



Module 3: Life on Earth, Taxonomy & Ecology



Certification

Graduates receive DTA Short Course Certificate (upon completion of full program)



Duration

3 days (24 hours)

Course Description

This module provides the foundational scientific framework for professional guiding. It explores the origins and defining characteristics of life, the principles of evolution, and the mechanisms of genetics. Trainees will master the taxonomic system for classifying and identifying species, a critical skill for accurate communication in the field. The course culminates in ecology—the study of relationships—teaching guides to interpret the bush, predict animal behaviour, and tell the compelling story of how an ecosystem functions, moving beyond simple identification to provide a deeply informative guest experience.

Course Outcome

- How to define life and explain the scientific theories of its origin and evolution on Earth.
- How to articulate Darwin's theory of evolution by natural selection and the role of genetics.
- How to accurately use the hierarchical taxonomic system (Kingdom to Species) to classify and identify organisms.
- How to apply scientific naming conventions to avoid confusion with common names.
- How to analyze an ecosystem by understanding its abiotic (non-living) and biotic (living) structures.
- How to explain the flow of energy through food webs and the critical rule of 10%.
- How to read the landscape by identifying limiting factors and using them to predict wildlife presence.
- How to describe the vital biogeochemical cycles (water, carbon, nitrogen) and the role of decomposers.

Topics Covered

Life on Earth & Evolution:

- Defining the Characteristics of Life
- Theories on the Origins of Life
- Fundamentals of Evolution and Natural Selection
- Darwin's Theory of Evolution
- Basics of Genetics and Inheritance

Taxonomy:

- The Purpose and Use of Classification
- The Hierarchy of Classification: Kingdom, Phylum, Class, Order, Family, Genus, Species
- Rules of Scientific Naming (Binomial Nomenclature)
- Applying Taxonomy in the Field for Identification and Storytelling

Ecology:

- The Study of Relationships: From Individuals to the Biosphere
- Abiotic Factors: Climate, Soil, Geography, and Fire
- Biotic Factors: Species Roles, Niches, and Keystone Species
- Symbiotic Relationships: Mutualism, Commensalism, Parasitism
- Energy Flow: Food Chains, Food Webs, and Trophic Levels
- Limiting Factors and Predicting Animal Behaviour
- Biogeochemical Cycles: Water, Carbon, and Nitrogen
- Ecosystem Dynamics: Resilience, Succession, and Conservation



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