



PLANIT

TEACHERS

Coastal and Marine Ecosystems

Student Name: _____

Class: _____

Due Date: _____

Part 1: Marine Ecosystem Introduction

Essential Ecosystem Concepts (Ελληνικά & English):

- Θαλάσσια Βιοποικιλότητα / Marine Biodiversity
- Οικολογικές Ζώνες / Ecological Zones
- Ανθρωπογενείς Επιπτώσεις / Human Environmental Impacts
- Αειφόρος Διαχείριση / Sustainable Management

Ecosystem Complexity Analysis:

1. Describe the key characteristics of three marine habitats:
 - Coral Reefs
 - Mangrove Forests
 - Deep Ocean Zones
2. Compare and contrast marine ecosystem interactions:
 - Predator-Prey Relationships
 - Symbiotic Interactions
 - Nutrient Cycling Mechanisms

Part 2: Human Impact and Environmental Challenges

Environmental Pressure Analysis

1. Identify and explain major human-induced threats to marine ecosystems:
 - Overfishing
 - Plastic Pollution
 - Ocean Acidification
 - Coastal Development
2. Propose mitigation strategies for each environmental challenge

Stakeholder Conflict Resolution

1. Analyze a coastal management scenario involving:
 - Local Fishing Communities
 - Tourism Industry
 - Environmental Conservation Groups
 - Government Regulators

Part 3: Research and Problem Solving

Select ONE Research Investigation:

1. Marine Conservation Case Study
 - Select a specific marine ecosystem
 - Document environmental challenges
 - Develop comprehensive restoration plan
 - Estimate ecological and economic impacts
2. Climate Change Marine Impact Assessment
 - Analyze sea-level rise consequences
 - Study marine species adaptation
 - Predict ecosystem transformation
 - Propose adaptive strategies

Extension Activities

Advanced Exploration Options:

1. Create a Marine Ecosystem Simulation
 - Model ecological interactions
 - Demonstrate environmental changes
 - Predict long-term ecosystem responses
2. Develop a Sustainable Marine Management Proposal