness today. Explain the free enterprise system while examining agribusiness at the local, state, national, and international level. Outline government's role in and impact of the agriculture industry, its involvement in agribusiness, and its effect on agricultural prices. Explore government agencies involved with agriculture and its	Project Based Learning Formative Assessments: questioning, observations, check-list, self-evaluations Summative Assessments: unit test, research Rubrics	

		effects on agriculturalists and issues in agriculture. Identify current issues in agriculture and locate ways to educate yourself and others on these issues. Define advocate, identify specific ways to advocate for agriculture, develop agriculture related Facebook status updates, craft a letter to the editor, and role play a conversation with an individual opposing a specific agricultural issue.		
Describe economic principles in agribusiness.		Define total product (TP), marginal product (MP), and average product (AP) and identify the relationship between them to illustrate the principle of diminishing physical returns. Define total revenue (TR), total cost (TC), marginal revenue product (MRP), and marginal input cost (MIC), and use them to illustrate the principle of diminishing economic returns. Define the point of maximum profit and maximum production and the relationship between the two. Recall three characteristics of fixed costs and identity the five types of fixed costs. Recall two characteristics of variable costs, identity the three types of variable costs, and describe how a variable cost becomes fixed.	Project Based Learning Formative Assessments: questioning, observations, check-list, self-evaluations Summative Assessments: unit test, research Rubrics	

		Define total cost; classify expenses into fixed costs or variable costs; and examine the total cost, fixed cost, and variable cost curves. Identify the reason for using per-unit costs and represent the equations for average fixed cost, average variable cost, and average total cost. Identify the difference between short and long run inputs and resources. Define substitution and describe the two methods of substitution. Determine maximum profit. Determine and calculate the best rate of substitution. Recall the definition of opportunity cost and net opportunity cost. Identify two ways business decisions are affected by opportunity costs. Describe the effect of a manager or business owner not considering opportunity costs. Identify and calculate one measure used to represent opportunity costs. Contrast demand and quantity demanded, define and illustrate the Law of Demand, identify three factors that may shift the demand curve, and contrast luxury and necessity items.		

		Contrast supply and quantity supplied, define and illustrate the Law of Supply, and identify three factors that may shift the supply curve. Demonstrate how to determine price and what factors affect price to change, determine the point of equilibrium, and identify the reasons for surplus and shortage. Define elasticity, describe three types of elasticity, calculate the price elasticity for supply and demand, and illustrate the importance of understanding elasticities. Define time value of money. Define and calculate the future value of a dollar. Define and calculate the future value of a dollar per period. Define and calculate sinking fund factors. Define and calculate the present value of a dollar per period. Define and calculate the present value of a dollar per period. Define and calculate amortization. Correlate the connection between time value of money and inflation		
Describe the factors involved in agribusiness planning, analysis and management.		Sketch an entrepreneur, using pictures to illustrate characteristics of a successful entrepreneur, advantages of	Project Based Learning	

		being an entrepreneur, and disadvantages of being an entrepreneur. Analyze business opportunities by examining market potential and recognizing factors affecting the success or failure of small businesses. Identify and explain four regulations that may affect the start-up of an agricultural business. Create two SMART short-term goals, two SMART intermediate goals, and two SMART long-term goals; prioritize these goals and identify three things the student will do to help them achieve these six goals. Demonstrate the steps in using a personal time management system. Create a business resume. Create a business plan. Complete a comparison chart over the four types of business structures Identify three reasons for financial planning and develop a personal financial plan. Create a personal savings and investment plan, identifying specific ways to save and invest money. Identify four reasons for maintaining a regular budget, determine breakeven price, and modify a budget using a given scenario.	Formative Assessments: questioning, observations, check-list, self-evaluations Summative Assessments: unit test, research Rubrics	

		Define three aspects of business financing, identify and describe three sources of business financing, and illustrate two key items a business should provide to secure a loan. Describe the 5 C's of Credit, identify how a FICO score is calculated, and compare and contrast the four kinds of credit. Define two types of loans, calculate asset to liability ratio, and define leverage and how it can be beneficial to a business. Identify three types of credit institutions and describe the loans they provide; describe three types of credit instruments used by lending agencies. Define interest, calculate simple interest, calculate compound interest, and calculate an amortized loan payment. Define two types of loans, calculate asset to liability ratio, and define leverage and how it can be beneficial to a business. Identify three types of credit institutions and describe the loans they provide; describe three types of credit instruments used by lending agencies. Define interest, calculate simple interest, calculate compound interest, and calculate an amortized loan payment. Define customer credit and identify one advantage and one disadvantage to extending credit to customers.		

		Construct a sample credit policy. Describe how students, as business owners, would determine credit standing for their customers. Recall three considerations to make when considering a parcel of land, describe two ways to determine property value, and determine the legal land description of a parcel of land. Explain the four steps in purchasing real estate, identify three things to include in a contract, and contrast the three types of deeds. Describe four basic elements of a real estate transaction. Analyze a current agribusiness in terms of its land, labor, capital, and management. Identify ways to improve labor efficiency, determine labor needs for crop enterprises, and determine labor needs for livestock enterprises. Identify opportunities when outsourcing may be profitable and efficient for an agribusiness. Determine machinery costs in relations to fieldwork days and implement selection. Determine acceptable custom rates for Missouri. Justify three reasons for raising livestock.		

		Explain considerations to be made in selecting livestock. Analyze current livestock publications to determine the profitability of producing a particular type of livestock. Identify the important characteristics in planning a cropping system. Define and calculate effective field capacity. Personally identify what drives the decision-making process, what interferes with the decision-making process, the consequences for making a poor decision, and the rewards for making an educated decision. Define a problem and illustrate each step in the decision-making process in order to solve that problem. Use the SWOT Analysis to evaluate a person and/or business decision. Identify the use of agribusiness records, describe the three types of accounting systems, define three special journals used in agribusiness, and illustrate the double entry accounting system. Complete an income statement by identifying revenue, cash expense, and noncash expense; and calculating gross revenue, net income from operations, and net income. Complete a balance sheet by identifying assets and liabilities; calculating total assets, total liabilities, and net worth; and		

		calculating solvency and liquidity. Complete a cash flow statement by identifying income and expenses and calculating net total and complete a cash flow statement by identifying operating, financial, and investing activities; and calculating net totals. Define business procedures and justify their need. Identify reports needed in agribusiness. Explain the use and procedures for guarantees and warranties. Define contract, identify three things to consider when making a contract, and identify three legal aspects of contracts. Describe a lease and the relationship between the two parties involved and weigh the lessee's advantages and disadvantages to leasing. Justify the need for an automatic renewal clause and explain how to use arbitration. Contrast a cash lease with a production share lease; identify and define three types of leases. Identify the top three characteristics employers look for in an employee, demonstrate how employees can be successful, define morale and its effects on a business, and define ethics and its effects on a business.		

		Role-play how to confront employees, fix employee problems, and respond to employee issues. Craft two dialogues for implementing change in the workplace. Identify five legality issues of hiring employees. Calculate taxable income and analyze the advantages and methods of maximizing after-tax income. Categorize income and expenses. Define depreciation, calculate basis, and calculate expensing. Recognize the importance and benefits of reducing and increasing taxable income. Calculate MACRS depreciation. Identify and describe five federal taxes. Identify and describe three state taxes. Identify and describe two local taxes. Identify taxes paid by most people and establish the difference between a progressive tax and a flat tax. Use a risk management assessment tool in examining a personal decision. Examine a business's current issue or dilemma and use the		

		Risk Management Model to develop a solution to lower the risk. Indicate five ways agribusinesses can reduce risk. Examine price discovery methods used in the United States. Define ways in which commodity markets are utilized in agribusiness. Explore the benefits to the producer of using cash markets. Explain how farmers use a futures contract and calculate a hedge. Explain how farmers use an option and calculate an option. Identify three keys to success with futures and options. Define insurance, identify four common types of insurance, and explain three things to consider before purchasing insurance. Define the importance of crop insurance to farmers. Explore the legal liabilities of farmers and ranchers. Draft a proposal for an estate plan. Rationalize the use of wills in estate planning. Justify stock markets, rental and leasing agreements, and good		

		financial planning as a tool for risk management.		
Describe the factors in retail agribusiness sales.		Describe the various selling environments and identify Missouri businesses in each environment. Role play the tasks of a salesperson in various selling environments. Generate a list of words, phrases, statements, and questions to use during a sales presentation for each communication style. Criticize dialogues that build and break-down rapport. Assemble a list of how a salesperson can build and maintain a relationship with a customer. Identify the characteristics of the three types of sales personalities and dialogue specific words, statements, and questions to be asked to each during a sales presentation. Identify the importance of determining customer needs and craft questions to use during a sales presentation to determine those needs. Develop appropriate activities to ensure satisfaction at each level. Justify personal purchases using Maslow's Hierarchy of Needs and the steps used in deciding to make a purchase.	Project Based Learning Formative Assessments: questioning, observations, check-list, self-evaluations Summative Assessments: unit test, research Rubrics	

		Create a plan for identifying potential customers using the 4P's of Marketing. Communicate the importance of obtaining product, company, and industry knowledge prior to performing a sales presentation. Define the seven steps of the Feature Benefit Sales Presentation Technique and the need for each and gather and/or create resources to aid in final sales presentation Create a list of attention getters to use when meeting a customer and identify techniques to use when approaching customers in the four selling environments. Identify and address valid objections, hidden objections, and misunderstandings. Script examples of each type of close to use in a sales presentation. Analyze a local business's promotional campaign. Develop a public relations campaign for the local FFA chapter and agriculture program to be carried out during National FFA Week Explore various types of advertising, and analyze the use and effectiveness of social media, websites, and blogs. Critique the effectiveness of promotional displays. Justify personal purchases using Maslow's Hierarchy of Needs		

		and the steps used in deciding to make a purchase. Create a plan for identifying potential customers using the 4P's of Marketing. Communicate the importance of obtaining product, company, and industry knowledge prior to performing a sales presentation. Critique managing inventory advice and suggestions. Analyze how an agribusiness can determine selling price. Identify specific discounts offered in agribusiness.		
Outline personal skills necessary for success in agricultural businesses		Seek available jobs in the area and define the steps in applying for a job. Create a personal resume and evaluate a peer's resume. Create a personal cover letter and evaluate a peer's cover letter. Complete a sample job application and evaluate a peer's job application. Interview for a job and evaluate a peer's interview. Examine how the use of written communication can contribute to an agribusiness success or be detrimental if used unprofessionally. Differentiate between successful social and professional	Project Based Learning Formative Assessments: questioning, observations, check-list, self-evaluations Summative Assessments: unit test, research Rubrics	

		communication and craft a professional email. Examine how social media can be used effectively and ineffectively for business purposes. Critique managing inventory advice and suggestions. Analyze how an agribusiness can determine selling price. Identify specific discounts offered in agribusiness. Define work ethics and identify the effects of unethical behavior in the workplace and its effect on job performance and advancement. Differentiate between ethical and unethical behavior and identify how to determine the written and unwritten rules for the workplace. Examine the effects of culture on workplace rules and norms.		

The student will demonstrate competence in the application of principles and techniques for the development and management of agribusiness systems.		ABS.02 Utilize appropriate management planning principles in AFNR business enterprises. ABS.03 Utilize record keeping to accomplish AFNR business objectives while complying with laws and regulations. ABS.04 Apply generally accepted accounting principles and skills to manage cash budgets, credit budgets and credit for AFNR businesses.	Project Based Learning	Personal Record book

Agriculture Structures Year At-A-Glance:

Quarter 1	Quarter 2
• Safety • Working with Plans • Farmstead Planning	• Building Construction
Quarter 3	**Quarter 4**
• Concrete • Electricity	• Plumbing • Fencing

Agriculture Structures			Last Revised:	
Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Prerequisite Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Learning Target	Assessment Methods:	Instructional Activities & Assignments
Apply safety procedures for working with agricultural structures, construction and mechanics.		Describe safety practices associated with building construction.	Project Based Learning Formative Assessments: questioning, observations, check-list, self-evaluations Summative Assessments: unit test, research Rubrics	Agricultural Structures Student Reference

Working with plans and farmstead planning		Demonstrate an understanding of the importance planning has on effective work procedure by drawing a construction plan and developing a plan of procedure, a cutting bill of materials, and a purchasing bill of materials. Apply principles of farm and homestead planning by devising a farmstead plan and explaining their design decisions in paragraph form	Project Based Learning Formative Assessments: questioning, observations, check-list, self-evaluations Summative Assessments: unit test, research Rubrics	

Building Construction, Concrete, Plumbing, Electricity, and Fencing		Demonstrate an understanding of correct building construction procedures by laying out joists Agricultural Structures Competency Profile (6/99) 2 and rafters, applying roofing skills, and answering questions about roofing materials. Apply principles of correct concrete construction procedures by making a concrete patio block. Demonstrate an understanding of how to work with electricity and wiring by diagramming a wiring plan for an agricultural structure, identifying sources of electrical grounding in the structure, and completing a bill of materials for the project. Demonstrate an understanding of plumbing equipment and procedures by applying different techniques to join dissimilar types of pipe—copper, PVC, CPVC, and black iron. Apply principles of correct fence installation by devising a fencing plan that complies with local codes and includes the materials used, cost, and layout of the fence.	Project Based Learning Formative Assessments: questioning, observations, check-list, self-evaluations Summative Assessments: unit test, research Rubrics	

The student will demonstrate competence in the application of principles and techniques for the development and management of agribusiness systems.		ABS.02 Utilize appropriate management planning principles in AFNR business enterprises. ABS.03 Utilize record keeping to accomplish AFNR business objectives while complying with laws and regulations. ABS.04 Apply generally accepted accounting principles and skills to manage cash budgets, credit budgets and credit for AFNR businesses.	Project Based Learning	Personal Record book

Landscaping and Turfgrass Year At-A-Glance:

Quarter 1	Quarter 2
• Landscape Installation, Plant Growth and Maintenance • Landscape Design Concepts	• Creating a Landscape Design • Identify and Classify Landscape Plants
Quarter 3	**Quarter 4**
• Careers in the Landscape Industry • Classify and Identify Turfgrass	• Turf Installation, Growth and Maintenance • Careers in the Turfgrass Industry

Landscaping and Turfgrass			Last Revised:	
Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Prerequisite Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Learning Target	Assessment Methods:	Instructional Activities & Assignments

Landscape and turf plant identification, landscape and turf installation, plant growth and maintenance		CS.03.04. Use appropriate protective equipment and demonstrate safe and proper use of AFNR tools and equipment. PS.01.03. Develop and implement a fertilization plan for specific plants or crops. PS.03.02. Develop and implement a management plan for plant production. PS.03.03. Develop and implement a plan for integrated pest management for plant production. PS.02.01. Classify plants according to taxonomic systems. PS.04.01. Evaluating, identifying and preparing plants to enhance an environment. PS.01.01. Determine the influence of environmental factors on plant growth	Project Based Learning Formative Assessments: questioning, observations, check-list, self-evaluations Summative Assessments: unit test, research Rubrics	Landscape Management Key Terms Turfgrass Management Key Terms Landscape Installation, Plant Growth and Management PPT Landscape Installation, Plant Growth and Management Student Activities Identify and Classify Landscape Plants PPT Identify and Classify Landscape Plants Student Activities Shrubs ID Tree ID Vines and Groundcovers ID Landscape Plants Identification Sheet Classify and Identify Turfgrass PPT Classify and Identify Turfgrass Student Activities Turfgrass ID Sheet Turfgrass Identification Table Turf Installation, Growth and Maintenance PPT Turf Installation, Growth and Maintenance Student Activities Turfgrass Growth and Maintenance Lab Turfgrass Site Preparation Lab

Landscape Design Concepts, creating and landscape design		PS.04.01. Evaluating, identifying and preparing plants to enhance an environment. PS.04.02. Create designs using plants.	Project Based Learning Formative Assessments: questioning, observations, check-list, self-evaluations Summative Assessments: unit test, research Rubrics	Landscape Design Concepts PPT Landscape Design Concepts Student Activities Creating a Landscape Design PPT Creating a Landscape Design Student Activities Selecting Flowers Selecting Groundcovers and Vines Selecting Shrubs and Hedges Selecting Trees Selecting Turfgrass
Careers in the landscape and turf industry		CS.05.01. Evaluate and implement the steps and requirements to pursue a career opportunity in each of the AFNR career pathways (e.g., goals, degrees, certifications, resumes, cover letter, portfolios, interviews, etc.). CS.05.02. Examine and choose career opportunities that are matched to personal skills, talents, and career goals in an AFNR pathway of interest.	Project Based Learning Formative Assessments: questioning, observations, check-list, self-evaluations Summative Assessments: unit test, research Rubrics	Careers in the Landscape Industry PPT Careers in the Landscape Industry Student Activities Careers in the Turfgrass Industry PPT Careers in the Turfgrass Industry Student Activities

The student will demonstrate competence in the application of principles and techniques for the development and management of agribusiness systems.		ABS.02 Utilize appropriate management planning principles in AFNR business enterprises. ABS.03 Utilize record keeping to accomplish AFNR business objectives while complying with laws and regulations. ABS.04 Apply generally accepted accounting principles and skills to manage cash budgets, credit budgets and credit for AFNR businesses.	Project Based Learning	Personal Record book

Crop Science Year At-A-Glance:

Quarter 1	Quarter 2
• Overview • Plant Biology • Soil Fertility and Management	• Identifying and Selecting Crops and Seeds • Safety, Environment and Legal Issues • Corn and Grain Sorghum Production
Quarter 3	**Quarter 4**
• Soybean Production • Wheat and Small Grain Production	• Forage Production • Cotton Production • Rice Production

Crop Science			Last Revised:	
Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Prerequisite Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Learning Target	Assessment Methods:	Instructional Activities & Assignments

Describe Missouri crops and their uses, the importance of crops, careers in crop science and the government influence and current trends in crop production		Describe Missouri crops and their uses. Describe the importance of crops Identify careers in crop science Identify government influences and current trends in crop production	Project Based Learning Formative Assessments: questioning, observations, check-list, self-evaluations Summative Assessments: unit test, research Rubrics	Research the different crops grown in Missouri and present them orally to the class. Challenge students to develop a new food product from the crops grown in Missouri and create a poster presentation. Create flash cards of the different crops grown in Missouri Research and conduct a scavenger hunt for current events and create a graph of comparing numbers of bushels of crops grown in Missouri. Interview an individual in the crop science industry. Research a career in the crop science industry. Complete a case study covering the governmental influence on the crop science industry. Complete a case study covering the current trends in the crop science industry.
Describe plant biology including physiology and plant growth and nutrient needs.		Describe plant physiology. Describe plant growth and nutrient needs.	Project Based Learning Formative Assessments: questioning, observations, check-list, self-evaluations Summative Assessments: unit test, research Rubrics	Germinate seeds of monocot and dicot plants. Record daily observations in a journal. Plant different varieties of seeds within a species and complete a research report with your findings Complete a case study on recent findings in regards to nutrients valuable for plant growth. Interview a soil scientist. Present your findings to the class.

Describe soil fertility and management		Describe soil composition. Describe soil types and limitations. Describe soil testing Describe fertilizing soils Describe soil management practices Describe Soil conservation practices.	Project Based Learning Formative Assessments: questioning, observations, check-list, self-evaluations Summative Assessments: unit test, research Rubrics	Provide four soil samples for the students to judge. Have them analyze the soil particles of each sample. Have the students use soil sample books to determine the soil in a particular area. Have them prepare written reasons why they feel the selected area would have good or poorly draining soils. Have students interview a land owner which has recently completed conservation practices on their land. Organize a soils judging career development event team with students in the class Have students complete a research report which is analyzing results from soil sampling. Create a media presentation explaining fertilizer application methods. Calculate fertilizer needs and application rates of selected fields. Prepare a poster presentation explaining the different tillage practices Prepare a poster presentation explaining the different planting methods Conduct a debate on conventional-versus conservation-tilled soils. Have students conduct interviews with individuals who practice soil conservation Analyze case studies over the different soil conservation practices.

Identify and Select crops and seeds and describe specific crop production methods for corn, grain sorghum, soybean, wheat and small grains, forage, cotton, and rice.		Identify crops and weeds. Describe crop selection. Describe crop seed selection. Plan a crop Select a variety Select a tillage and Planting Method Select a pest control program Scout and Maintain crops Harvesting crops Marketing crops Figuring crop costs	Project Based Learning Formative Assessments: questioning, observations, check-list, self-evaluations Summative Assessments: unit test, research Rubrics	Create a poster presentation over legumes, forb, or woody plants. Prepare a research report over the weeds in their area Conduct an interview with a seed salesperson and prepare a presentation for the class. Have students research various seed companies and prepare written reasons for seed selected. Develop seed judging activities for the students. For each species: Create flash cards of nutrient deficiencies. Conduct an experiment and write a research report on the effects of light or temperature on plants Create flash cards of nutrient deficiencies Conduct a debate on the different tillage methods. Create an online database for the state to compare planting and harvest dates Calculate plant populations and costs of planting Create flashcards of common pests Interview crop scouts on common pests in the area. Create flashcards of common weeds. Interview crop scouts on common pests in the area.

				Calculate the costs of replanting lost crops. Calculate the proper harvest times. Calculate harvest losses. Create a media presentation of the different harvest methods. Using a specified commodity play the futures market. Set up an imaginary farm and fill out a journal along the way. Calculate variable and fixed costs and net returns.

Identify safety, environment and Legal Issues in Crop Production		Describe protecting ourselves and others in crop production. Describe protecting the environment in crop production Evaluate laws pertaining to crop production.	Project Based Learning Formative Assessments: questioning, observations, check-list, self-evaluations Summative Assessments: unit test, research Rubrics	Have students create an online social media presentation about safety around the farm. Create a poster about safety and present to an elementary class. Conduct a debate on the biggest problem or danger of crop production activities. Have students research the different conservation practices supported by the Natural Resource and Conservation Services. Calculate legal land descriptions.
The student will demonstrate competence in the application of principles and techniques for the development and management of agribusiness systems.		ABS.02 Utilize appropriate management planning principles in AFNR business enterprises. ABS.03 Utilize record keeping to accomplish AFNR business objectives while complying with laws and regulations. ABS.04 Apply generally accepted accounting principles and skills to manage cash budgets, credit budgets and credit for AFNR businesses.	Project Based Learning	Personal Record book

Agriculture Communication and Leadership Year At-A-Glance:

Quarter 1	Quarter 2
• Ethics in Media • Research • Agriculture Issues	• Leadership Skills • Written Communication • Oral Communication
Quarter 3	**Quarter 4**
• Public Relations • Advertising • Marketing • Multimedia	• Careers and Employment • Analyzing the SAE

Agriculture Communication and Leadership			Last Revised:	
Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Prerequisite Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Learning Target	Assessment Methods:	Instructional Activities & Assignments

Develop knowledge of ethics in media, and gather and analyze research and analyze agricultural issues		Explain the relevance of ethics in media. Evaluate the legitimacy of resources. Determine and utilize the methods of documentation for Qualify plagiarism Identify causes and effects of sensationalism Participate in informal presentations and discussions of issues proposed in the media. Define a topic Develop methods and skills to write an effective thesis Determine the purpose and relevance of research Define and identify audience for research Research the historical background of an issue Identify, cite, date, and cross reference sources. Conduct research interviews Summarize data Explain and analyze Agricultural Issues, including environmental, Agricultural technology, animal issues, Agricultural career issues, economy/trade, Agricultural policy, and food safety. Evaluate the impact of Agricultural Issues, including	Project Based Learning Formative Assessments: questioning, observations, check-list, self-evaluations Summative Assessments: unit test, research Rubrics	Evaluate current events in the media and complete a review of the event including bibliographical information. Present the event to class for informal discussions.

		the impact on the agricultural community, general community, and policies.		

Develop Leadership SKills including written and oral communication.		Explain and analyze Agricultural Issues, including environmental, Agricultural technology, animal issues, Agricultural career issues, economy/trade, Agricultural policy, and food safety. Evaluate the impact of Agricultural Issues, including the impact on the agricultural community, general community, and policies.	Project Based Learning Formative Assessments: questioning, observations, check-list, self-evaluations Summative Assessments: unit test, research Rubrics	Work cooperatively to research and develop team building activities and instructions/handouts to verbally present and teach to classmates the activity so they can perform it Research information relating to agriculture/natural resources to develop a working outline, including bibliographical information and present a formal presentation. Research information relating to agricultural and natural resource commodities and develop a research paper including bibliographical information and present a formal presentation. Deliver a well-developed demonstration presentation as well as appraise peer presentations.

Create Public Relations, advertising and marketing and utilize multimedia		Describe the characteristics needed to develop desirable personal, social skills, and team building skills. Describe the importance and process of developing better human relationships Explain group dynamics and conflict resolution. Identify the traits of effective leaders and participate in leadership training through involved participation in FFA. Discuss the importance and use of written communications in agriculture. Apply appropriate spelling and grammar when writing. Utilize planning and outline preparation in written communication. Create an appropriate page layout and design. Define communication and explain components and importance of the communication. Explain the meaning of listening and identifying important listening skills Compare and contrast verbal and nonverbal communication . Identify barriers to communication and explain ways of overcoming barriers. Formulate approaches to use in overcoming interference in the communication process.	Project Based Learning Formative Assessments: questioning, observations, check-list, self-evaluations Summative Assessments: unit test, research Rubrics	Prepare a communications plan for a community/FFA event. Utilize multimedia to communicate, market, or inform a target audience about an Agricultural subject/area

		Demonstrate proper grammar, vocabulary, and pronunciation in oral communications Distinguish types of public speeches. Demonstrate and evaluate the characteristics of a good public speaker Define the elements of a communication plan. Develop a promotion for an agribusiness company/organization. Create basic marketing tools for an agribusiness company / organization (i.e., business card, flyer, brochure) Design a display for an agribusiness company/organization. Develop a press release. Design an ad for print, radio, and television Approach and effectively communicate with a potential client. Effectively handle client objections and resistance Develop a video presentation. Discuss etiquette while preparing an email. Develop skills to create effective photography Construct and present a multimedia presentation using		

		PowerPoint or comparable software		
Prepare for Careers and Employment and analyze the SAE program		Describe professional dress and personal grooming. Prepare a written letter of application/cover letter Develop and utilize a resume Identify awards that may be earned as a result of the SAE program and complete award applications.	Project Based Learning Formative Assessments: questioning, observations, check-list, self-evaluations Summative Assessments: unit test, research Rubrics	Demonstrate the skills necessary to become employable in desired career pathway. Demonstrate an understanding of the process and value of analyzing SAE data by completing an FFA State Proficiency Award application.
The student will demonstrate competence in the application of principles and techniques for the development and management of agribusiness systems.		ABS.02 Utilize appropriate management planning principles in AFNR business enterprises. ABS.03 Utilize record keeping to accomplish AFNR business objectives while complying with laws and regulations. ABS.04 Apply generally accepted accounting principles and skills to manage cash budgets, credit budgets and credit for AFNR businesses.	Project Based Learning	Personal Record book

Floriculture Year At-A-Glance:

Quarter 1	Quarter 2
• Floral Industry • Identification of Floriculture Plants • Post-Harvest Handling of Floral Plants • Mechanics of Floral Design	• Principles of Floral Design • Types of Floral Design
Quarter 3	**Quarter 4**
• Types of Floral Design	• Floral Shop Operations

Floriculture			Last Revised:	
Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Prerequisite Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Learning Target	Assessment Methods:	Instructional Activities & Assignments

Describe the floristry industry.		Identify the structure of the floristry industry 2. Describe career opportunities in floristry	Project Based Learning Formative Assessments: questioning, observations, check-list, self-evaluations Summative Assessments: unit test, research Rubrics	Demonstrate an understanding of the floristry industry by exploring training and educational opportunities available to prospective industry practitioners and presenting their findings in a poster.
Identify floriculture plants		Describe the factors involved identifying plants 2. Identify plants and plant parts used in the floristry industry	Project Based Learning Formative Assessments: questioning, observations, check-list, self-evaluations Summative Assessments: unit test, research Rubrics	Demonstrate the ability to identify plants by gathering information and illustrations of various plants and assembling a catalog of those plants.
Describe post-harvesting handling techniques and the mechanics of floral design.		Demonstrate techniques for the processing of cut plant materials 3. Demonstrate the care of potted plants Identify and safely use tools and supplies 2. Construct bows using basic ribbon widths 3. Select and prepare appropriate containers 4. Perform basic wiring and taping techniques 5. Package flowers and arrangements for delivery	Project Based Learning Formative Assessments: questioning, observations, check-list, self-evaluations Summative Assessments: unit test, research Rubrics	Demonstrate an understanding of post-harvest handling parameters by developing procedures for treatment of potted plants and cut plant materials and presenting them in the form of care cards. Demonstrate an understanding of the nomenclature of floral design mechanics by associating terms with definitions, illustrations, and tools.

Describe the basic principles of floral design and the types of floral designs		Identify basic principles of floral arranging and elements of design 2. Identify design shapes Identify how floral designs are used 2. Construct flowers to wear 3. Construct a bud vase 4. Construct a one-sided arrangement 5. Construct a centerpiece 6. Construct an evergreen wreath 7. Construct a silk arrangement 8. Construct a dried arrangement 9. Construct a dish garden	Project Based Learning Formative Assessments: questioning, observations, check-list, self-evaluations Summative Assessments: unit test, research Rubrics	Demonstrate an understanding of the basic principles of floral arranging by studying, evaluating, and critiquing floral arrangements and presenting their findings in a written and oral report. Demonstrate an understanding of various floral designs by planning and producing floral arrangements for a themed display.
Describe floral shop operations.		Demonstrate a sales transaction 2. Deliver a floral arrangement 3. Calculate the price of floral products 4. Assist in completing an inventory 5. Create displays 6. Maintain the floral shop area 7. Prepare an advertisement	Project Based Learning Formative Assessments: questioning, observations, check-list, self-evaluations Summative Assessments: unit test, research Rubrics	Demonstrate an understanding of the marketing aspect of a floral shop operation by contributing their time and effort to the creation of an advertising message to promote the sale of floral produce.
The student will demonstrate competence in the application of principles and techniques for the development and management of agribusiness systems.		ABS.02 Utilize appropriate management planning principles in AFNR business enterprises. ABS.03 Utilize record keeping to accomplish AFNR business objectives while complying with laws and regulations. ABS.04 Apply generally accepted accounting principles and skills to manage cash budgets, credit budgets and credit for AFNR businesses.	Project Based Learning	Personal Record book

Food Science Year At-A-Glance:

Quarter 1	Quarter 2
• Principles of Food Preservation	• Food Processing
Quarter 3	**Quarter 4**
• The Biochemistry of Foods	• Food Selection and Consumer Health

Food Science			Last Revised:	
Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Prerequisite Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Learning Target	Assessment Methods:	Instructional Activities & Assignments

Define the principles of food preservation		Describe factors related to food preservation Describe factors that contribute to food deterioration	Project Based Learning Formative Assessments: questioning, observations, check-list, self-evaluations Summative Assessments: unit test, research Rubrics	Demonstrate an understanding of food preservation by researching food preservation techniques and presenting their findings to the class in an oral report.

Describe food processing.		Explain procedures used to process food safely Describe the complexity of development of food products Identify products produced from different grades of raw milk Summarize how dairy products are processed and packaged Compare egg processing techniques to egg products List the products and by-products from meat animals Describe the processing of meat animals Explain the relationship between quality grades, inspections, and brand names in the meat industry Identify the products of grain crops Explain the processing of grain crops Identify fruit, vegetable, and nut products and factors that determine quality Explain how fruits, vegetables, and nuts are processed	Project Based Learning Formative Assessments: questioning, observations, check-list, self-evaluations Summative Assessments: unit test, research Rubrics	Demonstrate an understanding of the food processing industry by creating and describing a food product, in outline form, that will appeal to today's consumers and designing the packaging materials to effectively market the product

Describe the biochemistry of foods		Identify the factors that affect food safety and quality Describe problems resulting from food deterioration Describe the nutritional properties of foods Describe how processing techniques influence the nutritional value of food Describe the role of biotechnology in the food industry	Project Based Learning Formative Assessments: questioning, observations, check-list, self-evaluations Summative Assessments: unit test, research Rubrics	Demonstrate an understanding of biochemistry of foods by creating a poster about a commodity, product, or application that has been created or made better by the influence of biochemistry and giving an oral report to the class based on their poster.
Describe food selection and consumer health.		Describe the factors that affect consumer choices of food Interpret a food label Compare the nutritional value of beverages Describe the relationship between diet and health	Project Based Learning Formative Assessments: questioning, observations, check-list, self-evaluations Summative Assessments: unit test, research Rubrics	Demonstrate an understanding of the nutritional facts on food labels and the nutritional requirements of a healthy diet by creating a chart where they will keep track of the foods they consume and writing a summary of their results
The student will demonstrate competence in the application of principles and techniques for the development and management of agribusiness systems.		ABS.02 Utilize appropriate management planning principles in AFNR business enterprises. ABS.03 Utilize record keeping to accomplish AFNR business objectives while complying with laws and regulations. ABS.04 Apply generally accepted accounting principles and skills to manage cash budgets, credit budgets and credit for AFNR businesses.	Project Based Learning	Personal Record book

FACS Priority Standard *(Quick Look)*	K	1	2	3	4	5	6	7	8	9	10	11	12
Middle School FACS 1													
1.2 Demonstrate transferable employability skills in school, community and workplace settings							I						
2.1 Demonstrate management of individual and family resources such as food, clothing, shelter, health care, recreation, transportation, time, and human capital							I						
FACS 1													
1.2 Demonstrate transferable employability skills in school, community and workplace settings								I	I				
2.1 Demonstrate management of individual and family resources such as food, clothing, shelter, health care, recreation, transportation, time, and human capital								I	I				
FACS 2													
1.2 Demonstrate transferable employability skills in school, community and workplace settings								I, R	I, R				

2.1 Demonstrate management of individual and family resources such as food, clothing, shelter, health care, recreation, transportation, time, and human capital								I, R	I, R				
FACS 3													
1.2 Demonstrate transferable employability skills in school, community and workplace settings									R				
2.1 Demonstrate management of individual and family resources such as food, clothing, shelter, health care, recreation, transportation, time, and human capital									R				
FACS 4													
1.2 Demonstrate transferable employability skills in school, community and workplace settings									R, M				
2.1 Demonstrate management of individual and family resources such as food, clothing, shelter, health care, recreation, transportation, time, and human capital									R, M				
Career and Family													
1.2 Demonstrate transferable employability skills in school, community and workplace settings										I	I	I	I
2.1 Demonstrate management of individual and family resources such as food, clothing, shelter, health care, recreation, transportation, time, and human capital										I	I	I	I

15.0 Evaluate the effects of parenting roles and responsibilities on strengthening the well-being of individuals and families										I	I	I	I
Advanced Child Development													
4.0 Integrate knowledge, skills, and practices required for careers in early childhood, education, and services												I, R, M	I,R,M
1.2 Demonstrate transferable and employability skills in school, community and workplace												R, M	R, M
Nutrition and Wellness													
8.5 Demonstrate professional food preparation methods and techniques for all menu categories to produce A variety of food products that meet customer needs											R	R	R
International and Specialty Cuisine													
8.5 Demonstrate professional food preparation methods and techniques for all menu categories to produce A variety of food products that meet customer needs											M	M	M
Students will apply the cooking skills necessary to prepare and serve designated food products in international and specialty cuisine.											I, R, M	I, R, M	I, R, M

I – Introduce R – Reinforce M – Mastery o – Optional for grade level

MS FCS Courses Year At-A-Glance: Pacing Guides

6th Grade FACS - Semester 2 - 3 Day Rotation	6th Grade FACS - Semester 2 - 3 Day Rotation

• Food Production - Nutrition and Wellness	• Apparel, Textiles, and Fashion
Semester - FACS 1	**Semester - FACS 2**
• Food Production - Kitchen Basics (Kitchen Utensils, Kitchen Terms, Measuring, Recipes, Safety and Sanitation) • Housing and Interior Design • Apparel, Textiles, and Fashion	• Food Production • Apparel, Textiles, and fashion • Personal Finance • Childcare
Semester - FACS 3	**Semester FACS 4**
• Entrepreneurship • Food Production • Apparel, Textiles, and Fashion	• Food Safety • Food Production • Apparel, Textiles, and Fashion

Middle School FACS			Last Revised (Date & Name): 1/7/19 - Bridgette	
Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Prerequisite Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Learning Target	Assessment Methods:	Instructional Activities & Assignments

1.2 Demonstrate transferable employability skills in school, community and workplace settings		1.2.3 Apply communication skills in school, community and workplace settings 1.2.4 Demonstrate teamwork skills in school, community and workplace settings 1.2.8 Demonstrate work ethics and professionalism	• Project Based Learning • Formative Assessments: questioning, observations, check-list, self-evaluations • Summative Assessments: unit test, research • Rubrics	**Entrepreneurship** Lesson Guide Shark Tank Great Food Truck Race **Housing and Interior Design** Housing Styles House Hunters 3D Bedroom Project **Childcare** **Growth and Development** **Egg Baby Project** **Apparel, Textiles and Fashion** Sewing Equipment Pillow Project **Food Production** MyPlate Global Foods Unit Plan **Food Safety** Knife Skills Recipes **Personal Finance** LIFE Project
2.1 Demonstrate management of individual and family resources such as food, clothing, shelter, health care, recreation, transportation, time, and human capital		3.3.2 Demonstrate components of a financial planning process that reflect the distinction between needs, wants, values, goals, and economic resources 8.2 Demonstrate food safety and sanitation procedures 11.3 Apply housing and interior design knowledge, skills and processes to meet specific design needs 12.3 Analyze strategies that promote growth and development across the lifespan 16.4 Demonstrate skills needed to produce, alter, or repair fashion, apparel, and textile products		

Career and Family Year At-A-Glance:

Quarter 1	Quarter 2
• You and Your World • Building Relationship Skills	• Relating to Family and Children • Clothing
Quarter 3	**Quarter 4**
• Clothing (cont.) • Food and Nutrition and Working in the Kitchen	• Housing and Human Needs • Exploring Careers

Career and Family			Last Revised (Date & Name): 1/7/19 - Veronica	
Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Prerequisite Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Learning Target	Assessment Methods:	Instructional Activities & Assignments

1.2 Demonstrate transferable employability skills in school, community and workplace settings		1.2.3 Apply communication skills in school, community and workplace settings 1.2.4 Demonstrate teamwork skills in school, community and workplace settings 1.2.8 Demonstrate work ethics and professionalism	• Project Based Learning • Formative Assessments: questioning, observations, check-list, self-evaluations	You and your world Self • Introduction (Bio Poem - Past, Present, Future - Similarities and Differences Bingo - You are Unique) • Needs, Values, Wants

2.1 Demonstrate management of individual and family resources such as food, clothing, shelter, health care, recreation, transportation, time, and human capital		3.3.2 Demonstrate components of a financial planning process that reflect the distinction between needs, wants, values, goals, and economic resources 8.2 Demonstrate food safety and sanitation procedures 11.3 Apply housing and interior design knowledge, skills and processes to meet specific design needs 12.3 Analyze strategies that promote growth and development across the lifespan 16.4 Demonstrate skills needed to produce, alter, or repair fashion, apparel, and textile products	• Summative Assessments: unit test, research	• Who Am I Peers • You and your peers • Peer pressure poster • Friendship Ad • Conflict Resolution with worksheet • Effective Communication with Backdrawing Family • Genogram • Family Structure • Family Life Cycle • Sibling Rivalry • Family Handbook Career and budgets • Careers Research or career exploration • Logo Part 1 • Logo Part 2 Food • MyPlate Interior Design • You and Your Home • Finding the elements and principles of design • Color wheel project • Decorate a room with blueprint symbols Babysitting Sewing project • Threading the machine and winding the bobbin • Sewing Machine Parts Clothing • Wardrobe Analysis • Wardrobe Inventory • Wardrobe cluster • Clothing that suits you

Child Development Year At-A-Glance:

Quarter 1	Quarter 2
• Self/Values/Stress • Relationships/Communication • Dating • Marriage	• Parenting/Infertility • Conception • Pregnancy • Labor
Quarter 3	**Quarter 4**
• Parenting Styles • Newborns • Birth Defects • Infants	• Toddlers • Child Abuse/Neglect • Preschool • Child Development Theorist • Lesson Plans • Intro into Child Development 2 (Early Childhood Ed)

Child Development			Last Revised (Date & Name): 1/7/19 - Veronica Barnes	
Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Prerequisite Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Learning Target	Assessment Methods:	Instructional Activities & Assignments

12.0 Analyze factors that influence human growth and development		12.1 Analyze principles of human growth and development across the lifespan 12.2 Analyze conditions that influence human growth and development 12.3 Analyze strategies that promote growth and development across the lifespan	• Project Based Learning • Formative Assessments: questioning, observations, check-list, self-evaluations	Self/Values/Stress • What defines you collage • Self-concept case studies Communication Relationships • Dating with situations

15.0 Evaluate the effects of parenting roles and responsibilities on strengthening the well-being of individuals and families	1.2 Demonstrate transferable employability skills in school, community and workplace settings 2.1 Demonstrate management of individual and family resources such as food, clothing, shelter, health care, recreation, transportation, time, and human capital	15.1 Analyze roles and responsibilities of parenting 15.2 Evaluate parenting practices that maximize human growth and development 15.4 Analyze physical and emotional factors related to beginning the parenting process	• Summative Assessments: unit test, research	Marriage Parenting/Infertility Conception • Parenting Bio-Poem • male/female diagrams Pregnancy Labor with Cervical Dilation Chart Parenting Styles Newborns • Name Analysis • Birth Defects Infants • Brochure • Baby Think It Over or Alternative Assignment Toddlers • Early Literacy Child Abuse/Neglect Preschool • Positive Guidance with worksheet • Daycare Design ○ Laws • Theorists Webquest or Theorist Research Rubric Lesson Plan Rubric Observations • Preschool Report Card • Physical Development • Emotional Development • Activity Center

Advanced Child Development Year At-A-Glance:

Career Education Curriculum

Quarter 1	Quarter 2
• Bulletin Boards • Arts and Crafts • Music and Movements	• Fine Motor: Snack • Letters • Numbers
Quarter 3	**Quarter 4**
• Science • Math	• NOCTI - TSA Testing • Gross Motor: Physical Activity • Indoor • Outdoor

Advanced Child Development			Last Revised (Date & Name): 1/7/19 - Veronica Barnes	
Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Prerequisite Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Learning Target	Assessment Methods:	Instructional Activities & Assignments

4.0 Integrate knowledge, skills, and practices required for careers in early childhood, education, and services	12.0 Analyze factors that influence human growth and development
	
	15.0 Evaluate the effects of parenting roles and responsibilities on strengthening the well-being of individuals and families
		4.2 Analyze developmentally appropriate practices to plan for early childhood, education, and services
		
		4.3 Demonstrate integration of curriculum and instruction to meet children's developmental needs and interests
		
		4.4 Demonstrate a safe and healthy learning environment for children
		
		4.5 Demonstrate techniques for positive collaborative relationships with children
		
		4.6 Demonstrate professional practices and standards related to working with children
			• Project Based Learning
			• Summative Assessments
				• Bulletin Boards Bulletin Board Rubric
				• Weekly Journals Blank Weekly Journal
				• Lessons Blank Lesson Plan Template
				  ○ School
				  ■ Literacy and Reading
				  ■ Math
				  ■ Science
				  ○ Play
				  ○ Music and Movement
				  ○ Arts and Crafts
				• Time sheets Blank Time Sheets
				• Observations
				• Final Projects
				
				NOCTI Test
				• Human Resources article
				Resource
				• ISD Portfolio

1.2 Demonstrate transferable and employability skills in school, community and workplace		1.2.2 Demonstrate job seeking and job keeping skills 1.2.3 Apply communication skills in school, community, and workplace settings 1.2.8 Demonstrate work ethics and professionalism		

Nutrition and Wellness Year At-A-Glance:

Quarter 1	Quarter 2
• Nutrients • Kitchen Basics (Kitchen Utensils, Kitchen Terms, Measuring, Recipes, Safety and Sanitation)	• Eggs • Dairy Products • Meat/Protein • Cake Decorating
Quarter 3	**Quarter 4**
• Meal Planning • Knife Safety/Skills • Veggies • Fruits	• Grains • Catering • Culinary Careers

Nutrition and Wellness			Last Revised (Date & Name): 1/7/19 - Veronica Barnes	
Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Prerequisite Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Learning Target	Assessment Methods:	Instructional Activities & Assignments
8.5 Demonstrate professional food preparation methods and techniques for all menu categories to produce A variety of food products that meet customer needs	1.2 Demonstrate transferable employability skills in school, community and workplace settings 2.1 Demonstrate management of individual and family resources such as food, clothing, shelter, health care, recreation, transportation, time, and human capital	8.5.1 Demonstrate professional skills in safe handling of knives, tools and equipment 8.5.2 Demonstrate professional skill for a variety of cooking methods including roasting, broiling, smoking, grilling, sauteing, pan frying, deep frying, braising, stewing, poaching, steaming, and baking using professional equipment and current technologies 8.5.3 Utilize weights and measurement tools to demonstrate knowledge of portion control and proper scaling and measurement techniques	• Project Based Learning • Formative Assessments: questioning, observations, check-list, self-evaluations • Summative Assessments: unit test, research	Safety/Kitchen Basics • Kitchen Utensils • Basic Kitchen Terms • Safety and Sanitation • Measuring ○ Kitchen Math • Recipes Blank Lab Evaluation Sheet Food Affects Life Nutrients Poster/Fitness MyPlate Notes and Brochure Health Concerns

		8.5.4 Apply the fundamentals of time, temperature, and cooking methods of cooking, cooling, reheating, and holding a variety of foods		• Foodborne Illness Dairy • Dairy Products chart • Cheese taste test Meat/Protein • Eggs Notes/Image with Eggs Experiment and omelet lab Cake Decorating • Research • Rubric Veggies • Student Project Knife Safety/Skills Fruits • Taste Test • Poster Grains • Whole Grains • Yeast/Quick Breads ○ Gluten Experiment • Cakes/Cookies/Pies ○ Cookie Decorating Alternative Assignment ○ Pie crust recipe cake decorating rubric with cake decorating scavenger hunt and self-assessment Culinary Career Powerpoint and Research Meal Planning Meal Planning Project Rubric • Brownie Plating

				Catering • Create a Menu • Good Caterer Article Consumerism • Fad Diet • Brand Comparison

International and Speciality Cuisine Year At-A-Glance:

Quarter 1	Quarter 2
• Review basic food skills and safety • United States and Canada • Latin America	• Europe • Mediterranean Countries • Gingerbread
Quarter 3	**Quarter 4**
• Fish and Shellfish • Middle East and Africa	• Asia • Kitchen Design

International and Speciality Cuisine			Last Revised (Date & Name): 1/7/19 - Veronica Barnes	
Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Prerequisite Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Learning Target	Assessment Methods:	Instructional Activities & Assignments

8.5 Demonstrate professional food preparation methods and techniques for all menu categories to produce A variety of food products that meet customer needs	8.5 Demonstrate professional food preparation methods and techniques for all menu categories to produce A variety of food products that meet customer needs	8.5.1 Demonstrate professional skills in safe handling of knives, tools and equipment 8.5.2 Demonstrate professional skill for a variety of cooking methods including roasting, broiling, smoking, grilling, sauteing, pan frying, deep frying, braising, stewing, poaching, steaming, and baking using professional equipment and current technologies 8.5.3 Utilize weights and measurement tools to demonstrate knowledge of portion control and proper scaling and measurement techniques 8.5.4 Apply the fundamentals of time, temperature, and cooking methods of cooking, cooling, reheating, and holding a variety of foods	• Project Based Learning • Formative Assessments: questioning, observations, check-list, self-evaluations • Summative Assessments: unit test, research	Basic Foods Skills and Safety and Sanitation Review • Measuring relay US and Canada with Test • United States Region Map • US Test whole or part 1 and part 2 • Canada Test Candies Salads, Casseroles, Soups, Breads Latin America • Mexico Test • Tapas menu • South America Study Guide and Test

Students will apply the cooking skills necessary to prepare and serve designated food products in international and specialty cuisine.				Europe • British Isles Test • Germany Notes help and Germany Test • France Test Mediterranean Countries • Italy notecards/study guide and test • Greece study guide and test/key Thanksgiving Food Research Host a Foreign Exchange Student with rubric Gingerbread Rubric • Research Fish and Shellfish and test Middle East and Africa • Test Asia • Research project • International market Blank Lab Evaluation Sheet

Industrial Tech Priority Standard ***(Quick Look)***	K	1	2	3	4	5	6	7	8	9	10	11	12
MS Industrial Tech. I													

1. Safety Safely operate machines and tools in an industrial environment.								I, M	I, M				
2.Machine and Tool Processes Successfully use tools and machines to produce products from materials using appropriate safe methods.								I, M	I, M				
3. Workplace Skills Work with other students in a simulated workplace environment to achieve goals with deadlines and realistic limitations on time and materials.								I, M	I, M				
4. Fundamentals of Construction Successfully design and assemble to produce products from materials using intro level cabinetry and metal cutting and welding technology								I, M	I, M				
5. Finishing Successfully select and apply proper finish using appropriate application								I, M	I, M				
6. Creative Problem Solving Students will develop and understanding of the role of troubleshooting, research and development, invention and innovation, and experimentation in problem solving.								I, M	I, M				
MS Industrial Tech. II													
1. Safety Safely operate machines and tools in an industrial environment.								I, R, M	I, R, M				
2.Machine and Tool Processes								I, R, M	I, R, M				

Successfully use tools and machines to produce products from materials using appropriate safe methods.													
3. Workplace Skills Work with other students in a simulated workplace environment to achieve goals with deadlines and realistic limitations on time and materials.								I, R, M	I, R, M				
4. Fundamentals of Construction Successfully design and assemble to produce products from materials using intro level cabinetry and metal cutting and welding technology								I, R, M	I, R, M				
5. Finishing Successfully select and apply proper finish using appropriate application								I, R, M	I, R, M				
6. Creative Problem Solving Students will develop and understanding of the role of troubleshooting, research and development, invention and innovation, and experimentation in problem solving.								I, R, M	I, R, M				
HS Material Processing I													
1. Safety Safely operate machines and tools in an industrial environment.										I,M	I,M	I,M	I,M
2.Fundamental Machine and Tool Processes Successfully use tools and equipment to produce products from materials using desired methods.										I,M	I,M	I,M	I,M

3. Fundamentals of Construction Workplace Skills Work with other students in a simulated workplace environment to achieve goals with deadlines and realistic limitations on time and materials.										I,M	I,M	I,M	I,M
4. Fundamental Finishing Use										I,M	I,M	I,M	I,M
5. Workplace Skills Work with other students in a simulated workplace environment to achieve goals with deadlines and realistic limitations on time and materials.										I,M	I,M	I,M	I,M
HS Material Processing II													
1. Safety Safely operate machines and tools in an industrial environment.											R,M	R,M	R,M
2.Advanced Machine and Tool Processes Successfully use precision tools and equipment to produce products from materials using advanced finish cabinetry and metal cutting and welding technology											R,M	R,M	R,M
3. Workplace Skills Work with other students in a simulated workplace environment to achieve goals with deadlines and realistic limitations on time and materials.											R,M	R,M	R,M
4. Maintenance and Planning											I,M	I,M	I,M

Repair and perform regular preventative maintenance on shop equipment.													

I – Introduce *R – Reinforce* *M – Mastery* *o – Optional for grade level*

CTE/Engineering and Technology Material Processing I & II 7-8 Grade Year At-A-Glance:

Quarter 1	Quarter 2
• Safety and basic shop practices • Individual written and practical testing and certification on all major wood shop tools • Standard and Metric measurement	• Woods project based learning
Quarter 3	**Quarter 4**
• Safety and basic shop practices • Individual written and practical testing and certification on all major wood and metal shop tools • Standard and Metric measurement	• Wood and Metal project based learning

CTE/Engineering and Technology Education/Material Processing/7-8			Last Revised (Date & Name): 1/7/2019 Aaron Avery	
Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Prerequisite Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Learning Target	Assessment Methods:	Instructional Activities & Assignments

1. Safety	*3.2National Standards For Technical Literacy NSTL* *Standards For Technical Literacy*	1. Safely operate machines and tools in an industrial environment.	1.Written and practical safety tests Material Processing Tests	1.Lecture, demonstration, and supervised work.
2. Machine and Tool Processes	*7.19 National Standards For Technical Literacy NSTL* *Standards For Technical Literacy*	2.Successfully use tools and equipment to produce products from materials using desired methods.	2.Assessment of physical project based learning projects.	2.Challenging projects that specifically use targeted machines and skills in the course of production.
3. Workplace Skills	*6.11 National Standards For Technical Literacy NSTL* *Standards For Technical Literacy*	3.Work with other students in a simulated workplace environment to achieve goals with deadlines and realistic limitations on time and materials.	3.Assessment of physical projects and daily formative assessment of workplace skills.	3.Complete projects in a work environment using machines and methods similar to those used in industry with real world time and material constraints.
4. Fundamentals of Construction	*7.20 National Standards For Technical Literacy NSTL* *Standards For Technical Literacy*	3.Successfully use tools and equipment to produce products from materials using desired methods.	3.Assessment of physical project based learning projects.	4.Challenging projects that specifically use targeted machines and skills in the course of production.
5. Finishing	*7.19 National Standards For Technical Literacy NSTL* *Standards For Technical Literacy*	4.Successfully use tools and equipment to produce products from materials using desired methods.	5.Assessment of physical project based learning projects.	5.Challenging projects that specifically use targeted machines and skills in the course of production.

6. Creative Problem Solving	*5.10 National Standards For Technical Literacy NSTL* *Standards For Technical Literacy*	6. Successfully troubleshoot, research and development, invention and innovation, and experimentation in problem solving.	6..Assessment of physical project based learning projects.	6. Challenging projects that require problem solving

CTE/Engineering and Technology Material Processing I Year At-A-Glance:

Quarter 1	Quarter 2
• Safety and basic shop practices • Individual written and practical testing and certification on all major wood shop tool.	• Woods project based learning • Intro to CNC based controls
Quarter 3	**Quarter 4**
• Complete Woods unit • Intro to metals • Begin Individual written and practical testing and certification on metal shop tools.	• Continue Individual written and practical testing and certification on metal shop tools. • Basic machine work • Intro to Precision Measurement • Intro to Welding

CTE/Engineering and Technology Education/Material Processing I/9-12			Last Revised (Date & Name): Chris Adams 8/29/2018	
Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Assessment Methods:	Instructional Activities & Assignments

Career Education Curriculum

1. Safety MP1 Safety SBG	*National Standards For Technical Literacy NSTL* *Standards For Technical Literacy*	1. Safely operate machines and tools in an industrial environment.	1.1.Written Safety Tests KNHS Equipment Safety Tests 1.2Practical Safety Testing and certification KNHS Equipment Certifications	1.Lecture, demonstration, and supervised work.
2. Machine and Tool Processes MP1 MTP SBG	*National Standards For Technical Literacy NSTL* *Standards For Technical Literacy*	2.Successfully use tools and equipment to produce products from materials using desired methods.	2.1.Practical Testing and certification KNHS Equipment Certifications 2.2.Assessment of physical project based learning projects.	2.Challenging projects that specifically use targeted machines and skills in the course of production.
3. Fundamentals of Construction MP1 FC SBG	*National Standards For Technical Literacy NSTL* *Standards For Technical Literacy*	3.Successfully use tools and equipment to produce products from materials using desired methods.	3.Assessment of physical project based learning projects.	3.Challenging projects that specifically use targeted machines and skills in the course of production.
4. Workplace Skills MP1 WP SBG	*National Standards For Technical Literacy NSTL* *Standards For Technical Literacy*	4.Work with other students in a simulated workplace environment to achieve goals with deadlines and realistic limitations on time and materials.	4.Assessment of physical projects and daily formative assessment of workplace skills.	4.Complete projects in a work environment using machines and methods similar to those used in industry with real world time and material constraints.
5. Finishing MP1 FIN SBG	*National Standards For Technical Literacy NSTL* *Standards For Technical Literacy*	4.Successfully use tools and equipment to produce products from materials using desired methods.	5.Assessment of physical project based learning projects.	5.Challenging projects that specifically use targeted machines and skills in the course of production.

CTE/Engineering and Technology Material Processing II Year At-A-Glance:

Quarter 1	Quarter 2
• Cabinetry • Wood CNC G-code creation • Project Based Learning Chest Project	• Metals Design Cut Weld • Plasma CNC G-code Creations • Project Based Learning Can Crusher Project
Quarter 3	**Quarter 4**
• Machine Tool • Precision Measurement • Metal Lathe Precision Machining • Project Based Learning Hammer Project	• Equipment Maintenance and Repair • Design and Build Original or Service Project

CTE/Engineering and Technology Education/Material Processing II/9-12			Last Revised (Date & Name): Chris Adams 12/1/2018	
Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Assessment Methods:	Instructional Activities & Assignments

Career Education Curriculum

1. Safety MP2 Safety SBG	National Standards For Technical Literacy NSTL Standards For Technical Literacy	1. Safely operate machines and tools in an industrial environment.	1.1.Written Safety Test KNHS Equipment Safety Tests 1.2Practical Safety Testing and certification KNHS Equipment Certifications	1.Lecture, demonstration, and supervised work.
2. Advanced Machine and Tool Processes MP2 AMTP SBG	National Standards For Technical Literacy NSTL Standards For Technical Literacy	2.Successfully use tools and equipment to produce products from materials using desired methods.	2.1.Practical Testing and certification KNHS Equipment Certifications 2.2.Assessment of physical project based learning projects.	2.Challenging projects that specifically use targeted machines and skills in the course of production.
3. Workplace Skills MP2 WS SBG	National Standards For Technical Literacy NSTL Standards For Technical Literacy	3.Work with other students in a simulated workplace environment to achieve goals with deadlines and realistic limitations on time and materials.	3.Assessment of physical projects and daily formative assessment of workplace skills.	3.Complete projects in a work environment using machines and methods similar to those used in industry with real world time and material constraints.
4. Maintenance and Planning MP2 M&P SBG	*National Standards For Technical Literacy NSTL* *Standards For Technical Literacy*	4.Work with other students in a simulated workplace environment to maintain and improve school shop and overall school.	4.Assessment of maintenance and planning.	4.Maintain equipment through periodic and corrective maintenance procedures in accordance with manufacturer's instructions and good shop practice.

CTE/Engineering and Technology Introduction To Engineering Design Year At-A-Glance:

Quarter 1	Quarter 2
• Unit 1 Design Process 10 days • Unit 2 Technical Sketching and Drawing Overview 25 Days • Unit 3 Measurement and Statistics 5 Days	• Unit 3 Measurement and Statistics 15 Days • Unit 4 Modeling Skills 10 Days • Unit 5 Geometry of Design 15 Days
Quarter 3	**Quarter 4**
• Unit 5 Geometry of Design 5 Days • Unit 6 Reverse Engineering 15 Days • Unit 7 Documentation 10 Days	• Unit 7 Documentation 10 Days • Unit 8 Advanced Computer Modeling 10 Days • Unit 9 Design Team Overview 2 days • Unit 10 Design Challenges Any Remaining Days

CTE/Engineering and Technology Education/Introduction to Engineering Design/9-12			Last Revised (Date & Name): Chris Adams 12/1/2018	
Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Assessment Methods:	Instructional Activities & Assignments

Unit 1 Design Process	PLTW U1T1 Standards Alignment Organized by Lesson Standards Alignment Organized by Standard National Standards For Technical Literacy Standard NSTL	Apply the design process to a system, component, or process to meet desired needs with realistic constraints.	Project based and summative assessment.	PLTW Activities 1.1-1.9 Unit 1 Test
Unit 1 Design Process	PLTW U1T2 Standards Alignment Organized by Lesson Standards Alignment Organized by Standard National Standards For Technical Literacy Standard NSTL	Understand the role and impact of engineering solutions within a global, economic, environmental, and societal Context	Project based and summative assessment.	PLTW Activities 1.1-1.9 Unit 1 Test
Unit 2 Technical Sketching and Drawing	PLTW U2T1 Standards Alignment Organized by Lesson Standards Alignment Organized by Standard National Standards For Technical Literacy Standard NSTL	Use the accepted practices and techniques of engineering graphics and technical drawings to clearly convey information and ideas	Project based and summative assessment.	PLTW Activities 2.1-2.5 Unit 2 Test
Unit 2 Technical Sketching and Drawing	PLTW U2T2 Standards Alignment Organized by Lesson Standards Alignment Organized by Standard National Standards For Technical Literacy Standard NSTL	Proficiently apply spatial skills to conceptualize and understand objects in 3d space and visualize and understand mental rotation of objects and how they appear in different positions	Project based and summative assessment.	PLTW Activities 2.1-2.5 Unit 2 Test

Unit 3 Measurement and statistics	PLTW U3T1 Standards Alignment Organized by Lesson Standards Alignment Organized by Standard National Standards For Technical Literacy Standard NSTL	Analyze and interpret data in order to make valid and reliable claims or determine optimal design solutions.	Project based and summative assessment.	PLTW Activities 3.1-3.9 Unit 3 Test
Unit 3 Measurement and statistics	PLTW U3T2 Standards Alignment Organized by Lesson Standards Alignment Organized by Standard National Standards For Technical Literacy Standard NSTL	Apply mathematics and computational thinking (specifically ratios, rates, percentages, and unit conversions) to solve problems involving quantities and units (including compound or derived units)	Project based and summative assessment.	PLTW Activities 3.1-3.9 Unit 3 Test
Unit 4 Modeling Skills	PLTW U4T1 Standards Alignment Organized by Lesson Standards Alignment Organized by Standard National Standards For Technical Literacy Standard NSTL	Use the engineering design process to design a system, component, or process to meet desired needs within realistic constraints	Project based and summative assessment.	PLTW Activities 4.1-4.6 Project Designs and CADD Drawings
Unit 4 Modeling Skills	PLTW U4T2 Standards Alignment Organized by Lesson Standards Alignment Organized by Standard National Standards For Technical Literacy Standard NSTL	Create and use mathematical/computer models or simulations to represent design solutions or support explanations	Project based and summative assessment.	PLTW Activities 4.1-4.6 Project Designs and CADD Drawings

Unit 4 Modeling Skills	PLTW U4T3 Standards Alignment Organized by Lesson Standards Alignment Organized by Standard National Standards For Technical Literacy Standard NSTL	Develop and use multiple types of models to analyze systems, components or processes and/or to solve problems	Project based and summative assessment.	PLTW Activities 4.1-4.6 Project Designs and CADD Drawings
Unit 4 Modeling Skills	PLTW U4T4 Standards Alignment Organized by Lesson Standards Alignment Organized by Standard National Standards For Technical Literacy Standard NSTL	Develop and use multiple types of models to analyze systems, components or processes and/or to solve problems	Project based and summative assessment.	PLTW Activities 4.1-4.6 Project Designs and CADD Drawings
Unit 5 – Geometry of Design	PLTW U5T1 Standards Alignment Organized by Lesson Standards Alignment Organized by Standard National Standards For Technical Literacy Standard NSTL	Use current engineering tools (ex., spreadsheet software, CADD software) to create models, solve problems and perform engineering design.	Project based and summative assessment.	PLTW Activities 5.1-5.8 Project Designs and CADD Drawings
Unit 5 – Geometry of Design	PLTW U5T2 Standards Alignment Organized by Lesson Standards Alignment Organized by Standard National Standards For Technical Literacy Standard NSTL	Apply geometric concepts and methods to describe and model objects and solve problems.	Project based and summative assessment.	PLTW Activities 5.1-5.8 Project Designs and CADD Drawings

Unit 6 – Reverse Engineering	PLTW U6T1 Standards Alignment Organized by Lesson Standards Alignment Organized by Standard National Standards For Technical Literacy Standard NSTL	Communicate technical information or ideas in multiple formats including orally, graphically, textually and mathematically, as appropriate.	Project based and summative assessment.	PLTW Activities 6.1-6.5 Project Designs and CADD Drawings of T9 Reverse Engineering Project
Unit 6 – Reverse Engineering	PLTW U6T1 Standards Alignment Organized by Lesson Standards Alignment Organized by Standard National Standards For Technical Literacy Standard NSTL	Plan and conduct an investigation or test a design to gather data to document a design, build and revise models, and/or solve a problem.	Project based and summative assessment.	PLTW Activities 6.1-6.5 Project Designs and CADD Drawings of T9 Reverse Engineering Project
Unit 7 – Documentation	PLTW U7T1 Standards Alignment Organized by Lesson Standards Alignment Organized by Standard National Standards For Technical Literacy Standard NSTL	Define a design problem that involves criteria and constraints that may include social, technical and/or environmental considerations.	Project based and summative assessment.	PLTW Activities 7.1-7.7 Project Designs and CADD Drawings Apollo 13 Design Brief
Unit 7 – Documentation	PLTW U7T2 Standards Alignment Organized by Lesson Standards Alignment Organized by Standard National Standards For Technical Literacy Standard NSTL	Use the engineering design process to design a system, component, or process to meet desired needs within realistic constraints.	Project based and summative assessment.	PLTW Activities 7.1-7.7 Project Designs and CADD Drawings Apollo 13 Design Brief

Unit 7 – Documentation	PLTW U7T3 Standards Alignment Organized by Lesson Standards Alignment Organized by Standard National Standards For Technical Literacy Standard NSTL	Communicate technical information or ideas in multiple formats including orally, graphically, textually and mathematically, as appropriate.	Project based and summative assessment.	PLTW Activities 7.1-7.7 Project Designs and CADD Drawings Apollo 13 Design Brief
Unit 8 – Advanced Computer Modeling	PLTW U8T1 Standards Alignment Organized by Lesson Standards Alignment Organized by Standard National Standards For Technical Literacy Standard NSTL	Use mathematical and computational thinking to represent phenomenon and solve engineering problems.	Project based and summative assessment.	PLTW Activity 8.2 Project Designs and CADD Drawings for Automata Design Challenge
Unit 8 – Advanced Computer Modeling	PLTW U8T2 Standards Alignment Organized by Lesson Standards Alignment Organized by Standard National Standards For Technical Literacy Standard NSTL	Use current engineering tools (ex., spreadsheet software, CADD software) to create models, solve problems and perform engineering design.	Project based and summative assessment.	PLTW Activity 8.2 Project Designs and CADD Drawings for Automata Design Challenge
Unit 8 – Advanced Computer Modeling	PLTW U8T3 Standards Alignment Organized by Lesson Standards Alignment Organized by Standard National Standards For Technical Literacy Standard NSTL	Communicate technical information or ideas in multiple formats including orally, graphically, textually and mathematically, as appropriate.	Project based and summative assessment.	PLTW Activity 8.2 Project Designs and CADD Drawings for Automata Design Challenge

Unit 9 – Design Team	PLTW U9T1 Standards Alignment Organized by Lesson Standards Alignment Organized by Standard National Standards For Technical Literacy Standard NSTL	Communicate effectively using virtual/remote communication tools.	Project based and summative assessment.	PLTW Activities 9.1 -9.3 Project Designs and CADD Drawings for Project 9.3a Virtual Design Challenge
Unit 9 – Design Team	PLTW U9T2 Standards Alignment Organized by Lesson Standards Alignment Organized by Standard National Standards For Technical Literacy Standard NSTL	Function effectively on a multidisciplinary team.	Project based and summative assessment.	PLTW Activities 9.1 -9.3 Project Designs and CADD Drawings for Project 9.3a Virtual Design Challenge
Unit 9 – Design Team	PLTW U9T3 Standards Alignment Organized by Lesson Standards Alignment Organized by Standard National Standards For Technical Literacy Standard NSTL	Perform research to gather information, define problems, provide evidence, and/or justify decisions in the process of solving a problem.	Project based and summative assessment.	PLTW Activities 9.1 -9.3 Project Designs and CADD Drawings for Project 9.3a Virtual Design Challenge
Unit 9 – Design Team	PLTW U9T4 Standards Alignment Organized by Lesson Standards Alignment Organized by Standard National Standards For Technical Literacy Standard NSTL	Apply the design process to design a system, component, or process to meet desired needs within realistic constraints	Project based and summative assessment.	PLTW Activities 9.1 -9.3 Project Designs and CADD Drawings for Project 9.3a Virtual Design Challenge

Unit 9 – Design Team	PLTW U9T5 Standards Alignment Organized by Lesson Standards Alignment Organized by Standard National Standards For Technical Literacy Standard NSTL	Understand professional and ethical responsibilities related to engineering.	Project based and summative assessment.	PLTW Activities 9.1 -9.3 Project Designs and CADD Drawings for Project 9.3a Virtual Design Challenge
Unit 9 – Design Team	PLTW U9T6 *Standards Alignment Organized by Lesson* *Standards Alignment Organized by Standard* National Standards For Technical Literacy Standard NSTL	Communicate technical information or ideas in multiple formats including orally, graphically, textually and mathematically, as appropriate.	Project based and summative assessment.	PLTW Activities 9.1 -9.3 Project Designs and CADD Drawings for Project 9.3a Virtual Design Challenge

CTE/Engineering and Technology Principles of Engineering Design Year At-A-Glance:

Quarter 1	Quarter 2
• Unit 1.1 Mechanisms 20 Days • Unit 1.2 Energy And Power 20 Days	• Unit 1.2 Energy And Power 10 Days • Unit 1.3 Energy Applications 15 Days • Unit 3.1 Machine Control 15 Days
Quarter 3	**Quarter 4**
• Unit 3.1 Machine Control 15 Days • Unit 3.2 Fluid Power Machine Control 15 Days • Unit 3.3 Design Problem Control Systems 10 Days	• Unit 2.1 Statics 10 days • Unit 2.2 Materials 2 days • Unit 2.3 Materials Testing 10 days • Unit 4.1 Statistics 2 days • Unit 4.2 Kinematics 5 days

CTE/Engineering and Technology Education/Principles of Engineering /9-12			Last Revised (Date & Name): Chris Adams 12/1/2018	
Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Assessment Methods:	Instructional Activities & Assignments

Energy and Power Unit 1.1 Mechanisms	PLTW POE U1.1T1 Standards Alignment Organized by Lesson Standards Alignment Organized by Standard National Standards For Technical Literacy Standard NSTL	T1 – Explore career opportunities in engineering and interview a professional engineer to gain insight related to pathway to engineering and current state of engineering.	Project based and summative assessment.	PLTW Activities 1.1-1.4 Unit 1.1 Test
Energy and Power Unit 1.1 Mechanisms	PLTW POE U1.1T2 Standards Alignment Organized by Lesson Standards Alignment Organized by Standard National Standards For Technical Literacy Standard NSTL	T2 – Apply the engineering design process to design a system using mechanisms to redirect energy within a system by manipulating force, speed, and distance.	Project based and summative assessment.	PLTW Activities 1.1-1.4 Unit 1.1 Test
Energy and Power Unit 1.1 Mechanisms	PLTW POE U1.1T3 Standards Alignment Organized by Lesson Standards Alignment Organized by Standard National Standards For Technical Literacy Standard NSTL	T3 – Determine the mechanical advantage of a simple machine or system of simple machines and characterize the work done by and power of a mechanical system.	Project based and summative assessment.	PLTW Activities 1.1-1.4 Unit 1.1 Test
Condensing/ Converting Format From PLTW	Condensing/ Converting Format From PLTW Curriculum	Condensing/ Converting Format From PLTW Curriculum	Condensing/ Converting Format From PLTW	Condensing/ Converting Format From PLTW Curriculum

CTE/Engineering and Technology Engineering Design & Development Year At-A-Glance:

Quarterly Project
• See quarterly project timeline here: EDD Quarterly Timeline

CTE/Engineering and Technology Education/Engineering Design and Development /12			Last Revised (Date & Name): Chris Adams 1/31/2018	
Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Assessment Methods:	Instructional Activities & Assignments
Condensing/ Converting Format From PLTW Curriculum	Condensing/ Converting Format From PLTW Curriculum	Condensing/ Converting Format From PLTW Curriculum	Condensing/ Converting Format From PLTW Curriculum	Condensing/ Converting Format From PLTW Curriculum

Career Education Curriculum

AFJROTC Priority Standard ***(Quick Look)***	K	1	2	3	4	5	6	7	8	9	10	11	12
AS 100 Leadership Education													
1. Analyze the heritage, organization, and tradition of service programs.													
2. Analyze the benefits of positive personal behavior.													
3. Evaluate healthy living through physical activity and good nutrition.													
4. Apply safe, drug-free decisions.													
5. Analyze the importance of citizenship in the United States.													
AS 100 Aerospace Science													
1.Know the historical facts and impacts of the early attempts to fly.													
2. Know the major historical contributors to the development of flight.													
3. Know the contributions of the U.S. Air Force to modern aviation history.													
4. Know the key events of space exploration history.													
AS 200 Leadership Education													
1. Apply the key factors of effective communications													

2. Know the ways in which personal awareness affects individual actions.													
3. Know the key elements of building and encouraging effective teams.													
4. Apply the key behaviors for becoming a credible and competent leader.													
AS 200 Aerospace Science													
1. Analyze the elements of flight.													
2. Evaluate how atmospheric conditions affect flight.													
3. Evaluate how flight affects the human body.													
4. Analyze flight navigation and the purpose of aerial navigation aids.													
AS 300 Leadership Education													
1. Analyze the different ways of pursuing a career path.													
2. Analyze the requirements for applying to a college or university.													
3. Analyze positive and negative impact of college life in meeting career goals.													
4. Evaluate the essential process for successfully pursuing desired career or job.													
5. Evaluate the benefits of working for the Federal Government.													
6. Create a plan for successful career development.													
AS 300 Aerospace Science													

1. Know the history of astronomy and the specific characteristics of the Earth, Moon, solar system, and the planets.													
2. Comprehend the big picture of space exploration, including the history of spaceflight, organizations doing work in space, and the overall space environment.													
3. Comprehend the importance of entering space, characteristics of manned and unmanned spaceflight, and how humans are affected during spaceflight.													
4. Comprehend the key concepts for getting from the surface of the Earth into Earth orbit and to other planets and back again.													
5. Comprehend how spacecraft, rockets, and launch vehicles are designed and built.													
6. Comprehend the latest advances in space technology													
AS 400 Aerospace Science													
1. Apply theories and techniques learned in previous leadership courses.													
2. Analyze how to develop leadership and management competency through participation.													
3. Analyze strengthened organizational skills through active incorporation.													
4. Evaluate how to develop confidence in ability by exercising decision-making skills.													
5. Evaluate Air Force standards, discipline, and conduct.													

Career Education Curriculum

I – Introduce *R – Reinforce* *M – Mastery* *o – Optional for grade level*

Leadership Education 100 Year At-A-Glance:

Quarter 1	Quarter 2
• Organization of the JROTC • Customs and Courtesies for Junior ROTC • 30 step Drill Sequence	• Attitude, Discipline, and Respect • Ethics, Values, and Morals • 30 step Drill Sequence
Quarter 3	**Quarter 4**
• Managing Stress • First Aid • Making Positive Decisions	• Medicines and Drugs • Alcohol • Tobacco

Lesson Plans	Resources	Test banks
LE 100 Lesson plans	PBL,rubric,standards	Assessments

Aerospace Science 100 Year At-A-Glance:

Quarter 1	Quarter 2
• Early Days of Flight • Wright Brothers • Pioneers of Flight	• World War I • Commercial Flight • WWII
Quarter 3	**Quarter 4**
• US Air Force is Born	• Modern Air Force

AS 100/9-12/Aerospace Science: A Journey Into Aviation History	Last Revised (Date & Name): Dec 2018 Randy Johnson/Mark Talley
AS 100 Lesson Plans	Test Banks Assessments

Leadership Education 200 Year At-A-Glance:

Quarter 1	Quarter 2
• Learning to communicate • Learning to listen • Critical thinking • Drill	• Writing Effectively • Speaking Effectively • Drill
Quarter 3	**Quarter 4**
• What it takes to be a leader • Group and team dynamics • Followership	• Leadership Characteristics • Leadership style • Drill

AS 200/9-12/Leadership Education 200: Communication, Awareness, and Leadership	Last Revised (Date & Name): Dec 2018 Randy
Lesson Plans	Assessments

Aerospace Science 200 Year At-A-Glance:

Quarter 1	Quarter 2
• Principles of Flight • Physics of Flight	• Purpose/Function of airplane parts • Aircraft Motion Control • Flight Power
Quarter 3	**Quarter 4**
• Atmosphere • Weather Elements • Aviation Weather	• Human Physiology and air flight • Navigation

AS 200/9-12/Aerospace Science 200: The Science of Flight: A Gateway to New Horizons		Last Revised (Date & Name): Dec 2018 Randy Johnson
Lesson Plans	PBL, Rubric, Standards	Assessments

Leadership Education 300 Year At-A-Glance:

Quarter 1	Quarter 2
• Researching Careers • Self Discovery • Drill	• Career Paths • Financing College • Career Skills
Quarter 3	**Quarter 4**
• Budget • Credit • Taxes	• Banking • College funding, scholarships • Drill

AS 300/9-12/Leadership Education 300: Life Skills & Career Opportunities	Last Revised (Date & Name): Dec 2018 Randy Johnson
Lesson Plans, PBL, Rubric, Standards	Assessments

Aerospace Science 300 Year At-A-Glance:

Quarter 1	Quarter 2
• History of Astronomy • Earth and Moon	• Sun and Solar System • Deep Space
Quarter 3	**Quarter 4**
• Europe • Middle East	• Africa • Asia

AS 300/9-12/Aerospace Science 300: Exploring Space: The High Frontier			Last Revised (Date & Name): Dec 2018 Randy Johnson	
Lesson Plans	Space As 300	PBL,Rubric,Standards	Space AS 300	Assessments
Lesson Plans	AS 220 Global Studies	PBL, Rubric, Standards	AS220 Global Studies	Assessments

Aerospace Science 400 Year At-A-Glance:

Quarter 1	Quarter 2
• Management Basics • Management Theories Cadet leadership	• Cadet leadership • Planning
Quarter 3	**Quarter 4**
• Group behavior • Work Teams	• Communicating • Interpersonal skills

AS 400/12/Aerospace Studies 400: Management of the Cadet Corps	Last Revised (Date & Name): Dec 2018 Randy Johnson	
Lesson Plans	Resources	Test banks
Lesson Plans	PBL, Rubric, Standards	Assessments

STEM Priority Standard *(Quick Look)*	K	1	2	3	4	5	6	7	8	9	10	11	12
STEM NSTL Standard 9. Students will develop an understanding of engineering design.													
A. The engineering design process includes identifying a problem, looking for ideas, developing solutions, and sharing solutions with others.	I	R	M										
B. Expressing ideas to others verbally and through sketches and models is an important part of the design process.	I	R	M										
C. The engineering design process involves defining a problem, generating ideas, selecting a solution, testing the solution(s), making the item, evaluating it, and presenting the results.				I	R	M							
D. When designing an object, it is important to be creative and consider all ideas.				I	R	M							
E. Models are used to communicate and test design ideas and processes.				I	R	M							
STEM NSTL Standard 10. Students will develop an understanding of the role of troubleshooting, research and development, invention and													

innovation, and experimentation in problem solving.													
A. Asking questions and making observations helps a person to figure out how things work.	I	R	M										
B. All products and systems are subject to failure. Many products and systems, however, can be fixed.	I	R	M										
C. Troubleshooting is a way of finding out why something does not work so that it can be fixed.				I	R	M							
D. Invention and innovation are creative ways to turn ideas into real things.				I	R	M							
E. The process of experimentation, which is common in science, can also be used to solve technological problems				I	R	M							
STEM NSTL Standard 11. Students will develop the abilities to apply the design process.													
A. Brainstorm people's needs and wants and pick some problems that can be solved through the design process.	I	R	M										
B. Build or construct an object using the design process.	I	R	M										
C. Investigate how things are made and how they can be improved.	I	R	M										
D. Identify and collect information about everyday problems that can be solved by technology, and generate ideas and requirements for solving a problem.				I	R	M							

E. The process of designing involves presenting some possible solutions in visual form and then selecting the best solution(s) from many.				I	R	M							
F. Test and evaluate the solutions for the design problem.				I	R	M							
G. Improve the design solutions.				I	R	M							

I – Introduce *R – Reinforce* *M – Mastery* *o – Optional for grade level*

STEM Year At-A-Glance:

Quarter 1	Quarter 2
• NSTL Standard 9	• NSTL Standard 10
Quarter 3	**Quarter 4**
• NSTL Standard 11	• Review All

STEM Teaching

Last Revised (Date & Name): May 2019 Ruth Adams and Catherine Plakorus

Priority Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Prerequisite Standards: (Based on Missouri Learning Standards / CLEs / GLEs)	Learning Target	Assessment Methods:	Instructional Activities & Assignments

NSTL Standard 9. Students will develop an understanding of engineering design.			Formative and summative assessments of projects.	Project Based learning using LEGO Robotics
NSTL Standard 10. Students will develop an understanding of the role of troubleshooting, research and development, invention and innovation, and experimentation in problem solving.			Formative and summative assessments of projects.	Project Based learning using LEGO Robotics
NSTL Standard 11. Students will develop the abilities to apply the design process.			Formative and summative assessments of projects.	Project Based learning using LEGO Robotics