



Appendix F: PLT Conceptual Framework

Theme: Diversity

1.0 Throughout the world, there is a great diversity of habitats, organisms, societies, technologies, and cultures.

Diversity in Environments

1.1 Biodiversity results from the interaction of living and nonliving environmental components such as air, water, climate, and geologic features.

1.2 Forests, as well as other ecosystems, contain numerous habitats that support diverse populations of organisms.

1.3 The Earth's atmosphere, water, soil, climate, and geology vary from region to region, thus creating a wide diversity of biological communities.

Diversity of Resources and Technologies

1.4 Humans use tools and technologies to adapt and alter environments and resources to meet their physical, social, and cultural needs.

1.5 Technologies vary from simple hand tools to large-scale and complex machinery, mechanisms, and systems.

1.6 Successful technologies are those that are appropriate to the efficient and sustainable use of resources, and to the preservation and enhancement of environmental quality.

Diversity Among and Within Societies and Cultures

1.7 Human societies vary greatly and inhabit many land forms and climates throughout the world.

1.8 Humans throughout the world create differing social, cultural, and economic systems and organizations to help them meet their physical and spiritual needs.

1.9 The standard of living of various peoples throughout the world is dependent on environmental quality; the availability, utilization, and distribution of resources; the government; and culture of its inhabitants.

1.10 Natural beauty, as experienced in forests and other habitats, enhances the quality of human life by providing artistic and spiritual inspiration, as well as recreational and intellectual opportunities.

Theme: Interrelationships

2.0 The ecological, technological, and socio-cultural systems are interactive and interdependent.

Environmental Interrelationships

2.1 Organisms are interdependent, and depend on nonliving components of the Earth.

2.2 Altering the environment affects all life forms, including humans, and the interrelationships that link them.

2.3 Organisms adapt to changes in the environment according to the genetic and behavioral capacity of their species.

Resource and Technological Interrelationships

2.4 Resource management technologies interact and influence environmental quality; the acquisition, extraction, and transportation of natural resources; all life forms; and each other.

2.5 While technological advances decrease the incidence of disease and death, the ever-increasing world population is placing heavy demands on the finite resources of the Earth.

2.6 International cooperation directed toward conserving resources and protecting environmental quality is beneficial to human health and the well-being of other life forms.

2.7 By reducing waste and recycling materials, individuals and societies can extend the value and utility of resources and also promote environmental quality.

Societal and Cultural Interrelationships

2.8 Human societies and cultures throughout the world interact with each other and affect natural systems upon which they depend.

2.9 The quantity and quality of resources and their use—or misuse—by humans affect the standard of living of societies.

2.10 Cultural and societal perspectives influence the attitudes, beliefs, and biases of people toward the use of resources and environmental protection.

2.11 All humans consume products and thereby affect the availability of renewable and nonrenewable natural resources.

2.12 The extracting, processing, transporting, and marketing of natural resources provide employment opportunities for many people.

Theme: Systems

3.0 Environmental, technological, and social systems are interconnected and interacting.

Environmental Systems

3.1 In biological systems, energy flows and materials continually cycle in predictable and measurable patterns.

3.2 Plant and animal populations exhibit interrelated cycles of growth and decline.

3.3 Pollutants are harmful by-products of human and natural systems which can enter ecosystems in various ways.

3.4 Ecosystems possess measurable indicators of environmental health.

Resource Management and Technological Systems

3.5 The application of scientific knowledge and technological systems can have positive or negative effects on the environment.

3.6 Resource management and technological systems can help societies meet, within limits, the needs of a growing human population.

3.7 Conservation technology enables humans to maintain and extend the productivity of vital resources.

Systems in Society and Culture

3.8 Most cultures have beliefs, values, and traditions that shape human interactions with the environment and its resources.

3.9 In democratic societies, citizens have a voice in shaping resource and environmental management policies. They also share in the responsibility of conserving resources and behaving in an environmentally responsible manner.

3.10 In democratic societies, individuals and groups, working through governmental channels, can influence the way public and private lands and resources are managed.

3.11 Effective citizen involvement in the environmental decision-making process involves a careful study of all sides of the issues, along with the ability to differentiate between honest, factually accurate information and propaganda.

Theme: Structure and Scale

4.0 Technologies, societal institutions, and components of natural and human-built environments vary in structure and scale.

Structures and Scale in Environments

4.1 Populations of organisms exhibit variations in size and structure as a result of their adaptation to their habitats.

4.2 The structure and scale of an ecosystem are influenced by factors such as soil type, climate, availability of water, and human activities.

4.3 When the Earth is studied as an interacting ecological system, every action, regardless of its scale, affects the biosphere in some way.

Structure and Scale in Resources and Technology

4.4 Technologies vary in size, structure, and complexity and in their positive and negative effects on the environment.

4.5 Conservation and management technologies, when appropriately applied to the use or preservation of natural resources, can enhance and extend the usefulness of the resource, as well as the quality of the environment.

4.6 Human-built environments, if planned, constructed, and landscaped to be compatible with the environment in which they will be located, can conserve resources, enhance environmental quality, and promote the comfort and well-being of those who will live within them.

4.7 International cooperation on resource management and environmental improvement programs can be beneficial to people in many parts of the world.

Structure and Scale in Societies and Cultures

4.8 The structure and scale of the natural resources in a given area shape the economy upon which the society and its culture is based. Cultural structures and actions affect the management of resources and environmental quality.

4.9 Governmental, social, and cultural structures and actions affect the management of resources and environmental quality.

4.10 Demographics influence environmental quality, government policy, and resource use.

Theme: Patterns of Change

5.0 Structure and systems change over various periods of time.

Patterns of Change in the Environment

5.1 Organisms change throughout their lifetimes. Species of organisms change over long periods of time.

5.2 Although species become extinct naturally, the increasing number of extinctions in recent history may be linked to the rapid increase in human population.

5.3 As organisms go through their life cycle of growth, maturity, decline, and death, their role in the ecosystem also changes.

5.4 Ecosystems change over time through patterns of growth and succession. They are also affected by other phenomena such as disease, insects, fire, weather, climate, and human intervention.

Patterns of Change in Resources and Technologies

5.5 Our increasing knowledge of the Earth's ecosystems influences strategies used for resource management and environmental stewardship.

5.6 Technologies that are developed to meet the needs of an increasing world population should also be environmentally sound.

5.7 To be most effective, new technologies require well-informed and highly skilled workers.

Patterns of Change in Society and Culture

5.8 Governments change and evolve over the years. Such changes affect the lives of its citizens, as well as resource management and environmental policies.

5.9 Consumers "drive" the marketplace with their demands for goods and services. Such demands shift with time and may have positive or negative effects on the resource base and environmental quality.

5.10 Industries usually respond to consumer demand for recyclable, recycled, or otherwise environmentally friendly products.

5.11 Leisure and recreational pursuits can have an impact on forests and other resource-producing areas.

5.12 Increased public knowledge of the environment and the need for conservation of natural resources have resulted in lifestyle changes in many cultures.