

Class: BSAA Animal

Instructor: Jennifer Banda

Unit Plan- Animal Anatomy

Standards:

National Agriculture, Food, and Natural Resource Curriculum Standards

AS.02.02. Performance Indicator: Apply principles of comparative anatomy and physiology to uses within various animal systems.

AS.02.02.01.b. Compare and contrast animal cells, tissues, organs and body systems.

AS.02.02.01.c. Explain how the components and systems of animal anatomy and physiology relate to the production and use of animals.

AS.02.02.04.a. Describe the properties, locations, functions and types of animal tissues.

AS.02.02.05.a. Describe the properties, locations, functions and types of animal organs.

AS.02.02.06.a. Describe the functions of the animal body systems and system components.

What are the desired learning results of this unit?	Standards:
Students will acquire a working understanding of...(Attach standards)(Student Friendly)	
Explain the meaning of anatomy and physiology.	AS.02.02.
Describe how the animal body is organized in terms of cells, tissues, organs, and organ systems.	AS.02.02.01.b.
Examine the four basic tissue types.	AS.02.02.04.a.
List and briefly describe the major organ systems found in vertebrate animals.	AS.02.02.05.a. AS.02.02.06.a.

Describe the importance of understanding the anatomy and physiology of animals.	AS.02.02.01.c.
Dissect a chicken wing.	AS.02.02.01.b.

What essential question(s) will anchor students to learning?

What makes up an animal body?
What is the role of tissues in the animal body?
How do the parts of animals relate to other animals and even human anatomy?

What skills are needed to achieve desired results (nuts and bolts teaching)?

- Basic background on the anatomy of animals.
- Ability to draw conclusions on how the animal systems relate and interact.

What is acceptable evidence to show desired results?

Performance Task(s) & Product(s)

- Anatomy Quiz
- Organ Systems Quiz
- Chicken Wing Dissection Lab

Key Criteria for use in evaluating work:

- Anatomy Quiz
 - Students will complete a quiz on anatomy and physiology. They should correctly answer each question.
- Organ Systems Quiz
 - Students will complete a quiz on the organ systems of animals. They should correctly answer each question.
- Chicken Wing Dissection Lab
 - Students will complete a Lab report, including:
 - A description of how a chicken wing is like a human arm, using the terms muscle, skin, fat, ligaments, tendons, and bones.
 - Labeling a picture of the bones and muscles in a chicken wing that are similar to that of the human

Other Evidence

“Question of the Day” at beginning of each class

Handouts to be used for note taking templates and as study guides.

Unit Test

Unit Plan- Animal Digestion and Reproduction**Standards:**

National Agriculture, Food, and Natural Resources Curriculum Standards

AS.02.02. Performance Indicator: Apply principles of comparative anatomy and physiology to uses within various animal systems.

AS.02.02.06.b. Compare and contrast body systems and system adaptations between animal species.

AS.04.01. Performance Indicator: Formulate feed rations to provide for the nutritional needs of animals.

AS.04.01.01.a. Compare and contrast common types of feedstuffs and the roles they play in the diets of animals.

AS.04.01.02.a. Explain the importance of a balanced ration for animals.

AS.05.01. Performance Indicator: Evaluate the male and female reproductive systems in selecting animals.

AS.05.01.01.a. Explain the male and female reproductive organs of the major animal species.

AS.05.01.01.b. Describe the functions of major organs in the male and female reproductive systems.

AS.05.01.01.c. Select breeding animals based on characteristics of the reproductive organs.

AS.05.02. Performance Indicator: Evaluate animals for breeding readiness and soundness.

AS.05.02.01.a. Explain how age, size, life cycle, maturity level and health status affect the reproductive efficiency of male and female animals.

AS.05.02.01.b. Summarize factors that lead to reproductive maturity.

What are the desired learning results of this unit?	Standards:
Students will acquire a working understanding of...(Attach standards)(Student Friendly)	
Identify and describe the importance of essential nutrients in an animal's diet.	AS.04.01.02.a.
Differentiate the purposes of feed and types of feedstuffs.	AS.04.01.01.a.
Compare and contrast the digestive systems of animals.	AS.02.02.06.b.
Examine the parts of an egg and chicken's reproductive systems.	AS.05.01.01.a. AS.05.01.01.b AS.05.01.01.c
Examine the embryonic development of chickens.	AS.05.02.01.a. AS.05.02.01.b
Incubate chicken eggs and monitor their development.	

What essential question(s) will anchor students to learning?

What are the essential nutrients that animals need?
How do the essential nutrients of an animal relate to the essential nutrients of humans?
How can types of feed be combined to create a balanced and nutritional feed for animals?
How do the digestive systems of animals relate to what they eat?
How do chickens reproduce?
How does a chick develop in an egg?
What factors need to be considered with incubating chicken eggs?

What skills are needed to achieve desired results (nuts and bolts teaching)?

- Background understanding of the essential nutrients for human health.

What is acceptable evidence to show desired results?

Performance Task(s) & Product(s)

- A. Students will complete a quiz on animal nutrition and feedstuffs.
- B. Students will choose one type of animal digestive system and construct a 3D model of that system. They will also be required to answer questions on the system.
- C. Students will dissect a chicken egg.
- D. Students will properly monitor the incubation of chicken eggs.
- E. Students will properly monitor the incubation of chicken
- F. Students will complete a Chicken Embryology Quiz.

Key Criteria for use in evaluating work:

- A. Animal Nutrition and Feedstuffs Quiz
 - They should answer questions completely and correctly.
 - Students should also correctly identify and categorize feedstuffs.
- B. 3D Digestive System Project
 - 3D model is accurate to the type of system they chose.
 - Student identifies animals that have that system.
 - Student lists common food the animal eats.
 - Student accurately labels the system
- C. Chicken Egg Dissection
 - Properly identify and label each part of the egg
 - Correctly answer conclusion questions
 - Complete lab report.
- D. Chicken Egg Incubation
 - Students monitor levels of the incubator daily
 - Students check progress of eggs weekly
 - Complete report at end of incubation
- E. Chicken Embryology Quiz
 - They should answer questions completely and correctly.
 - Students should correctly label any diagrams.

Other Evidence

“Question of the Day” at beginning of each class

Handouts to be used for note taking templates and as study guides.

Unit Test

Unit Plan- Genetics

Standards:

National Agriculture, Food, and Natural Resources Curriculum Standards

AS.02.02. Performance Indicator: Apply principles of comparative anatomy and physiology to uses within various animal systems.

AS.02.02.02.a. Diagram a typical animal cell and identify the organelles.

AS.02.02.02.b. Describe the functions of animal cell structures.

AS.02.02.03.a. Describe the basic functions of animal cells in growth and reproduction.

AS.02.02.03.b. Detail the processes of meiosis and mitosis in animal growth, development, health and reproduction.

AS.02.02.03.c. Explain the application of the processes of meiosis and mitosis to animal growth, development, health and reproduction

BS.02.05. Performance Indicator: Perform microbiology, molecular biology, enzymology and immunology procedures.

BS.02.05.02.a. Explain the structures of DNA and RNA and how genotype influences phenotype.

BS.02.05.02.b. Explain the molecular basis for heredity and the tools and techniques used in DNA and RNA manipulations.

BS.02.05.02.c. Analyze factors that influence gene expression.

What are the desired learning results of this unit?	Standards:
Students will acquire a working understanding of...(Attach standards)(Student Friendly)	
• Examine the roles of cells.	AS.02.02.02.b.
• Differentiate the types of cells.	AS.02.02.02.a
• Describe how cells divide and pass on genetic material.	AS.02.02.03.b.
• Examine the components of DNA.	BS.02.05.02.a.
• Explain the processes of translation and transcription.	BS.02.05.02.b.
• Explain the principles of dominance and incomplete dominance.	AS.02.02.03.c

• Use the Punnett square to predict the genotypes and phenotypes of offspring.	AS.02.02.03.c BS.02.05.02.c.
--	---------------------------------

What essential question(s) will anchor students to learning?

What is the role of cells in the animal body?
How do cells differ in function?
How are cells divided to pass on genetic material to offspring?
How is DNA made within a cell?
How are genes passed on?
What factors affect the expression of certain genes?

What skills are needed to achieve desired results (nuts and bolts teaching)?

- Background knowledge that animals are composed of cells.
- Different types of cells perform different tasks necessary for the survival of an animal or animal species.
- Sex cells must combine in order to produce new generations of offspring

What is acceptable evidence to show desired results?

Performance Task(s) & Product(s)

- Students will complete a cell quiz.
- Students will complete a mitosis and meiosis graphic organizer.
- Students will complete a DNA quiz.
- Students will complete a series of Punnett Squares and genetic probability problems.

Key Criteria for use in evaluating work:

- Cell Quiz
 - They should answer questions completely and correctly and label any diagrams
- Mitosis/Meiosis Graphic Organizer
 - Students fill out the graphic organizer with a description of each step of mitosis and meiosis.
 - Students provide a picture of each step of mitosis and meiosis.

C. DNA Quiz ○ They should answer questions completely and correctly and label any diagrams. D. Punnett Square/Genetic Probability Problems. ○ Accurately fill out the Punnett square. ○ Show the correct representation of the probability of each offspring in the cross.
<u>Other Evidence</u> “Question of the Day” at beginning of each class Handouts to be used for note taking templates and as study guides. Unit Test

Course: Veterinary Technology

Length: Semester

Units	Standards
Unit A: Personal Safety and Animal Handling <u>Lessons:</u> OSHA Hazards in the Workplace Handling and Restraint <u>Assessments:</u> OSHA Standards Quiz Hand-Washing Practicum Safe Animal Handling Practicum Knot-Tying Practicum Lesson Quizzes Bi-Monthly Bell-ringer Quizzes Unit Test	<u>AFNR:</u> AS.02.01.02.a. AS.02.02.01.b AS.07.01.01.b CRP.01.01.01.a. CRP.01.01.02.a. CRP.01.01.02.c CRP.06.02.01.a. CS.01.01.01.c CS.03.01.02.a CS.03.04.01.a CS.03.04.02.a CS.03.04.03.a. CS.06.03.01.a <u>Math Content::</u> CCSS.MATH.CONTENT. 5.MD.A. 1 <u>NGSS:</u> MS-LS1-5, MS.KS1-8

Unit C: Issues in the Animal Industry <i>Lessons:</i> Animal Rights vs. Animal Welfare Human-Animal Bond Euthanasia <i>Assessments:</i> Animal Rights/Welfare Organization Research Chart Pet Insurance Research, Discussion, and Interview Grief Techniques Dealing with Grief Pamphlet Lesson Quizzes Bi-Monthly Bell-ringer Quizzes Unit Test	<u><i>AFNR:</i></u> AS.02.01.01.a. AS.02.01.01.c. AS.02.01.03.a. AS.02.02.02.b. AS.02.02.02.c. CS.01.01.01c. CRP.09.02.02.c. CRP.12.01.02.b. <u><i>ELA:</i></u> CCSS.ELA-LITERACY.C CRA.W. 2d. CCSS.ELA-LITERACY.C CRA.RI.7. CCSS.ELA-LITERACY.C CRA.W. 9. CCSS.ELA-LITERACY.C CRA.SL.4. CCSS.ELA-LITERACY.C CRA.SL.1d. <u><i>Math:</i></u> 5.NF.6
Unit D: Veterinary Terminology <i>Assessment:</i> Term Matching Quiz Bi-Monthly Bell-ringer Quizzes Unit Test	
Unit E: Care and Management of Species--Lessons E.2.2 <i>Lessons:</i> Small Animal Management and Tools <i>Assessments:</i> Small Animal Tools and Equipment Chart Small Habitat "Is this the Pet for you?" Brochure Bi-Monthly Bell-ringer Quizzes Unit Test	<u><i>AFNR:</i></u> AFNR AS.02.01.02.a AFNR.AS.05.01.01.a AFNR.AS.07.01.01.b <u><i>English:</i></u> CCSS.ELA-LITERACY.W HST.9- 10.2.a
Unit W: Hospital Procedures <i>Lessons</i> W.1 Management Practices W.2 Treatment Methods W.3 Surgical Nursing	<u><i>AFNR</i></u> AFNR AS.02.02.01.a AS.02.02.01.b AS.06.02.03.c AS.07.01.01.a.

Assessments: Disinfectant/Aseptic Research WS Preventing Nosocomial Disease Cleaning a Hospital: Aseptic Techniques Wounds Come in All Shapes and Sizes Crossword Puzzle Common Errors and Client Education WS Bandage Application Lab Fluid Calculations WS Shot Lab Surgical Instrument Bingo Surgical Instruments Evaluation Research on Sutures Activity Suture Lab Labeling Teeth WS Anesthesia Machine WS Dental Case Study Dental Medical Records Lesson Quizzes Bi-Monthly Bell-ringer Quizzes Unit Test	AS.07.01.01.b. AS.07.01.01.c. AS.07.01.03.a AS. 07.01.05.a. CRP.09.02.02.c CRP.12.01.02.b. CS.01.01.01c. <u>English</u> CCSS.ELA-LITERACY.R ST.9-10.3 CCSS.ELA-LITERACY.R ST.9-10.4 CCSS.ELS-LITERACY.R ST.11-12.4 CCSS.ELA-LITERACY.C CRA.RI.7. CCSS.ELA-LITERACY.C CRA.W. 2d. <u>Math</u> CCSS.MATH.CONTENT. 6.RP.3c.
Unit V: Physical Exams Lessons: V.1 Physical Exam Accuracy and the SOAP System V.1.1 Signalment and History: Penny and the Pork V.1.2 The SOAP System: Problem-Oriented Medical Records V.2 Vital Signs and Performing the Physical Exam V.2.1 Vital Signs V.2.2 The Case of Jethro V.2.3 Ocular Examination of an Animal Assessments: Singlement and History Scenarios SOAP Game Edsel's Medical Record Activity Vital Signs Lab Jethro Case Study Ocular Exam of an Animal Lesson Quizzes Bi-Monthly Bell-ringer Quizzes Unit Test	<u>AFNR:</u> AFNR.AS.01.02.03.a AFNR AS.06.03.01.a AFNR.AS.06.03.02.a AFNR.AS.07.01.01.b AFNR.AS.07.01.02.a AFNR.AS.07.01.02.b AFNR.CS.03.04.02.a AFNR.CS.03.04.02.b AFNR.CS.03.04.03.b AFNR.CRP.12.01.01.a AFNR CRP.12.02.01.b <u>English:</u> CCSS.ELA-LITERACY.R ST.9.10.2 CCSS.ELA-LITERACY. RST.9.10.3 CCSS.ELA-LITERACY.R ST.11.12.4 CCSS.ELA-LITERACY.R ST.11.12.2 CCSS.ELA-LITERACY.R

	ST. 11.12.7
Unit X: Office Management <i>Lessons:</i> X.1 Careers and Success in the Workplace X.2 Client Veterinarian Relationships and Client Education X.3 Waiting Room Management X.4 Administrative Duties <i>Assessments:</i> Veterinary Team/Responsibility Matching Intra/Interpersonal Skills WS Review Game Veterinary Team: Who Am I? Veterinary Team: Career Pathways Veterinarian/Client Relationship Venn Diagram Veterinarian/Client Relationship Case Study Veterinarian/Client Advice Column Project Waiting Room Skits Waiting Room Management Case Studies Setting up a Medical Chart Filing Medical Charts Master Problem List Record Scheduling Appointments WS Lesson Quizzes Bi-Monthly Bell-ringer Quizzes Unit Test	<u>AFNR:</u> AFNR.CRP.01.01.01a AFNR.CRP.01.01.02.a AFNR.CRP.01.03.02.a AFNR.CRP.04.01.02.a AFNR.CRP.04.02.02.a AFNR.CRP.04.03.01.b AFNR.CRP.05.01.02.a AFNR.CRP.06.02.01.a AFNR.07.01.01.a AFNR.CRP.08.02.01.a AFNR.CRP.09.02.01.a AFNR.CRP.09.02.02.c AFNR.CRP.09.03.02.a AFNR.CRP.10.04.02.a AFNR.CRP.12.02.02.a AFNR.CS.01.01.01.c <u>English</u> CCSS.ELA-LITERACY.C CRA.W.2d x CCSS.ELA-LITERACY.C CRA.W.4
Unit Y: Laws and Ethics <i>Lessons:</i> Y.1 Owner Issues - Y.1.1 There are legal and ethical issues involved in animal ownership. - Y.1.2 Methods of animal breeding can be controversial. - Y.1.3 Many controversial management practices are utilized to raise and care for livestock animals. Y.2 Veterinary Issues - Y.2.1 Veterinarians are bound by ethical standards and legal laws. - Y.2.2 Sometimes animal owners request controversial surgical procedures from veterinarians. - Y.2.3 Preventative care is instrumental in prolonging animal life and avoiding the need for euthanasia. <i>Assessments:</i> Animal Fighting and Owner Liability Research Letter to Legislator	<u>ANFR:</u> AFNR.AS.01.02.01.b AFNR.AS.01.02.01.c AFNR.AS.01.03.01.a AFNR.AS.01.03.01.c AFNR.AS.02.01.01.a AFNR.AS.02.01.02.b AFNR.AS.02.01.02.c AFNR.AS.02.01.03.b AFNR.AS.02.02.02.b AFNR.AS.04.02.04.a AFNR.AS.07.01.04.b AFNR.CRP.01.01.01.b AFNR.CRP.09.01.01.a <u>English</u> CCSS.ELA-LITERACY.R ST.9.10.1 CCSS.ELA-LITERACY.W

Should you breed your dog? Case Studies Letter to the Editor: Breeding Issues Livestock Management Practices Research and Notes Animal Management Issues Role Playing Activity PORC Legislative Bill "Day in the Life Of..." Activity What Would You Do? Veterinary Laws and Ethics Controversial Surgical Procedures Debate Shelter Decisions: Euthanasia and Preventative Care Preventative Care Costs Research Bi-Monthly Bell-ringer Quizzes Unit Test	HST.9.10.1B CCSS.ELA-LITERACY.W HST.9-10.2.B CCSS.ELA-LITERACY.W HST.9.10.1.D CCSS.ELA-LITERACY.R ST.11.12.7 <u>NGSS:</u> NGSS.HS-LS3-1 <u>Math:</u> CCSS.MATH.CONTENT. HSN.Q.A.3
--	---