Nebraska CTE

Food Science and Safety (2021-)

Investigate trends within the Food Science industry. AFNR.HS.18.1	**a** Identify food science career professions. AFNR.HS.18.1.A
	b Evaluate career opportunities matched to personal life skills, talents, career goals, and local industry trends within the food science industry. AFNR.HS.18.1.B
	c Develop an educational plan to successfully pursue a career in the food science industry. AFNR.HS.18.1.C
	d Compare and contrast food production companies and the products they produce. AFNR.HS.18.1.D
Assess the basic principles of proper nutrition, including the identification and evaluation of the six essential nutrients needed for good health. AFNR.HS.18.2	**a** Classify nutrients as either macro or micro. AFNR.HS.18.2.A
	b Identify the dietary roles of the six macronutrients. AFNR.HS.18.2.B
	c Develop dietary plans based on nutritional needs. AFNR.HS.18.2.C
Evaluate the chemistry of food. AFNR.HS.18.3	**a** Differentiate between simple and complex carbohydrates and their uses in food processing. AFNR.HS.18.3.A
	b Describe the functions of amino acids and proteins in food processing. AFNR.HS.18.3.B
	c Describe the uses of lipids in food processing. AFNR.HS.18.3.C
	d Identify the role of water in food processing. AFNR.HS.18.3.D
Evaluate the implications of microorganisms in food products on food processing and sto	**a** Distinguish between beneficial and harmful microorganisms and their roles in the creation or spoilage of food products. AFNR.HS.18.4.A
	b Identify the process of creating foods utilizing the fermentation process. AFNR.HS.18.4.B
	c nalyze conditions and factors that affect the growth of microorganisms within rocessing and storage facilities. AFNR.HS.18.4.C

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	d	Determine the differences between multicellular parasites, bacteria, yeasts, molds, and viruses. AFNR.HS.18.4.D
	e	Determine appropriate ways to control and prevent microbial growth in food products. AFNR.HS.18.4.E
	f	Investigate microorganisms that cause food-borne illness in humans and how to control or eliminate them. AFNR.HS.18.4.F
Assess the physics of food production. AFNR.HS.18.5	a	Describe the influence of water on food products. AFNR.HS.18.5.A
	b	Identify a food's viscosity/fluidity. AFNR.HS.18.5.B
	c	Classify foods based on their water activity. AFNR.HS.18.5.C
	d	Explain the difference between smoke point, flash point, and fire point when dealing with oils in processing foods. AFNR.HS.18.5.D
	e	Explain the science behind emulsions and their role in food processing. AFNR.HS.18.5.E
Evaluate principles and applications of food safety and sanitation. AFNR.HS.18.6	a	Identify steps in the proper implementation of Hazard Analysis and Critical Control Points (HACCP) and Preventative Controls for Human Food. AFNR.HS.18.6.A
	b	Differentiate between Sanitation Standard Operating Procedures (SSOPs) and Good Manufacturing Practices (GMPs) and identify the purposes of each. AFNR.HS.18.6.B
	c	Evaluate procedures and inspection standards for sanitation in the food processing industry. AFNR.HS.18.6.C
	d	Analyze state and federal laws and regulations governing food inspection standards. AFNR.HS.18.6.D