NED (2)

1st Nonvascular plants, or bryophyta (liverworts, mosses)

2nd Tracheophyta or vascular plants:

FERNS = PTERIDOPHYTA (without seeds)

CONIFERS = CONIFEROPHYTA } (WITH SEEDS)

FLOWERING PLANTS = ANTHOPHYTA }

ALTERNATION OF GENERATIONS facilitates the (S) sporophyte (diploid) cell conversion to haploid reproductive cells or spores. Spores land/germinate to form (G) gametophyte (haploid) which can make gametes by mitosis. Spores at Bottom of fern leaves.

When ♀ and ♂ gametes (1n) unite, sexually, a diploid zygote is formed, creating the 2n sporophyte.

For the nonvascular mosses, (G) Dominant.
For vascular ferns or flowering (all), (S) Dominant.

The key land plant adaptations for reproduction allow transport of sperm to eggs. Algae could easily carry this out in water with swimming gametes. Mosses use archegonia to reproduce on dry land. Ferns reproduce via diploid sporophyte, but no seeds are involved. Seed plants - gymno/naked seed and angio/protected seed. Pollen unites with ovary on land to form seed.