Horticulture 2 Animal Plant and Soil Science

Content Area: **Science**
Course(s): **Horticulture II**
Time Period: **September**
Length: **5 weeks**
Status: **Published**

Unit Overview

Introduction to the Animal Science Industry

Enduring Understandings

Identify and describe the important segments of the animal industry.

Analyze the components necessary to provide appropriate animal care and well-being.

Essential Questions

What is the history of animal domestication?

What are the important segments of the animal industry?

What are the components necessary to provide appropriate animal care and well-being?

What are the various optimal breeding times?

What terms are used for aquaculture, water, and fish anatomy?

What are major species used in aquaculture?

What are some nutrient and management requirements of aquaculture?

Career Readiness, Life Literacies, & Key Skills

- CRP6. Demonstrate creativity and innovation

CAEP.9.2.12.C	Career Preparation
TECH.9.4.12.CI.1	Demonstrate the ability to reflect, analyze, and use creative skills and ideas (e.g., 1.1.12prof.CR3a).
TECH.9.4.12.CI.2	Identify career pathways that highlight personal talents, skills, and abilities (e.g., 1.4.12prof.CR2b, 2.2.12.LF.8).

TECH.9.4.12.CI.3	Investigate new challenges and opportunities for personal growth, advancement, and transition (e.g., 2.1.12.PGD.1).

Inter-Disciplinary Connections

- RST.11-12.1. Accurately cite strong and thorough evidence from the text to support analysis of science and technical texts, attending to precise details for explanations or descriptions.
- RST.11-12.2. Determine the central ideas, themes, or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.
- RST.11-12.3. Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.

LA.RL.11-12	Reading Literature
LA.RI.11-12.2	Determine two or more central ideas of a text, and analyze their development and how they interact to provide a complex analysis; provide an objective summary of the text.
LA.9-10.CCSS.ELA-Literacy.RH.9-10.7	Integrate quantitative or technical analysis (e.g., charts, research data) with qualitative analysis in print or digital text.
LA.9-10.CCSS.ELA-Literacy.CCRA.R.1	Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.
LA.9-10.CCSS.ELA-Literacy.CCRA.R.3	Analyze how and why individuals, events, and ideas develop and interact over the course of a text.
LA.9-10.CCSS.ELA-Literacy.CCRA.R.7	Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.
LA.9-10.CCSS.ELA-Literacy.WHST.9-10.9	Draw evidence from informational texts to support analysis, reflection, and research.
SOC.9-12.CS	Chronological and Spatial Thinking
SOC.9-12.CS.1	Students compare the present with the past, evaluating the consequences of past events and decisions and determining the lessons that were learned.
SOC.9-12.HR.1	Students distinguish valid arguments from fallacious arguments in historical interpretations.
9-12.HS-LS1-3.3.1	Plan and conduct an investigation individually and collaboratively to produce data to serve as the basis for evidence, and in the design: decide on types, how much, and accuracy of data needed to produce reliable measurements and consider limitations on the precision of the data (e.g., number of trials, cost, risk, time), and refine the design accordingly.
9-12.HS-LS1-1.6.1	Construct an explanation based on valid and reliable evidence obtained from a variety of sources (including students' own investigations, models, theories, simulations, peer review) and the assumption that theories and laws that describe the natural world operate today as they did in the past and will continue to do so in the future.
	Key Ideas and Details

Instructional Strategies, Learning Activities, and Levels of Blooms/DOK

Activities

- Philadelphia Flower Show
- NJ State Horticultural Expo

- Student Compete in (CDE)
- Greenhouse Aquaponic
- Greenhouse Hydroponics
- FFA Convention
- SAE Presentations

- Breeding fish for Aquaponics and Sales
- Caring for fresh cut flowers
- Cooperative Leaning
- Drill and Practice
- Feeding Tilapia fish
- Field Trips
- Floral Designing
- Flower and leaf dissection
- Greenhouse routine Maintenance
- Guided Practice
- Individual Projects
- Internet Research
- Landscape Maintenance of Greenhouse grounds and courtyard
- Organic fruit and plant Production
- Participating in CDE'S(Competitions)
- Participating in CSA
- Partner Project/Activity
- Presentations
- Problem Solving
- Propagating plants
- Providing and scheduling Greenhouse tours
- Pruning Greenhouse Plants
- Reflective Discussion
- Research Projects
- Scouting Greenhouse plants
- Teacher Lecture and Notes
- Watering plants

Formative Assessment

- Class Discussion
- Closure
- Group Work
- Guided Practice

- Oral Response/ Random Questioning
- Performance Assessment
- Presentations
- Projects
- Teacher Observation
- Warm up
- Written Assessment

Benchmark Assessments

Benchmark Assessments:
Skills-based assessment
Reading response
Writing prompt
Lab practical

Alternative Assessments

Alternative assessments:
Performance tasks
Project-based assignments
Problem-based assignments
Presentations
Reflective pieces
Concept maps
Case-based scenarios
Portfolios

Summative Assessment

- MPA
- Nocti Exam
- Performance Assement
- Unit Assessment

Resources & Materials

- Teacher's Supplemental Website
- Unit Specific Power Point Presentation
- United Streaming (Related Videos)

Technology

TECH.8.1.12	Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.
TECH.8.1.12.A	Technology Operations and Concepts: Students demonstrate a sound understanding of technology concepts, systems and operations.
TECH.8.1.12.A.1	Create a personal digital portfolio which reflects personal and academic interests, achievements, and career aspirations by using a variety of digital tools and resources.
TECH.8.1.12.A.4	Construct a spreadsheet workbook with multiple worksheets, rename tabs to reflect the data on the worksheet, and use mathematical or logical functions, charts and data from all worksheets to convey the results.
TECH.8.1.12.A.CS1	Understand and use technology systems.
TECH.8.1.12.A.CS2	Select and use applications effectively and productively.
TECH.8.1.12.B	Creativity and Innovation: Students demonstrate creative thinking, construct knowledge and develop innovative products and process using technology.
TECH.8.1.12.C.CS2	Communicate information and ideas to multiple audiences using a variety of media and formats.
TECH.8.1.12.C.CS3	Develop cultural understanding and global awareness by engaging with learners of other cultures.
TECH.8.1.12.E.CS2	Locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media.
TECH.8.1.12.F.CS4	Use multiple processes and diverse perspectives to explore alternative solutions.