Marietta City Schools

2025-2026 District Unit Planner

Teacher(s)	IB ESS Y1- Glazebrook PLC: Glazebrook	**Subject group and course**	Environmental Systems and Society (ESS)		
Course part and topic	Unit 1- Topic 1: Foundations of ESS	**SL or HL/Year 1 or 2**	SL; Year 1	**Dates**	6 weeks- Semester 1

Unit description and texts	**DP assessment(s) for unit**
Topic 1: Foundation introduces the conceptual bedrock for the ESS course, emphasizing three key concepts—perspectives, systems, and sustainability. This topic explores how individual and collective worldviews shape environmental interactions, how systems thinking can be applied to socio-ecological relationships, and how sustainability principles influence human-environment dynamics. It encourages students to reflect on their own environmental perspectives, understand complex systems, and critically evaluate sustainable practices and challenges. These foundational ideas will be revisited and expanded upon throughout the course. **Environmental systems and societies guide (link me)**	● 1 Summative unit assessment ● 2 Formative quizzes ● Who am I? Environmental values activity ● Cultural attitudes jigsaw ● It takes a disaster timeline ● World view debate- Anthropocentrism vs ecocentrism ● Dakota access pipeline case study ● Global perspectives poster campaign ● Pancake systems modeling nt

Statement of Inquiry:
Understanding environmental perspectives, systems, and sustainability fosters holistic thinking and informed decision-making in addressing global environmental challenges.

Phenomenon:
People around the world respond very differently to the same environmental issues. These varied responses reflect underlying worldviews, value systems, and interpretations of scientific data.

Crosscutting Concepts:
- Systems and system models
- Cause and effect
- Stability and change
- Scale, proportion, and quantity

Core Ideas:

1.1 Perspectives:

- Perspectives are shaped by sociocultural, scientific, religious, and economic factors.
- Environmental value systems (EVSs) influence behavior and decision-making.
- Perspectives change over time and context due to events, advocacy, and information.

1.2 Systems:

- Systems have storages and flows and can be modeled to understand complexity.
- Feedback mechanisms influence system behavior.
- Models are useful but have limitations.

1.3 Sustainability:

- Sustainability involves meeting present needs without compromising future generations.
- Natural capital and ecosystem services are essential.
- Sustainability indicators and ecological footprints help measure environmental impact.

SEPs:

- Asking questions and defining problems
- Analyzing and interpreting data
- Engaging in argument from evidence
- Obtaining, evaluating, and communicating information

INQUIRY: establishing the purpose of the unit

Transfer goals

List here one to three big, overarching, long-term goals for this unit. Transfer goals are the major goals that ask students to "transfer" or apply their knowledge, skills, and concepts at the end of the unit under new/different circumstances, and on their own without scaffolding from the teacher.

SWBAT:

At the end of this unit, students should be able to independently and effectively:

- **Apply systems thinking** to analyze complex environmental issues in new contexts, such as local community planning or global resource challenges.
- **Evaluate environmental problems** from multiple perspectives, demonstrating empathy and critical awareness in proposing inclusive solutions.
- **Use sustainability principles** to propose informed and ethically reasoned actions for improving environmental practices in unfamiliar scenarios.

ACTION: teaching and learning through inquiry

Content/skills/concepts—essential understandings	Learning process *Check the boxes for any pedagogical approaches used during the unit. Aim for a variety of approaches to help facilitate learning.*
<u>Students will know the following content:</u> **Guiding Questions for Topic 1 Subtopics** **1.1 Perspectives** ● How do different perspectives develop? ● How do perspectives affect the decisions we make concerning environmental issues? **1.2 Systems** ● How can the systems approach be used to model environmental issues at different levels of complexity and scale? **1.3 Sustainability** ● What is sustainability and how can it be measured? ● To what extent are challenges of sustainable development also ones of environmental justice? **Objectives / Understandings for Topic 1** **1.1 Perspectives** ● 1.1.1: A perspective is how a situation is viewed and understood, influenced by values and beliefs. ● 1.1.2: Perspectives are shaped by sociocultural norms, science, religion, economics, and experience. ● 1.1.3: Values influence perspectives, priorities, and choices. ● 1.1.4: Values can be seen in communication and actions, often leading to tensions. ● 1.1.5: Values surveys can assess perspectives on environmental issues. ● 1.1.6: Worldviews are cultural lenses shaping environmental understanding. ● 1.1.7: Environmental value systems (EVS) model how inputs like media shape decisions. ● 1.1.8: Perspectives can be broadly categorized into technocentric, anthropocentric, and ecocentric. ● 1.1.9: Perspectives change over time, influenced by events and institutions. ● 1.1.10: Environmental movements have been influenced by individuals, literature, disasters, and	Learning experiences and strategies/planning for self-supporting learning: **Study Skills** ● Teach study reading & Cornell notes ● Independent reading outside of class **Small group/pair work** ● Jigsaw summaries **Writing/Diagram-ing** ● In-Class Practice **Interdisciplinary learning** The course is interdisciplinary by nature. Other/s: **<u>Accommodations:</u>** ● *<u>SWD/504 – Accommodations Provided</u>* ● *<u>ELL – Reading & Vocabulary Support</u>* ● *<u>Intervention Support</u>*

policy.

1.2 Systems

- 1.2.1–1.2.7: Introduce systems thinking—components, flows, diagrams, open/closed systems, and scales.
- 1.2.8–1.2.11: Feedback loops (negative/positive), tipping points, and system stability.
- 1.2.12–1.2.14: Use of models, their simplifications, and implications for accuracy.
- 1.2.15–1.2.18: Emergent properties, system resilience, diversity, and human impacts.

1.3 Sustainability

- 1.3.1: Sustainability ensures long-term system viability.
- 1.3.2–1.3.5: Three domains—environmental, social, and economic—are interlinked.
- 1.3.6: Sustainable development balances current needs with future viability.

Students will develop the following skills:

Critical Thinking & Evaluation

- Analyze environmental value systems (EVS) and how they influence decision-making.
- Evaluate the influence of historical events, media, science, and politics on environmental movements.

Systems Thinking

- Create and interpret systems diagrams with flows, storages, feedback loops, and tipping points.

Communication & Collaboration

- Engage in respectful debates, discussions, and group activities around environmental perspectives.
- Design and carry out effective surveys/questionnaires to gather and analyze values and perspectives.

Data Literacy

- Select and apply statistical tools (e.g., correlation, behavior-over-time graphs) to analyze survey results or system behaviors.

Ethical Reasoning

- *Extensions – Enrichment Tasks and Project*

• Examine and justify ethical positions on environmental issues and decisions using a variety of worldviews.	

Formative assessment:

Each subtopic will be assessed using topic quizzes.. Students will also complete individual and group assignments to demonstrate understanding of and practice with concepts, content, and skills.

Summative assessment:

Summative Case-study assessments will mirror criteria described by the IB program. Unit test will mirror the IB exam students will take at the end of the year**.**

Differentiation:

- *Just-in-time reteaching from formative quizzes at the start of most class sessions*
- *Scaffold learning - teaching study skills and writing strategies as well as content*
- *Extend learning - authentic science writing & documentaries for advanced reading*

Details: Growth will be monitored using formative assessments by the instructor. Remediation/ extension will be conducted through homework activities and investigations conducted in class. One on one tutoring offered to assist students needing additional assistance with material.

Approaches to learning (ATL)

Check the boxes for any explicit approaches to learning connections made during the unit. For more information on ATL, please see the guide.

1. Thinking Skills

- Practicing holistic thinking and systems approaches.
- Evaluating environmental claims and ethical positions.
- Reflecting on how values and perspectives influence decision-making.

2. Communication Skills

- Presenting data and perspectives clearly using appropriate formats (e.g., graphs, surveys).
- Practicing active listening and respectful dialogue around sensitive issues.
- Writing effective, critically evaluated conclusions.

Language and learning	TOK connections	CAS connections
Check the boxes for any explicit language and learning connections made during the unit. For more information on the IB's approach to language and learning, please see the guide.	*Check the boxes for any explicit TOK connections made during the unit*	*Check the boxes for any explicit CAS connections. If you check any of the boxes, provide a brief note in the "details" section explaining how students engaged in CAS for this unit.*

Explicit Language and Learning Connections Made During Topic 1

Topic 1 is rich in interdisciplinary vocabulary and conceptual language that helps students make connections across subjects and develop holistic environmental literacy. These connections include:

Key Vocabulary and Conceptual Terms:

- Perspective, worldview, values
- Environmental value systems (EVS) (technocentric, anthropocentric, ecocentric)
- System components: storages, flows, inputs, outputs
- Open/closed systems, feedback loops, tipping points, resilience
- Sustainability, sustainable development, intergenerational equity
- Carrying capacity, ecological footprint,

Theory of Knowledge (TOK) Connections for Topic 1

Topic 1 is deeply connected to TOK through the exploration of perspectives, ethics, and the production of knowledge about environmental systems.

TOK Knowledge Questions (KQs) Relevant to Topic 1:

- How does knowledge rooted in culture or religion influence environmental values?
- To what extent do personal perspectives shape what we accept as environmental truth?
- What role does scientific modeling play in shaping our understanding of systems?
- How can we justify environmental action in the face of incomplete or uncertain knowledge?

Relevant Areas of Knowledge

Explicit Learning and Language Connections Made During Topic 1

Learning Connection	Explanation
Systems Thinking in Sciences and Geography	Supports understanding of feedback, scale, and modeling environmental processes.
Ethical Reasoning in TOK and Philosophy	Connects to moral implications of sustainability and environmental justice.
Critical Literacy in Language and Social Studies	Enhances skills in interpreting environmental texts, media, and value positions.
Quantitative Reasoning in Math and Science	Needed for modeling systems, analyzing surveys, and calculating ecological data.
Cultural and Political Awareness in Civics	Explores governance, stakeholder roles, and worldview formation.
Personal Reflection and Communication Skills (ATL)	Encourages articulation of values, persuasive writing, and respectful dialogue.

natural capital **Interdisciplinary Learning Links:** ● Science: Use of system diagrams, feedback loops, and modeling ● Geography: Study of scale and place in systems and sustainability ● Economics: Resource valuation, cost-benefit analysis of sustainability ● Philosophy/Ethics: Moral reasoning around environmental justice and values ● Civics/Politics: Policy decisions, governance, and stakeholder perspectives **Literacy/Language Connections:** ● Using terminology in oral discussions and written reflections ● Development of persuasive writing and argumentation when analyzing perspectives ● Reflecting on and articulating evolving personal environmental worldview ● Practice considering opposing perspectives respectfully	**(AOKs):** ● Natural sciences (systems modeling, ecological data) ● Human sciences (sociology, psychology of environmental attitudes) ● Ethics (value systems, environmental justice) ● Politics (power and decision-making, collective action) **TOK Concepts Featured:** ● Perspective, culture, values, objectivity, truth, responsibility, justification, evidence **Example TOK Activities:** ● Analyze conflicting media narratives on environmental issues (e.g., climate change). ● Debate the moral justification of anthropocentrism vs. ecocentrism. ● Compare how knowledge claims differ between environmental activists and policymakers.	

Resources

List and attach (if applicable) any resources used in this unit

- Oxford Environmental Systems and Societies ISBN 978-0-19-833256-5
- Biozone Environmental Science Student Workbook ISBN 978-1-927173-55-8
- Hodder Education Environmental Systems and Societies Study and Revision Guide ISBN 978-1-471-89973-7
- IB ESS Schoology Group

Reflection—considering the planning, process and impact of the inquiry

What worked well *List the portions of the unit (content, assessment, planning) that were successful*	**What didn't work well** *List the portions of the unit (content, assessment, planning) that were not as successful as hoped*	**Notes/changes/suggestions:** *List any notes, suggestions, or considerations for the future teaching of this unit*