Course	Conservation Science
Unit	Unit 1:Naturalism

Standards

- 3.1.B2 - Analyze the impact of human activity on natural systems.
- 3.3.B4 - Analyze the roles and interactions of organisms within ecosystems.

Essential Questions	**Skills/Competencies**
• How does naturalism enhance our understanding of ecosystems and biodiversity? • In what ways can naturalist observations influence conservation practices?	• Detailed observation and documentation of species and ecological interactions. • Application of ecological principles to real-world conservation scenarios. • Critical thinking in assessing ecosystem health and human impacts.

Key Vocabulary	**Related Misconceptions**
• Naturalism • Ecosystem • Biodiversity • Niche • Fieldwork	• Naturalism is only about observing animals. (Reality: It involves comprehensive understanding of ecosystems and interactions among all components.) • Species that are rarely seen are unimportant. (Reality: Every species plays a critical role in ecosystem balance.)

Course	Conservation Science
Unit	Unit 2:Emergency Response

Standards

- 3.2.D3 - Evaluate the effectiveness of emergency response strategies in conservation contexts.
- 3.3.A3 - Understand the roles and responsibilities in emergency response and recovery.

Essential Questions	Skills/Competencies
• What are the critical elements of an effective emergency response plan in conservation scenarios? • How can conservationists develop and implement adaptive response strategies for various environmental crises?	• Designing comprehensive emergency response plans for conservation contexts. • Coordination with stakeholders and executing crisis management strategies. • Evaluating and adapting response strategies based on effectiveness and evolving conditions.

Key Vocabulary	Related Misconceptions
• Incident Command System • Crisis Management • Risk Assessment • Evacuation Protocols • Contingency Plans	• Emergency response is only needed after a crisis has occurred. (Reality: It involves preparation, mitigation, and rapid response to minimize impact.) • Only experts are required for effective emergency response. (Reality: Effective response involves collaboration with local communities and stakeholders.)

Course	Conservation Science
Unit	Unit 3: Navigation

Standards

- 3.5.B1 - Apply navigation techniques to explore and conserve natural areas.
- 3.5.B2 - Interpret and use various mapping tools for environmental data collection.

Essential Questions	Skills/Competencies
• What navigation tools and techniques are essential for effective fieldwork in conservation science? • How does accurate navigation contribute to the success of conservation and research projects?	• Mastery of GPS technology, topographic maps, and compass navigation. • Planning and executing field surveys with precision. • Analyzing geographical data to support conservation initiatives.

Key Vocabulary	Related Misconceptions
• GPS (Global Positioning System) • Topographic Map • Compass • Waypoints • Geographic Information Systems (GIS)	• Misconception: GPS devices are always precise and reliable. (Reality: GPS accuracy can be affected by environmental factors and requires careful use.) • Misconception: Navigation tools are only for outdoor use. (Reality: Navigation skills are essential for both field research and indoor mapping activities.)

Southmoreland School District
Curriculum Framework

Course	Conservation Science
Unit	Unit 4: Habitat Preservation

Standards

- 4.2.B3 - Assess strategies for maintaining and restoring habitat integrity.
- 4.2.A1 - Analyze the importance of different habitat types and their preservation.

Essential Questions	Skills/Competencies
• What are the most effective strategies for preserving diverse types of habitats? • How does habitat preservation contribute to global and local biodiversity?	• • Developing and implementing habitat conservation and restoration plans. • Monitoring and assessing habitat health and identifying threats. • Engaging with community and governmental stakeholders for habitat protection.

Key Vocabulary	Related Misconceptions
• Habitat Fragmentation • Conservation Easements • Restoration Ecology • Biodiversity Hotspots • Protected Areas	• Habitat preservation means excluding all human activity. (Reality: It involves sustainable management that balances human and ecological needs.) • All habitats recover equally from disturbances. (Reality: Different habitats have varying recovery capacities and require tailored conservation efforts.)

Course	Conservation Science
Unit	Unit 5: Wildlife Management

Standards

- 3.3.B4 - Analyze wildlife population dynamics and management strategies.
- 3.1.B2 - Evaluate the impact of human activity on wildlife populations.

Essential Questions	Skills/Competencies
• What are the core principles of effective wildlife management? • How can wildlife management practices be adapted to address changing environmental conditions?	• Monitoring and managing wildlife populations, including endangered species. • Developing and implementing wildlife management strategies and policies. • Analyzing data to make informed decisions about wildlife conservation.

Key Vocabulary	Related Misconceptions
• Population Dynamics • Carrying Capacity • Wildlife Surveys • Conservation Genetics • Adaptive Management	• Wildlife management only involves protecting species from hunting. (Reality: It encompasses habitat management, disease control, and population monitoring.) • All wildlife populations are stable if protected. (Reality: Many populations face challenges from habitat loss, climate change, and other factors.)

Course	Conservation Science
Unit	Unit 6: Sustainability

Standards

- 4.1.B3 - Evaluate the impact of human activities on sustainability and develop strategies for improvement.
- 4.1.A2 - Explain the concept of sustainability and its relevance to conservation.

Essential Questions	Skills/Competencies
• What role does sustainability play in conservation science? • How can sustainable practices be effectively integrated into conservation efforts and daily life?	• Understanding and applying sustainable development principles. • Designing strategies to minimize environmental impact and promote sustainability. • Advocating for and implementing sustainable practices in various contexts.

Key Vocabulary	Related Misconceptions
• Sustainable Development • Renewable Resources • Carbon Footprint • Ecosystem Services • Circular Economy	• Sustainability requires sacrificing modern conveniences. (Reality: It focuses on reducing negative impacts while maintaining quality of life.) • Only large-scale actions are effective for sustainability. (Reality: Individual and community-level actions are also crucial for achieving sustainability goals.)