

Agriscience and Technology 8004 (2021)

Demonstrating Personal Qualities and Abilities

- 1 Demonstrate creativity and innovation. A&T 1.1
- 2 Demonstrate critical thinking and problem solving. A&T 1.2
- 3 Demonstrate initiative and self-direction. A&T 1.3
- 4 Demonstrate integrity. A&T 1.4
- 5 Demonstrate work ethic. A&T 1.5

Demonstrating Interpersonal Skills

- 6 Demonstrate conflict-resolution skills. A&T 2.6
- 7 Demonstrate listening and speaking skills. A&T 2.7
- 8 Demonstrate respect for diversity. A&T 2.8
- 9 Demonstrate customer service skills. A&T 2.9
- 10 Collaborate with team members. A&T 2.10

Demonstrating Professional Competencies

- 11 Demonstrate big-picture thinking. A&T 3.11
- 12 Demonstrate career- and life-management skills. A&T 3.12
- 13 Demonstrate continuous learning and adaptability. A&T 3.13
- 14 Manage time and resources. A&T 3.14
- 15 Demonstrate information-literacy skills. A&T 3.15
- 16 Demonstrate an understanding of information security. A&T 3.16
- 17 Maintain working knowledge of current information-technology (IT) systems. A&T 3.17
- 18 Demonstrate proficiency with technologies, tools, and machines common to a specific occupation. A&T 3.18
- 19 Apply mathematical skills to job-specific tasks. A&T 3.19

20 Demonstrate professionalism. A&T 3.20

21 Demonstrate reading and writing skills. A&T 3.21

22 Demonstrate workplace safety. A&T 3.22

Addressing Elements of Student Life

23 Identify the purposes and goals of the student organization. A&T 4.23

24 Explain the benefits and responsibilities of membership in the student organization as a student and in professional/civic organizations as an adult. A&T 4.24

25 Demonstrate leadership skills through participation in student organization activities, such as meetings, programs, and projects. A&T 4.25

26 Identify Internet safety issues and procedures for complying with acceptable use standards. A&T 4.26

Exploring Work-Based Learning

27 Identify the types of work-based learning (WBL) opportunities. A&T 5.27

28 (Optional) Reflect on lessons learned during the WBL experience. A&T 5.28

29 Explore career opportunities related to the WBL experience. A&T 5.29

30 (Optional) Participate in a WBL experience, when appropriate. A&T 5.30

31 Identify the role of supervised agricultural experiences (SAEs) in agricultural education. A&T 5.31

32 Participate in an SAE. A&T 5.32

Exploring Leadership Opportunities through FFA

33 Identify the benefits and responsibilities of FFA membership. A&T 5.33

34 Describe leadership characteristics and opportunities as they relate to agriculture and FFA. A&T 5.34

35 (Optional) Apply for an FFA degree and/or an agricultural proficiency award. A&T 5.35

Becoming Oriented to Agriscience Technology

36 Identify class rules, safety precautions, and procedures. A&T 6.36

37 Explore new and emerging technologies in agriculture and agriscience. A&T 6.37

38 Identify the components of an agricultural/agriscience research project. A&T 6.38

39 Identify safety procedures in performing experiments. A&T 6.39

40 Perform an agriculture/agriscience experiment. A&T 6.40

**Understanding Global
Agriculture**

41 Define terms related to trade. A&T 7.41

42 Explore global agriculture. A&T 7.42

43 Explain the relationship of global trade to Virginia agriculture. A&T 7.43

**Understading AFNR
Businesses**

44 Identify the significance of agribusiness in agriscience. A&T 8.44

45 Identify types of agribusiness. A&T 8.45

46 Identify risks inherent in agribusiness. A&T 8.46

47 Identify characteristics of an entrepreneur. A&T 8.47

48 Explore career opportunities related to agriculture, food, and natural resources (AFNR). A&T 8.48

**Understanding
Agricultural Mechanics**

49 Demonstrate safety practices. A&T 9.49

50 Demonstrate measuring skills. A&T 9.50

51 Interpret plans for constructing an agriculture project. A&T 9.51

52 Identify new and emerging equipment and tools in agriscience. A&T 9.52

53 Identify portable hand tools, portable power tools, equipment, and accessories. A&T 9.53

54 Demonstrate the use of hand tools, portable power tools, equipment, and accessories. A&T 9.54

55 Demonstrate woodworking skills. A&T 9.55

56 Explain the principles of electricity. A&T 9.56

57 Demonstrate basic electrical wiring skills. A&T 9.57

58 (Optional) Shape metal. A&T 9.58

59 (Optional) Explain the arc-welding process. A&T 9.59

60 (Optional) Operate arc-welding equipment. A&T 9.60

61 Explain the operating principles of small engines. A&T 9.61

**Exploring Animal
Science**

62 Categorize breeds of animals. A&T 10.62

63 Identify equipment used in the care of companion and/or livestock animals. A&T 10.63

64 Evaluate types of companion and/or livestock animal feed. A&T 10.64

65 Explore healthcare and maintenance practices for companion and/or livestock animals. A&T 10.65

Exploring Natural Resources

66 Identify the importance of natural resource management. A&T 11.66

67 (Optional) Determine the volume and value of timber. A&T 11.67

68 Identify Virginia trees as sawtimber, pulpwood, and/or ornamentals. A&T 11.68

69 (Optional) Explain soil fertility. A&T 11.69

70 Discuss the importance of water to agriculture. A&T 11.70

71 Analyze a water sample. A&T 11.71

Exploring Horticultural Sciences

72 Identify common garden, landscape, and interior plants. A&T 12.72

73 Describe integrated pest management. A&T 12.73

74 (Optional) Explore the principles of floral design. A&T 12.74

75 (Optional) Explore the principles of landscape design. A&T 12.75

76 (Optional) Identify common horticultural and landscape tools, equipment, technologies, and practices. A&T 12.76

Exploring Food Science

77 Explore the food industry as it relates to agriculture, agriscience, and agribusiness. A&T 13.77

78 Research foodborne illnesses. A&T 13.78

79 Describe methods of food processing and preservation. A&T 13.79

80 Explain food labels. A&T 13.80
