3 Main Places Volcanoes Will Form

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1. Diverging Plates (rifts)

Types of volcanoes:

→ basalt plateau
→ rift volcano
} smooth flowing, flat, thin basalt lava

→ cinder cone (if rift under water)

- explosive due to water mixed in, a cone of cinders (tephra)

Examples:

→ Columbia Flood Basalts
→ Iceland (cinder cones)
→ mid-ocean ridges

2. Subduction Zones (o-c or o-o collisions)

Types of Volcanoes:

→ Composite / Strato volcanoes
- explosive, lava is thicker granitic, layered lava and ash

ex Mt St Helens
Mt Baker

→ Cinder Cones - explosive

→ Volcanic domes - thick lava piles

up in the crater (ex in Mt St Helen's crater now, rebuilding height)

3. Hotspots (mid-plate)

- a stationary plume of hotter magma rises up and breaks through a weak spot in the crust (usually ocean plate)

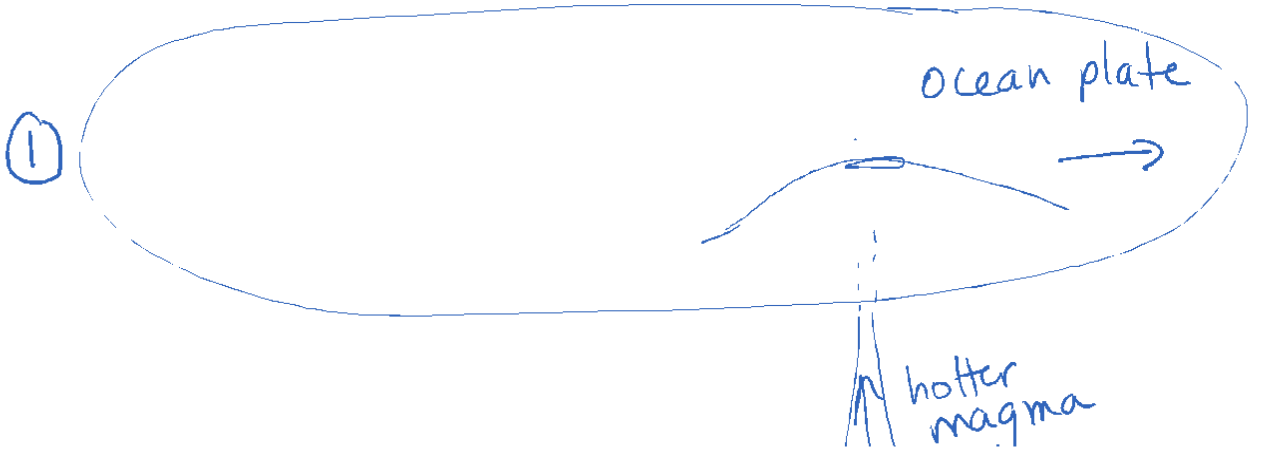
Types of Volcanoes:

→ shield (if breaking through ocean plate)

- smooth flowing, thin basaltic magma
- wide, low volcanoes
- ex Hawaii
  Olympus Mons on Mars

→ Composite/Strato (if breaking through continental plate)

- explosive, thick felsic magma
- steep, layered volcano
- ex Anahim Chain on BC mainland East of Queen Charlottes



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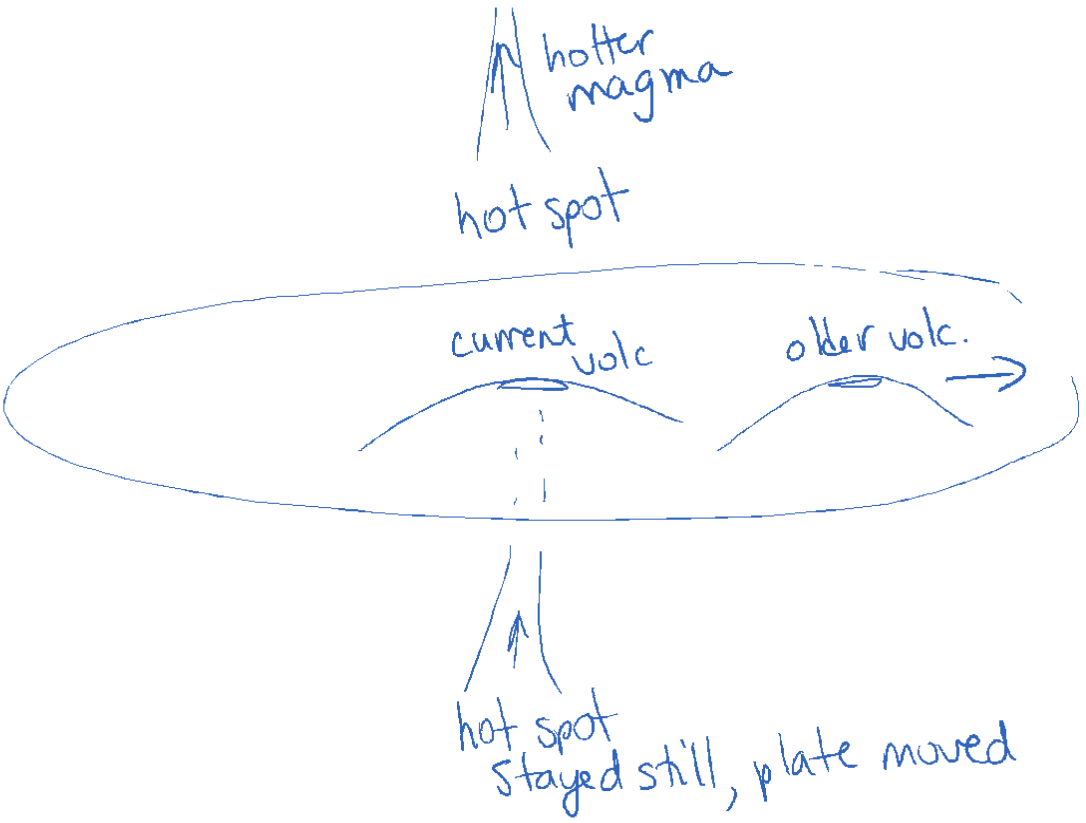

pg 255 # 1ad, 3a
pg 258 # 5abf, 6ab, 7
pg 263 # 8c, 11ab, 12cd
pg 265 # 13-15 — draw diagram from pg 264 to aid understanding (sills, etc)