

Food Products and Technology (2021-)

Apply principles of science to food processing to provide a safe, wholesome, and nutritious food supply for consumers. [AFNR.HS.17.1](#)

- a** Identify steps to design a research project in food science using the scientific method. [AFNR.HS.17.1.A](#)
- b** Explain how the chemical and physical properties of foods influence nutritional value and eating quality. [AFNR.HS.17.1.B](#)
- c** Compare and contrast the nutritive value of food and food groups. [AFNR.HS.17.1.C](#)
- d** Distinguish the common food constituents (e.g., proteins, carbohydrates, fats, vitamins, minerals, and water). [AFNR.HS.17.1.D](#)
- e** Compare and contrast food constituents and their relative value to consumers (e.g., product taste, appearance, nutrition). [AFNR.HS.17.1.E](#)
- f** Describe the purpose of common food additives. [AFNR.HS.17.1.F](#)

Summarize harvesting, selection, and inspection techniques to obtain quality food products for processing. [AFNR.HS.17.2](#)

- a** Discuss factors that affect quality and yield grades of food products. [AFNR.HS.17.2.A](#)
- b** Summarize quality control inspections procedures for raw food products for processing. [AFNR.HS.17.2.B](#)
- c** Analyze accepted animal treatment and harvesting techniques. [AFNR.HS.17.2.C](#)
- d** Explain desirable and undesirable characteristics of both pre-mortem and post-mortem animals in relation to the production of food products. [AFNR.HS.17.2.D](#)
- e** Evaluate, grade, and classify food products. [AFNR.HS.17.2.E](#)

Synthesize the steps in processing and preserving food and food products for sale and distribution. [AFNR.HS.17.3](#)

- a** Analyze processing techniques to turn raw materials into consumer-ready products. [AFNR.HS.17.3.A](#)
- b** Evaluate foods prepared for the fresh-food market based on factors such as shelf life, shrinkage, appearance, and weight. [AFNR.HS.17.3.B](#)
- c** Identify steps in food preservation processing, using various methods and techniques. [AFNR.HS.17.3.C](#)

d Evaluate ready-to-use food products. [AFNR.HS.17.3.D](#)

e Analyze foods stored in varying conditions for quality, shelf life, and intended use. [AFNR.HS.17.3.E](#)

Determine and apply steps in the process of preparing food and food products for sale and distribution. [AFNR.HS.17.4](#)

a Identify the links between microbiology, chemistry, and physics in the development of a new food product. [AFNR.HS.17.4.A](#)

b Explain the required components of a food label. [AFNR.HS.17.4.B](#)

c Prepare and label foods according to the established standards of regulatory agencies. [AFNR.HS.17.4.C](#)

d Formulate and package food products using weights and measures. [AFNR.HS.17.4.D](#)

e Prepare appropriate labels for food products, including principle and information labels. [AFNR.HS.17.4.E](#)
