Decomposition

Part 1: Decomposition Rates
Decomposition, a critical ecological process, is driven by the physical environment, litter quality, and decomposer organisms. Decomposition rate indicates how quickly organic matter decomposes.

- Life from Death: The Importance of Decomposition
- Investigating Decomposition: Why and How
- Calculating Decomposition Rate
- Forensic Science and Body Clocks
- The Decomposition Triangle
- Summary of Part 1
- Quiz Questions
- Ask Your Instructor

Part 2: Physical Environment
Climate and local conditions affect decomposition rates. Organic matter may decompose aerobically or anaerobically. Decomposition rates differ on land vs. in freshwater.

- The Physical Environment Affects Decomposition
- Decomposition Rates in Different Climates
- Explore a Long-Term Decomposition Experiment
- Composite Climate Indices
- The Role of Local Conditions
- Anaerobic vs. Aerobic Decomposition
- Decomposition in Water vs. on Land
- Summary of Part 2
- Quiz Questions
- Ask Your Instructor

Part 3: Litter Quality
The chemical and structual composition of litter varies greatly. Decomposition impacts ecosystem nutrient cycling and energy flow.

- Decomposition of Different Litter Species
- High-Quality and Low-Quality Litter
- Climate Change, Decomposition, and the Carbon Cycle
- Summary of Part 3
- Quiz Questions
- Ask Your Instructor

Part 4: Decomposer Organisms
Decomposition is performed by organisms, with different feeding preferences. Decomposer communities change through the stages of decomposition.

- Organisms Drive Decomposition
- Classifying Decomposers
- Decomposer Food Preferences
- The Decomposition Sequence
- Forensic Science and Body Bugs
- The Detrital Food Chain
- Summary of Part 4
- Quiz Questions
- Ask Your Instructor

Part 5: Fossil Fuels, Peat, and Climate Change
Climate change will impact decomposition dynamics in peat bogs, altering how carbon cycles.

- Peat Bogs and Fossil Fuels
- Climate Change, Carbon Sources, and Carbon Sinks
- Changes in Decomposition and Productivity
- Summary of Part 5
- Quiz Questions
- Ask Your Instructor