Virginia CTE

Veterinary Science 2 (8089)

Veterinary Science 2 (8089) VS2

A Demonstrating Personal Qualities and Abilities VS2.1

1. Demonstrate creativity and innovation. VS2.1.1
2. Demonstrate critical thinking and problem solving. VS2.1.2
3. Demonstrate initiative and self-direction. VS2.1.3
4. Demonstrate integrity. VS2.1.4
5. Demonstrate work ethic. VS2.1.5

B Demonstrating Interpersonal Skills VS2.2

6. Demonstrate conflict-resolution skills. VS2.2.6
7. Demonstrate listening and speaking skills. VS2.2.7
8. Demonstrate respect for diversity. VS2.2.8
9. Demonstrate customer service skills. VS2.2.9
10. Collaborate with team members. VS2.2.10

C Demonstrating Professional Competencies VS2.3

11. Demonstrate big-picture thinking. VS2.3.11
12. Demonstrate career- and life-management skills. VS2.3.12
13. Demonstrate continuous learning and adaptability. VS2.3.13
14. Manage time and resources. VS2.3.14
15. Demonstrate information-literacy skills. VS2.3.15
16. Demonstrate an understanding of information security. VS2.3.16
17. Maintain working knowledge of current information-technology (IT) systems. VS2.3.17
18. Demonstrate proficiency with technologies, tools, and machines common to a specific occupation. VS2.3.18
19. Apply mathematical skills to job-specific tasks. VS2.3.19
20. Demonstrate professionalism. VS2.3.20
21. Demonstrate reading and writing skills. VS2.3.21
22. Demonstrate workplace safety. VS2.3.22

D Examining All Aspects of an Industry VS2.4

23 Examine aspects of planning within an industry/organization. VS2.4.23

24 Examine aspects of management within an industry/organization. VS2.4.24

25 Examine aspects of financial responsibility within an industry/organization. VS2.4.25

26 Examine technical and production skills required of workers within an industry/organization. VS2.4.26

27 Examine principles of technology that underlie an industry/organization. VS2.4.27

28 Examine labor issues related to an industry/organization. VS2.4.28

29 Examine community issues related to an industry/organization. VS2.4.29

30 Examine health, safety, and environmental issues related to an industry/organization. VS2.4.30

E Addressing Elements of Student Life VS2.5

31 Identify the purposes and goals of the student organization. VS2.5.31

32 Explain the benefits and responsibilities of membership in the student organization as a student and in professional/civic organizations as an adult. VS2.5.32

33 Demonstrate leadership skills through participation in student organization activities, such as meetings, programs, and projects. VS2.5.33

34 Identify Internet safety issues and procedures for complying with acceptable use standards. VS2.5.34

F Exploring Work-Based Learning VS2.6

35 Identify the types of work-based learning (WBL) opportunities. VS2.6.35

36 Reflect on lessons learned during the WBL experience. VS2.6.36

37 Explore career opportunities related to the WBL experience. VS2.6.37

38 Participate in a WBL experience, when appropriate. VS2.6.38

G Exploring Leadership Opportunities through FFA VS2.7

39 Identify the role of supervised agricultural experiences (SAEs) in agricultural education. VS2.7.39

40 Participate in an SAE. VS2.7.40

41 Identify the benefits and responsibilities of FFA membership. VS2.7.41

42 Describe leadership characteristics and opportunities as they relate to agriculture and FFA. VS2.7.42

43 Apply for an FFA degree and/or an agricultural proficiency award. VS2.7.43

H Handling Exotic Animals VS2.8

44 Explain husbandry of exotic animals. VS2.8.44

45 Describe how to lift and carry common exotic animals. VS2.8.45

46 Describe methods of moving nonaggressive common exotic animals into and out of cages or enclosures. VS2.8.46

47 Describe nutritional needs of, and feeding procedures for, exotic animals. VS2.8.47

48 Describe restraint procedures to facilitate veterinary examination of common exotic animals. VS2.8.48

49 Explain how to perform a partial water change and filter change on an aquarium. VS2.8.49

I Understanding Laboratory Procedures VS2.9

50 Explain precautionary safety measures and their importance in a work environment for veterinary staff, as well as the standards designated by OSHA. VS2.9.50

51 Explain the importance of performing and reporting all laboratory procedures with complete accuracy. VS2.9.51

52 Demonstrate the management of laboratory samples. VS2.9.52

53 Perform the procedure for preparing and staining blood films and cytologies. VS2.9.53

54 Perform a urinalysis. VS2.9.54

55 Describe common abnormalities seen in blood films, cytologies, and urinalysis. VS2.9.55

J Demonstrating Hospital Procedures VS2.10

56 Identify veterinary instruments and equipment and their uses. VS2.10.56

57 Demonstrate methods for cleaning, disinfecting, and preparing surgical instruments. VS2.10.57

58 Describe restraint procedures to facilitate veterinary examination of animals. VS2.10.58

59 Demonstrate bandaging, splinting, and removal methods. VS2.10.59

60 Demonstrate method for applying a Robert Jones (RJ) bandage. VS2.10.60

61 Identify needle gauge sizes for animals, syringe types, and their uses. VS2.10.61

62 Demonstrate use of syringes. VS2.10.62

63 Explain dental care for animals. VS2.10.63

64 Explore spaying and neutering options. VS2.10.64

65 Demonstrate preparation of a patient for surgery. VS2.10.65

66 Demonstrate opening a sterile surgery pack. VS2.10.66

67 Prepare a surgical pack for sterilization. VS2.10.67

68 Demonstrate surgical site preparation, using required PPE. VS2.10.68

69 Demonstrate suture removal. VS2.10.69

70 Demonstrate administering an oral tablet or capsule. VS2.10.70

K Understand Disease and Disease Prevention VS2.11

71 Explain the concept of disease. VS2.11.71

72 Describe the characteristics of disease-producing agents. VS2.11.72

73 Explain common animal diseases and their treatments. VS2.11.73

74 Describe the concept of immunity. VS2.11.74

75 Explain basic vaccine concepts. VS2.11.75

76 Identify common animal diseases that can be prevented by vaccination. VS2.11.76

77 Describe the factors involved in vaccination schedules. VS2.11.77

78 Explain concepts of animal quarantine and isolation. VS2.11.78

79 Describe common diseases and their clinical signs in companion animals. VS2.11.79

80 Describe treatments and preventive measures for common contagious diseases. VS2.11.80

L Understanding Parasitology VS2.12

81 Explain concepts of parasitology. VS2.12.81

82 Identify parasites that commonly affect animals. VS2.12.82

83 Explain the life cycle of parasites and its relationship to parasitic infestation, detection, and treatment. VS2.12.83

84 Describe the clinical signs and symptoms of common parasitic infestations. VS2.12.84

85 Demonstrate standard diagnostic procedures for determining the presence of parasites. VS2.12.85

86 Describe preventive measures and common treatments for parasitic infestation. VS2.12.86

M Understanding Veterinary Pharmacology VS2.13

87 Explain the concept of pharmacology. VS2.13.87

88 Describe regulatory agencies and professional organizations that focus on pharmacology used in the animal industry. VS2.13.88

89 Describe the categories of commonly used veterinary medications. VS2.13.89

90 Explain the schedules of controlled substances. VS2.13.90

91 Describe routes of medication administration. VS2.13.91

92 Describe factors that affect dose determination. VS2.13.92

93 Calculate dosages for weight-based medications. VS2.13.93

94 Interpret information on medication labels. VS2.13.94

95 Explain the importance of avoiding specific drug combinations. VS2.13.95

96 Demonstrate administration of oral and topical medications. VS2.13.96

97 Demonstrate administration of aural medications. VS2.13.97

98 Demonstrate administration of ophthalmic medications. VS2.13.98

99 Demonstrate filling a syringe for injection. VS2.13.99

100 Demonstrate administration of an intramuscular injection. VS2.13.100

101 Demonstrate administration of a subcutaneous injection. VS2.13.101

102 Demonstrate how to prepare and dispense medications that a client will administer at home. VS2.13.102

N Performing Mathematical Operations (Posology) VS2.14

103 Complete basic four-function operations with whole numbers, fractions, and decimals. VS2.14.103

104 Identify basic units of the commonly used systems of measurement. VS2.14.104

105 Perform conversions between common systems of measurement. VS2.14.105

106 Measure liquids. VS2.14.106

107 Dilute liquids, following label directions. VS2.14.107

108 Calculate amounts for dilutions. VS2.14.108

109 Solve word problems associated with veterinary medicine. VS2.14.109

O Exploring First Aid on Animals VS2.15

110 Explain the concept of first aid. VS2.15.110

111 Describe the components of an animal first-aid kit and the uses of each. VS2.15.111

112 Identify common situations and conditions requiring first aid. VS2.15.112

113 Describe how to prioritize common emergencies. VS2.15.113

114 Identify local resources for animal care. VS2.15.114

P Maintaining Professional and Ethical Standards VS2.16

115 Explain the relationship between animal welfare and the animal rights movement. VS2.16.115

116 Explain mental demands and personal coping mechanisms of various animal-care professionals. VS2.16.116

117 Describe ethical standards for veterinary practice. VS2.16.117

Q Performing Office Functions VS2.17

118 Explain the layout of the veterinary facility and rationale for the design. VS2.17.118

119 Describe use of current veterinary-specific computer software. VS2.17.119

120 Check client in and out. VS2.17.120

121 Maintain patient identification. VS2.17.121

122 Describe how to handle client inquiries about products or services. VS2.17.122

R Exploring Emerging Technologies in Veterinary Sciences VS2.18

123 Identify current and emerging technologies and advances in veterinary science. VS2.18.123

124 Explain the concept of biotechnology as it relates to veterinary science. VS2.18.124

S Understanding Genetics and Breeding VS2.19

125 Explain the relationship among genes, chromosomes, and deoxyribonucleic acid (DNA). VS2.18.125

126 Explain the formation of gametes and zygotes and their relationship to inherited traits. VS2.18.126

127 Describe the use of genetics in selective breeding. VS2.18.127

128 Compare outcrossing/mixed breeding, line breeding, and inbreeding. VS2.18.128

129 Describe breeding cycles. VS2.18.129

130 Analyze the ethical aspects of breeding. VS2.19.130

T Working with Wildlife VS2.20

131 Identify wildlife species common to the locale. VS2.20.131

132 Locate a wildlife rehabilitator for a given species. VS2.20.132

133 Describe provision of interim care to injured or orphaned wildlife. VS2.20.133

134 Explain legal issues affecting the care and handling of wildlife. VS2.20.134