I. The Dynamic Planet

- Geomorphic processes (need to know examples of internal and external processes)
  - Internal (plate tectonics, volcanism, diastrophism)
  - External (weathering, mass wasting, erosion/deposition)
- Earth's structure and Internal Energy
  - Core
  - Mantle
  - Crust Isostatic adjustment (meaning, examples) (figure 8.4)
    difference between ocean and continental crust (density, thickness, composition)
- Plate Tectonics (Fig 8.13)
  - Sea-Floor spreading (mid-ocean ridge, evidence of sea floor spreading)
  - Subduction zone (where does it occur: continental-ocean plate collision)

II. Tectonics and volcanism

- Definition of relief
- Crust formation and deformation processes
  - Accretionary Terranes
  - Folding and warping (Fig. 9.8; 9.10)
  - Faulting: Normal, reverse, strike-strip (need to know forces, landforms, locations) (Fig 9.7)
- Convergent Boundaries - *subducting and/or overriding plates, trenches, volcanoes, and mountain ranges)* collision zones between plates
  - Continent-ocean: Andes, Rockies, Cascades (Fig 9-16a).
  - Ocean-ocean: Indonesia, Japan (Fig 9-16b)
  - Continent-continent: Himalayan, Alps (Fig 9-16c)
- Divergent Boundaries (rift zones: new ocean crust, tensional force, Iceland, East Africa)
- Transform Boundaries (no volcanic eruption, e.g., San Andreas Fault)
- Hot spots (Hawaii Island, Yellowstone)

Need to know associated features (volcanoes, trenches, horst and graben, etc) and locations (Fig. 9-22)

- Location of volcanic activity
- Volcanic features (Fig. 9-30)
  - Differences between shield and composite volcanoes (origin, rock composition, temperatures of melt, viscosity, hazards, form of volcano, examples)