West Virginia CTE

Food Science Technology

Foundations of Agriculture, Food, and Natural Resources

1 **Demonstrate understanding of food products and processing (e.g., protein sources, food preservation).** 0111.1

1 Demonstrate knowledge of safe practices and procedures in food science and technology. 0111.1.1

2 Demonstrate knowledge of national food and health and safety guidelines. 0111.1.2

3 Demonstrate knowledge of Safe food handling and food borne diseases. 0111.1.3

4 Demonstrate knowledge of avenues for food contamination (biological, chemical, and physical). 0111.1.4

5 Demonstrate knowledge of food borne illness prevention. 0111.1.5

6 Demonstrate knowledge of use of a microscope. 0111.1.6

7 Apply the scientific method for the improvement of food processing safety. 0111.1.7

8 Identify, sketch, and compare various harmful food borne microorganisms. 0111.1.8

9 Identify, sketch, and compare various beneficial food microorganisms. 0111.1.9

10 Examine the role and conduct an experiment with food preservatives. 0111.1.10

11 Conduct experiments involving harmful food borne microorganisms. 0111.1.11

12 Demonstrate how proper food handling, storage, and processing controls microorganisms. 0111.1.12

13 Examine the role of pesticides, chemicals, and preservatives on foods. 0111.1.13

14 Track the flow of plant and animal products from production source to consumer and determine possible contamination points. 0111.1.14

15 Conduct a food safety assessment. 0111.1.15

16 Demonstrate proper handwashing procedures. 0111.1.16

17 Demonstrate knowledge of basic economics of food science technology. 0111.1.17

18 Demonstrate knowledge of American agriculture history. 0111.1.18

19 Demonstrate knowledge of value-added food processing. 0111.1.19

20 Demonstrate knowledge of food advertising and marketing. 0111.1.20

1 Demonstrate knowledge of agriculture commodities futures market. 0111.1.21

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22 Locate and map the major food producing areas of the world by products. 0111.1.22

23 Examine global supply and demand for agricultural products. 0111.1.23

24 Research major agriculture innovations throughout history. 0111.1.24

25 Chart West Virginia, US and global production figures of agricultural commodities and products. 0111.1.25

26 Identify and display raw agricultural commodities and their value-added products. 0111.1.26

27 Determine the costs of food product processing to the consumer. 0111.1.27

28 Examine present consumer food demands and project future demands. 0111.1.28

29 Create and display packaging for an agricultural product. 0111.1.29

30 Examine convenience food packaging. 0111.1.30

31 Examine and analyze marketing and advertising of agricultural products. 0111.1.31

32 Create advertising and marketing items for an agricultural product. 0111.1.32

33 Observe and research product displays, labeling and marketing promotion techniques used in retail and wholesale food sales. 0111.1.33

34 Demonstrate knowledge of basic food nutrition. 0111.1.34

35 Demonstrate knowledge of food processing methods. 0111.1.35

36 Demonstrate knowledge of food additives. 0111.1.36

37 Demonstrate knowledge of food labeling, packaging, and portioning. 0111.1.37

38 Demonstrate knowledge of agricultural industry standards and grading systems. 0111.1.38

39 Students will demonstrate knowledge of the use of biotechnology in agriculture and food production. 0111.1.39

40 Students will demonstrate knowledge of regulatory food agencies and issues. 0111.1.40

41 Analyze and discuss industry standards and grades for agricultural commodity products. 0111.1.41

42 Examine & discuss food labels and compare to the food nutrition pyramid. 0111.1.42

43 Conduct experiments to determine food contents and nutritional elements. 0111.1.43

44 Process butter, ice cream, and cheese. 0111.1.44

45 Properly process fruits, vegetables and meats through canning, freezing, dehydrating, aging, blanching, and curing. 0111.1.45

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6 Produce food products using biotechnology (root beer, yogurt, sauerkraut, pickles, etc.). 0111.1.46

47 Package processed agricultural products for sale and distribution. 0111.1.47

48 Participate in or explore the FFA Poultry, Meats, Livestock, Dairy Products and Food Science Career Development Events. 0111.1.48

49 Conduct sensory analysis experiments for smell, taste and texture of food and food additives and enhancers. 0111.1.49

50 Analyze food labels and identify food additives and enhancers. 0111.1.50

51 Examine guidelines for the home processing of vegetables and meats. 0111.1.51

52 Conduct food product sampling and consumer evaluation activities. 0111.1.52

53 Debate and discuss food regulatory issues and the use of synthetic foods. 0111.1.53

54 Conduct and present a food and agriculture awareness campaign in your local community. 0111.1.54

55 Examine the World Health Organization, USDA and other governmental agencies involved with the world's food supply. 0111.1.55

56 Demonstrate knowledge of Safe preparation and presentation of foods. 0111.1.56

57 Demonstrate knowledge of cultural and ethnic foods. 0111.1.57

58 Demonstrate knowledge of preparing a menu. 0111.1.58

59 Demonstrate knowledge of organic foods. 0111.1.59

60 Identify community restaurants and categorize types of foods served. 0111.1.60

61 Identify global and national specialty food and ethnic preferences. 0111.1.61

62 Survey students, parents, and grandparents concerning ethnic or cultural food habits. 0111.1.62

63 Prepare traditional, regional American food specialties and discuss the relationship between ethnic preferences and the development of niche markets. 0111.1.63

64 Construct a nutritionally sound menu and prepare a food budget for a meal. 0111.1.64

65 Identify characteristics of organic foods. 0111.1.65

66 Students will demonstrate knowledge of food science technology careers. 0111.1.66

67 Investigate the diversity of careers in the food science, dietetics, and nutrition industries. 0111.1.67

68 Conduct student interest inventories. 0111.1.68

69 Identify advanced training and post-secondary educational opportunities in food science technology. 0111.1.69

70 Examine labor market information. 0111.1.70

71 Request post-secondary information. 0111.1.71

2 Demonstrate leadership skills. 0111.1.72

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2 **Demonstrate knowledge of leadership development through FFA.** `0111.2`

1 Participate in FFA leadership opportunities offered at the local, state, and national level. `0111.2.1`

2 Participate in FFA intracurricular competitive opportunities at the local, state, and national level. `0111.2.2`

3 Participate in community service and career awareness activities at the local, state, and national level. `0111.2.3`