Gradational Processes Study Sheet

Study content from Chapters 10 – 16 in your text, but especially:

Weathering (38-39)
- Physical:
  - Frost shatter, Plant roots, Thermal expansion, Exfoliation
- Chemical
  - Solution, Hydrolysis, Oxidation

Mass Wasting (39-41)
- Causes
- Types
  - Scree, Soil creep, Landslide, Mudflow, Slump, Avalanche, Soil solution

Rivers and Valleys (42-47)
- Types of drainage patterns (42)
  - Dendritic, Trellis, Radial
- Stages of river development (43)
  - Youth, Mature, Old age, Rejuvenated
- Erosional Processes of rivers (43-44)
  - Hydraulic action, Abrasion, Attrition, Corrosion
- Ways Rivers transport sediments (44)
  - Solution, Suspension, Saltation, Traction
- Landforms (44-47)
  - Potholes, gorges and canyons
  - Flood plains, meanders, undercut banks, point-bar,Slip-off slope, Levees, Dikes, Oxbow Lakes, River terraces, Braided Rivers, Sandbars, Arcuate Deltas, Bird's foot Deltas, Estuarine Deltas

Glaciers (47-54)
- Accumulation, ablation, firn, isostatic sinking and rebound (47-49)
- Erosional action of glaciers (49-50)
  - Plucking (AKA Quarrying), Abrasion, Glacial deposition, Till, Outwash
- Erosional features of alpine glaciers (50-52)
  - Cirque, tarn, arête, col, horn, striations, moraines (ground, lateral, terminal medial, recessional), esker, truncated spurs, hanging valleys, crevasses, icefall, ribbon or finger lakes
- Features of continental glaciers (52-53)
  - Drumlins, outwash plains, erratics, rouche moutonnee, crag and tail
- Post glacial landscape (53)
  - U-shaped valleys, hanging valleys, waterfalls
- Benefits of glaciation (53-54)

Wave Action and Coastal Landforms (54-57)
- Waves (54)
- Constructive or spilling waves vs. destructive or plunging waves (54-55)
- Wave refraction

Coastline erosion generated by waves (55)
Corrosion, Corrasion or abrasion, attrition, hydraulic action
Undercutting and cliff retreat (55-56)
Features formed from cliff retreat (56)
Bay, headlands, tunnel, arch, stacks, wave-cut platform
Swash, backwash, longshore drift (57)
Shoreline depositional features (57)
Spit, tombolo, groynes
Submerged shorelines (57)
Estuaries, Rias, Fiords

The work of Groundwater (58-60)
Permeability, Porosity, Zone of Saturation, Water Table, Groundwater, Zone of Aeration, Aquifer, Artesian well, Hydraulic head, Ordinary wells (58)
Landforms created by ground water (59)
Travertine terraces, caves and caverns, sinkholes
Karst Landscapes and Limestone Caves (59-60)
Sinkholes, uvala, poljes, hums
Stalagmites, stalactites, pillars, flowstones

Wind and Desert Landscapes (60-64)
What factors cause deserts to form? (60-61)
Latitude, Mountain barriers, cold ocean currents, ocean influence
Wind erosion in deserts (61-62)
Suspension, saltation, toadstools, deflation, blowouts, oases, aquifer
Water erosion in deserts (62)
Alluvial fan
Dune migration (62)
Types of dunes (63)
Traverse, barchan, parabolic, longitudinal
Unique landforms of desert lands (63-64)
Alluvial fans, bajadas, wadis, playa lakes, canyons, plateau, mesa, buttes, hamadas, bolson, ergs, loess

Review vocabulary on pages 64 – 67, your focus questions, and sample multiple choice questions on pages 361– 366.