7. Weathering

Objectives:
- Learn how material at the Earth’s surface is broken down
- Understand the types of weathering, the processes of weathering, and the end products of weathering

I. Introduction
- Weathering
  - Definition
  - Types
    - Physical
    - Chemical

II. Physical weathering
- Processes
  - Fracture development
  - Freeze-thaw (also called frost wedging)
  - Salt wedging (also called salt weathering)

III. Chemical weathering
- Processes
  - Dissolution
  - Hydrolysis
  - Oxidation

IV. Rates of weathering
- Physical and chemical weathering work together
  - Importance of volume and surface area

V. End products of weathering
- Materials
  - Quartz grains
  - Clay minerals
  - Iron oxides
  - Dissolved ions

VI. The life of sediment
- What happens to sediment?
  - More weathering (always going on at the surface)
  - Erosion
  - Transportation
  - Deposition
- How does sediment change over time?
  - Grain size
  - Sorting
  - Roundness
  - Composition
- Sediment maturity