SDG 15: Life on Land

This module focuses on SDG 15 which aims to “protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.” The stories cover land use in Peru, deforestation in the Amazon basin, and students’ conservation actions. Students are provided with case studies, conduct research, and create poster presentations. Through this process, they enhance research, analysis, and presentation skills while exploring the role of various stakeholders in addressing land degradation and biodiversity loss.

Link to Subjects	Biology	Link to Competencies	
Link to Indiana High School Core	TBD HS-LS2-7 HS-LS4-6	Link to International Baccalaureate	TBD
Stories	#1: Local Livestock Farmers Lead the way in Implementing Sustainable Land Use Practices and Reducing Deforestation in Peru. #2: The Amazon's Last Stand: Unraveling the Tale of Deforestation and Desertification #3: Students Lead Conservation Effort in Wildlife Area		
Activities	Activity #1: Sustainable Land Management Case Study	Activity #2: Community Land Conservation Project	Activity #3: Biodiversity Field Study
Type of Activity	Case Study	Service Learning	Field Study
Time of Activity	1-2 classes	Multiple classes (field trip)	Multiple classes (field trip)

Key Questions & Terms

Key Questions	Key Terms
How do human activities, such as deforestation, land degradation, and habitat fragmentation, impact terrestrial ecosystems and biodiversity?	Ecosystem Services Deforestation Desertification Land Degradation
What are the underlying causes of land degradation and biodiversity loss, and how do they intersect with social, economic, and environmental factors?	Habitat Fragmentation Invasive Species Protected Areas Sustainable Land Management
What are some effective strategies and approaches for conserving biodiversity, restoring degraded lands, and promoting sustainable land management practices?	Reforestation Afforestation Soil Conservation Erosion Control
How can local communities, governments, NGOs, and international partnerships collaborate to address land degradation and biodiversity loss, and achieve the targets outlined in SDG 15?	Conservation Agriculture Indigenous Land Rights Stakeholder Engagement
What are the potential benefits and challenges associated with implementing conservation initiatives and sustainable land use practices in different regions and contexts?	Environmental Stewardship Resilience Restoration Ecology Agroforestry
How can individuals and communities contribute to biodiversity conservation and sustainable land management efforts in their own lives and communities?	

Story Summaries

Story #1: The Amazon's Last Stand: Unraveling the Tale of Deforestation and Desertification

In the heart of the Amazon rainforest, biologist Diego Mendez navigates the complexities of deforestation and desertification. Driven by agricultural expansion, deforestation threatens biodiversity and soil health. Diego's research highlights the need for protected areas, reforestation, and sustainable land management to combat these challenges and secure the Amazon's future. Link to full story.

Story #2: Students Lead Conservation Effort in Clearwater Wildlife Area

High school students in Clearwater, North Carolina, nestled in the Appalachian Mountains, conduct a biodiversity survey, revealing threats like logging and invasive species. Inspired, they organize conservation efforts, restoring habitats and rallying community support. Their grassroots activism transforms the region, preserving its rich biodiversity for future generations. Link to full story.

Opening Discussion:

1. Have students read one of the above stories. Working in pairs or small groups, students should respond to the the following questions
    a. What problems are the people in the story facing?
    b. How do they respond to these problems?
    c. What principles and ideas shape their solutions/responses to the problems?
    d. How do these stories about Sustainable Land Management relate to other SDGs?
2. Through the discussion draw out key themes such as the following
    a. The importance of **conserving and sustainably using terrestrial ecosystem**s, including forests, wetlands, and mountains, to **preserve biodiversity** and ensure the continued provision of **ecosystem services**.
    b. Combating desertification, restoring degraded land, and promoting sustainable land management can help achieve **land degradation neutrality**.
    c. Sustainable management of forests, halting deforestation, restoring degraded forests, and increasing afforestation and reforestation efforts can enhance forest biodiversity and **ecosystem resilience**.
    d. There is a need to **engage local communities** and indigenous peoples in the conservation and sustainable management of terrestrial ecosystems, recognizing their **traditional knowledge**, practices, and rights in natural resource management.
    e. Integrated approaches to land and ecosystem management that consider social, economic, and environmental dimensions. This includes promoting **sustainable agriculture**, **land-use planning**, and **ecosystem-based adaptation** strategies to address **land degradation** and **biodiversity loss**.
    f. Achieving SDG 15 requires collaboration and **partnerships among governments, civil society organizations, the private sector, and local communities**.

Activity #1: Sustainable Land Management Case Study

This project engages students in analyzing real-world conservation and sustainable land management efforts. Students select or are provided with case studies, conduct research, and create poster presentations. Through this process, they enhance research, analysis, and presentation skills while exploring the role of various stakeholders in addressing land degradation and biodiversity loss.

Activity Learning Objectives

1. Understand real-world examples of efforts to conserve biodiversity and promote sustainable land use.
2. Analyze the strategies, challenges, outcomes, and implications of biodiversity conservation and sustainable land management initiatives.
3. Strengthen research, analysis, and presentation skills through the creation of poster presentations.

Teacher preparation

1. Prepare material for posters. If large-format printing is not available, posters can be made by sticking regular printer paper on posterboards.

Lesson Flow

1. Introduce the project to the students, explaining the objectives, expectations, and timeline. Emphasize the importance of biodiversity conservation and sustainable land management in achieving SDG 15.
2. Provide students with a list of case studies related to biodiversity conservation and sustainable land management, or allow them to choose their own. Ensure that each case study aligns with the learning objectives of the project.
3. Guide students in conducting research to gather information about their chosen case study. Encourage them to explore the background, goals, stakeholders involved, challenges faced, strategies implemented, outcomes achieved, and implications for SDG 15. Use the provided instructions and worksheet to help students organize their findings.
4. Instruct students to design a poster presentation based on their research and analysis. Provide guidelines for creating informative, visually appealing posters that effectively communicate the key aspects of their chosen case study.
5. Allocate time for students to present their posters to the class. Encourage them to summarize their findings, highlight successful approaches, discuss lessons learned, and consider the broader implications of their chosen case study. Facilitate a discussion following each presentation to encourage peer feedback and critical thinking.
6. If desired and possible, print out the poster presentations and display them in the classroom or school hallway. Encourage other students, teachers, and members of the school community to view the posters and learn from the students' research.

Possible Enrichment

Posters could be presented in local community center, school library or hallways.

Activity #2: Community Land Conservation Project

This activity immerses students in community-based land conservation efforts, supporting SDG 15. They participate in restoration projects like afforestation or invasive species removal, guided by local conservation organizations. Through hands-on work and reflection, students deepen their understanding of biodiversity preservation and ecosystem protection.

Activity Learning Objectives

1. Understand the importance of land conservation and its role in preserving biodiversity, protecting ecosystems, and promoting sustainable development.
2. Develop practical skills related to conservation work, including habitat restoration, afforestation, erosion control, and invasive species management, through hands-on participation in a real-world conservation project.
3. Actively Engage in conservation activities, fostering a sense of environmental stewardship and civic responsibility as they contribute to the restoration and preservation of local ecosystems and natural habitats.

Teacher preparation

1. See Instructions in Resources section below.

Lesson Flow

1. Reach out and connect with a local land conservation group, to plan for a service learning project engaging in erosion control, invasive species removal, tree planting, or some other conservation task.
2. Introduce students to the concept of community land conservation and its importance for preserving biodiversity, protecting ecosystems, and combating land degradation. Discuss the specific goals of the conservation project, whether it's restoring degraded land, planting trees, controlling erosion, or removing invasive species.
3. Prior to the fieldwork, engage students in planning sessions to prepare for the conservation project. Discuss safety protocols, project goals, and the roles and responsibilities of each participant. Provide background information about the ecological context of the project site, including its history, current condition, and the potential impacts of the proposed activities.
4. On the designated fieldwork day, gather students and volunteers at the project site. Begin with a brief orientation session to review the project objectives, safety guidelines, and logistical details. Divide participants into teams or groups, each assigned specific tasks based on the project goals. (Field Trip Day or Half Day)
5. Engage students in hands-on conservation work under the guidance of experienced volunteers or conservationists. Encourage teamwork, communication, and active participation as students work together to accomplish their assigned tasks. Provide opportunities for students to ask questions, learn new skills, and connect with nature during the fieldwork experience.

6. Following the fieldwork session, facilitate a reflection period where students can share their experiences, insights, and observations from the conservation project. Discuss the significance of their contributions to the local ecosystem and the broader goals of land conservation and sustainable development. (20 min)

Possible Enrichment

Follow-Up Activities: If possible, extend the learning beyond the fieldwork experience with follow-up activities such as data analysis, research projects, or presentations. Encourage students to document their conservation efforts through photos, videos, or written reflections. Explore opportunities for ongoing involvement in community conservation initiatives and discuss ways to continue supporting land conservation efforts in the future.

Activity #3: Biodiversity Field Study

In the Biodiversity Field Study, students conduct a comprehensive assessment of the flora and fauna in their local area, comparing a minimally disturbed area to one with more human disturbance. Students work in groups to identify and document various plant and animal species using apps like Merlin, Seek, and iNaturalist, as well as databases like eBird. They collect data on species diversity, abundance, and distribution, and calculate Simpson's diversity index to quantify biodiversity. Through this hands-on experience, students gain a deeper understanding of biodiversity and the impact of human activities on local ecosystems.

Activity Learning Objectives

1. Demonstrate an understanding of biodiversity and its importance for ecosystem health and resilience.
2. Develop fieldwork skills, including species identification, data collection, and observation recording, using digital tools such as Merlin, Seek, and iNaturalist.
3. Analyze and compare the biodiversity of more-impacted and less-impacted sites using the Simpson Diversity Index and data collected from digital tools.
4. Evaluate how human development and activity impact species diversity in different habitats and discuss potential strategies for mitigating these impacts.

Teacher preparation

1. Gather field guides, binoculars, hand lenses and other tools that can be used in the identification of local Flora and Fauna
2. Identify two sites - one less impacted and one more impacted by human activity, that can be compared in terms of biodiversity.
3. Arrange for transportation and any other necessary logistics.

Student preparation

1. Download Merlin and Seek on their personal phones.
2. Wear appropriate clothing for fieldwork.

Lesson Flow

1. Introduce students to the concept of biodiversity and its importance for ecosystem health and resilience.
2. Explain that students will participate in a biodiversity assessment lab where they will survey the biodiversity of more and less-impacted sites using digital tools such as Merlin, Seek, iNaturalist, and eBird databases.
3. Provide students with background information on the Simpson Diversity Index and how it is used to measure biodiversity.

4. Divide students into small groups and assign each group to survey a different site: one more-impacted site (e.g., urban area, agricultural field) and one less-impacted site (e.g., forest, wetland).
5. Instruct students to use Merlin and Seek apps to help identify plant and animal species within their designated sites. They can also use iNaturalist to record their observations and contribute to the global biodiversity database.
6. Have students record their observations, including species names, abundance, and habitat characteristics, in the iNaturalist app.
7. After the surveys are completed, guide students in calculating the Simpson Diversity Index for each site using the provided formula.
8. Facilitate a discussion where students compare the biodiversity of the more-impacted and less-impacted sites based on their Simpson Diversity Index values and the data collected from digital tools.
9. Encourage students to analyze how human development and activity have impacted species diversity in each site and discuss potential strategies for mitigating these impacts.

Possible Enrichment

This could be an ongoing field study conducted by a class every year, effectively monitoring the biodiversity at the study sites. Data could be shared from previous years and analyzed statistically to assess changes in biodiversity at both sites.

Results of the study could be compiled and students could design a poster to present the findings. The poster can then be displayed in the hallway or in a community center.

Advanced Approaches

Community Garden Project:

Objective: To promote soil conservation and sustainable agriculture practices in the community.

Instructions: Organize a community garden project where students, teachers, and community members work together to cultivate a garden using sustainable methods such as composting, mulching, and crop rotation. Assign tasks such as soil testing, planting, weeding, and watering to different groups of participants. Throughout the project, encourage discussions about the importance of soil conservation and how sustainable gardening practices can contribute to SDG 15. Monitor the garden's progress over time and celebrate successes.

Soil Erosion Field Trip:

Objective: To observe and analyze soil erosion in local areas and explore methods for mitigating erosion.

Instructions: Take students on a field trip to nearby locations where soil erosion is evident, such as construction sites, riverbanks, or deforested areas. Provide students with field notebooks to document their observations of erosion patterns, soil types, vegetation cover, and human activities contributing to erosion. Facilitate discussions about the causes and consequences of soil erosion, as well as strategies for preventing and controlling erosion through techniques like contour plowing, terracing, and reforestation. Encourage students to brainstorm ideas for community-based erosion control projects.

Soil Health Assessment Workshop:

Objective: To assess the health of local soils and identify opportunities for soil conservation efforts.

Instructions: Invite soil scientists or agricultural experts to conduct a workshop on soil health assessment techniques, such as soil testing, texture analysis, and macroinvertebrate sampling. Provide students with the opportunity to collect soil samples from different locations in the community and perform basic soil tests to assess factors like pH, nutrient levels, and organic matter content. Analyze the results together as a group to identify areas of concern and discuss potential strategies for improving soil health and promoting conservation practices. Encourage students to share their findings and recommendations with local stakeholders, such as farmers, gardeners, or municipal authorities.

Community Tree Planting Event:

Objective: To increase awareness of the importance of trees in soil conservation and ecosystem health.

Instructions: Organize a tree planting event in collaboration with local environmental organizations, parks departments, or community groups. Select a suitable site for planting trees, such as a park, schoolyard, or degraded area in need of restoration. Provide participants with native tree saplings and demonstrate proper planting techniques, including site selection, hole preparation, and watering. Discuss the role of trees in preventing soil erosion, stabilizing slopes, and enhancing soil fertility through processes like nutrient cycling and root penetration. Encourage students to take ownership of the planted trees and monitor their growth and impact on the surrounding soil and ecosystem over time.

Full Story Text(s)

Story #1: Local Livestock Farmers Lead the way in Implementing Sustainable Land Use Practices and Reducing Deforestation in Peru.

Full story: https://bit.ly/45qQpZy

WWF. (2021). Local livestock farmers lead the way in implementing sustainable land use practices and reducing deforestation in Peru. World Wide Fund for Nature. Retrieved from https://bit.ly/45qQpZy.

Story #2: The Amazon's Last Stand: Unraveling the Tale of Deforestation and Desertification

Deep in the Amazon rainforest, amidst the towering trees and vibrant biodiversity, lies a story of struggle and resilience—a narrative that intertwines the fate of the forest with the actions of humanity.

Diego Mendez is a biologist and native of the Amazon basin, whose life's work has been dedicated to unraveling the complex web of ecological interactions that sustain this vast and intricate ecosystem. As he navigates the dense undergrowth and lush canopy, Diego's journey serves as a microcosm of the broader challenges facing the Amazon—a battleground where the forces of deforestation and desertification clash with the imperatives of conservation and sustainability.

Deforestation, driven primarily by agricultural expansion, looms large on the horizon. Diego recounts how vast swathes of pristine rainforest have been cleared to make way for soybean plantations and cattle ranches, erasing centuries of ecological history in the blink of an eye. The rapid pace of land conversion not only threatens the Amazon's rich biodiversity but also exacerbates soil degradation and erosion—a silent menace that lurks beneath the surface.

Diego's research reveals the intricate mechanisms by which deforestation leads to soil degradation and erosion. As trees are felled and vegetation stripped away, the protective cover that once shielded the soil from the elements is lost. With nothing to anchor it in place, the soil becomes vulnerable to erosion by wind and water, leading to the loss of fertile topsoil and diminished agricultural productivity.

But the story does not end there. Diego's work also sheds light on the insidious threat of desertification—a creeping menace that lurks at the edges of the rainforest. As climate change intensifies, droughts become more frequent, and once-fertile land succumbs to erosion and degradation. Diego's research reveals how the Amazon, once a bastion of life and vitality, is

slowly being transformed into a barren wasteland—an outcome that spells disaster for both the region's biodiversity and the millions of people who depend on its resources for their livelihoods.

However, amidst the gloom and despair, Diego sees glimmers of hope. Conservation initiatives, such as protected areas and sustainable land management practices, offer a beacon of hope in the fight against deforestation and desertification. By restoring degraded landscapes and promoting sustainable land use, these initiatives aim to safeguard the Amazon's ecological integrity and promote resilience in the face of environmental change.

One such initiative is the establishment of protected areas and indigenous territories, which serve as refuges for biodiversity and traditional land management practices. By designating large swaths of land as protected areas, governments can prevent further deforestation and provide a safe haven for threatened species.

Additionally, reforestation and afforestation projects play a crucial role in restoring degraded landscapes and sequestering carbon. By planting native tree species and implementing agroforestry systems, communities can enhance soil fertility, improve water retention, and mitigate the impacts of climate change.

Furthermore, sustainable land management practices, such as agroecology and rotational grazing, offer promising solutions for mitigating soil degradation and erosion. By promoting organic farming methods, crop diversification, and soil conservation techniques, farmers can improve soil health and resilience while reducing their environmental footprint.

However, addressing deforestation and desertification in the Amazon requires collective action and international cooperation. Governments, corporations, civil society organizations, and local communities must work together to implement and enforce policies that prioritize conservation and sustainable land use. By preserving the Amazon's rich biodiversity and ecological services, we can secure a sustainable future for both the region and the planet.

Story #3: Students Lead Conservation Effort in Clearwater Wildlife Area

In the tranquil town of Clearwater, nestled in the heart of the Appalachian Mountains, a group of high school students embarks on a journey to explore and conserve the rich biodiversity of their region. Led by their passionate science teacher, Mrs. Thompson, the students set out to conduct a comprehensive biodiversity survey in a nearby wildlife area.

Armed with field guides, binoculars, and smartphones equipped with biodiversity survey apps, the students venture into the lush forests and meandering streams of the Appalachian foothills. Their mission: to document the diverse array of plant and animal species that call this biodiverse region home.

Guided by Mrs. Thompson's expertise, the students meticulously document their observations, noting the presence of towering tulip poplar trees, delicate trillium wildflowers, and elusive species such as the Eastern box turtle and the Kentucky warbler. With the help of Merlin, Seek, and iNaturalist apps, they identify and record the flora and fauna they encounter, contributing valuable data to citizen science projects and online databases.

As the students delve deeper into their survey, they uncover the intricate web of ecological interactions that sustains the Appalachian ecosystem. They observe the role of native plants in providing food and habitat for local wildlife, the importance of healthy stream ecosystems for maintaining water quality, and the delicate balance between predator and prey species.

However, amidst the awe-inspiring beauty of the Appalachian landscape, the students also encounter signs of environmental degradation and habitat loss. They witness clear-cut logging operations, invasive species encroaching on native habitats, and the impacts of urban development on sensitive ecosystems.

Determined to take action, the students channel their newfound knowledge and passion into a grassroots conservation effort. Inspired by their survey findings, they organize a community meeting to raise awareness about the importance of preserving the local wildlife area and discuss potential conservation strategies.

Drawing on scientific research and expert guidance, the students develop a multifaceted conservation plan aimed at protecting and restoring the region's biodiversity. Their plan includes measures such as habitat restoration projects, invasive species removal efforts, and the establishment of wildlife corridors to connect fragmented habitats.

To fund their conservation initiatives, the students launch a crowdfunding campaign and solicit donations from local businesses and organizations. They also partner with environmental nonprofits, government agencies, and academic institutions to leverage resources and expertise.

As their conservation efforts gain momentum, the students engage in hands-on restoration projects, planting native trees and shrubs, removing invasive species, and monitoring wildlife populations. They collaborate with community volunteers and conservation professionals, fostering a sense of stewardship and collective responsibility for the natural world.

Through their dedication and perseverance, the students begin to see tangible results. Native plant communities flourish, wildlife populations rebound, and the once-threatened wildlife area is transformed into a thriving oasis of biodiversity.

Reflecting on their journey, the students recognize the power of grassroots activism and community engagement in driving positive change. They feel a deep sense of pride and accomplishment knowing that their efforts have made a lasting impact on the health and vitality of their local environment.

As they continue their conservation work, the students are inspired by the resilience and beauty of the Appalachian landscape. They are committed to protecting and preserving this precious ecosystem for future generations to enjoy, ensuring that the rich biodiversity of the region remains a source of wonder and inspiration for years to come.

Resources

Community Land Conservation Project: Restoring Our Ecosystem

Objective: To actively participate in a community-based land conservation project, focusing on restoration, afforestation, erosion control, or invasive species removal, to support SDG15.

Materials Needed:

- Work gloves
- Shovels and gardening tools
- Native plant seedlings or saplings
- Erosion control materials (e.g., straw, erosion blankets)
- Identification guides for invasive species (if applicable)
- Safety equipment (as needed)

Instructions:

1. Start by introducing students to the concept of community land conservation and its importance for preserving biodiversity, protecting ecosystems, and combating land degradation. Discuss the specific goals of the conservation project, whether it's restoring degraded land, planting trees, controlling erosion, or removing invasive species.

2. Partner with a local land conservation organization or environmental group that coordinates community conservation projects. Work together to identify a suitable project site and discuss the tasks involved in the restoration or conservation effort.

3. Prior to the fieldwork, engage students in planning sessions to prepare for the conservation project. Discuss safety protocols, project goals, and the roles and responsibilities of each participant. Provide background information about the ecological context of the project site, including its history, current condition, and the potential impacts of the proposed activities.

4. On the designated fieldwork day, gather students and volunteers at the project site. Begin with a brief orientation session to review the project objectives, safety guidelines, and logistical details. Divide participants into teams or groups, each assigned specific tasks based on the project goals. Examples of activities may include:

    - Planting native trees or shrubs to restore habitat and increase biodiversity.
    - Installing erosion control measures such as contour barriers, check dams, or vegetative buffers to prevent soil erosion and stabilize slopes.
    - Removing invasive plant species through manual or mechanical methods to restore native vegetation and ecosystem balance.
    - Conducting habitat restoration activities such as clearing debris, building wildlife shelters, or creating nesting sites for birds and other wildlife.

5. Engage students in hands-on conservation work under the guidance of experienced volunteers or conservationists. Encourage teamwork, communication, and active participation as students work together to accomplish their assigned tasks. Provide opportunities for students to ask questions, learn new skills, and connect with nature during the fieldwork experience.

6. Following the fieldwork session, facilitate a reflection period where students can share their experiences, insights, and observations from the conservation project. Discuss the significance of their contributions to the local ecosystem and the broader goals of land conservation and sustainable development.

Case Study Options

(or choose your own)

Reforestation Projects:

- The "Great Green Wall" initiative in Africa aims to combat desertification by planting a belt of trees across the Sahel region, spanning multiple countries.

- The Bonn Challenge is a global effort to restore 350 million hectares of degraded and deforested land by 2030, with commitments from countries around the world.

Protected Area Management:

- Yellowstone National Park in the United States is one of the world's oldest national parks, established in 1872 to conserve wildlife and natural landscapes.

- The Galápagos Islands Marine Reserve in Ecuador protects a vast marine ecosystem, home to unique species like the Galápagos penguin and marine iguana.

Community-Based Conservation Initiatives:

- The Maasai Mara Conservancies in Kenya involve local Maasai communities in wildlife conservation and tourism management, providing economic benefits while preserving biodiversity.

- The Agroforestry Network in Brazil promotes sustainable land use practices among small-scale farmers, combining tree planting with agricultural crops to improve soil health and biodiversity.

Agroecology Projects:

- The SRI (System of Rice Intensification) method in India promotes sustainable rice cultivation practices, such as reduced water usage, organic fertilization, and biodiversity conservation, leading to increased crop yields and environmental benefits.

- The Permaculture movement in Australia emphasizes regenerative agriculture techniques, such as polyculture farming, contour planting, and soil regeneration, to promote biodiversity and resilience in food production systems.

Indigenous Land Management:

- The Gwaii Haanas National Park Reserve and Haida Heritage Site in Canada is co-managed by the Haida Nation and Parks Canada, integrating indigenous knowledge and traditional land management practices to conserve biodiversity and cultural heritage.

- The Tenure Facility supports indigenous and local communities in securing land rights and managing natural resources sustainably, empowering them to protect forests, wildlife habitats, and biodiversity hotspots.

Instructions: Sustainable Land Management Case Study Project

In this activity, you will have the opportunity to delve into real-world examples of efforts to conserve biodiversity and promote sustainable land use around the globe.

Objective:
The objective of this project is to examine case studies related to biodiversity conservation and sustainable land management. Through research and analysis, you will explore the strategies, challenges, outcomes, and implications of these initiatives, with a focus on their contribution to achieving SDG 15.

As part of this project, you work as a team to create a poster presentation summarizing your chosen case study. These posters will be printed out and displayed around the school, allowing you to share your findings with your classmates and other members of the school community.

Project Overview:
Case Study Selection: Each group will select a case study related to biodiversity conservation or sustainable land management. You may choose from the provided examples or select your own case study, ensuring it aligns with the objectives of the project.

Research and Analysis: Once you have chosen your case study, you will conduct research to gather information about its background, challenges faced, strategies implemented, outcomes achieved, lessons learned, and implications for SDG 15. Use the provided worksheet template to guide your analysis and organize your findings.

Poster Creation: Based on your research and analysis, you will design a poster presentation to visually communicate the key aspects of your chosen case study. Your poster should be informative, engaging, and visually appealing, incorporating text, images, charts, and other relevant materials. The poster will be submitted digitally and the top posters will be printed in a large format for display.

Presentation: You will have the opportunity to present your poster to the class, summarizing your findings and highlighting the significance of your chosen case study. Be prepared to answer questions and engage in discussion with your classmates.

Biodiversity Conservation and Sustainable Land Management Case Study Worksheet

Your Case Study and Poster should include the following:

Background Information:

- Brief overview of the case study, including its goals and objectives.
- Description of the geographical location and ecosystem(s) involved.
- Key stakeholders and organizations involved in the project.

Challenges Faced:

- Identification of the main challenges or threats to biodiversity and land management addressed by the case study.
- Explanation of why these challenges are significant and how they impact the environment and local communities.

Strategies Implemented:

- Overview of the strategies, interventions, or actions undertaken to address the identified challenges.
- Description of specific approaches or techniques used, such as reforestation, protected area management, community engagement, etc.

Outcomes Achieved:

- Summary of the results or outcomes of the case study, including any successes or achievements.
- Evaluation of the effectiveness of the strategies implemented and their impact on biodiversity conservation and sustainable land management.

Lessons Learned:

- Reflection on lessons learned from the case study, including successes, failures, and unexpected outcomes.
- Analysis of what worked well and what could be improved in similar projects in the future.