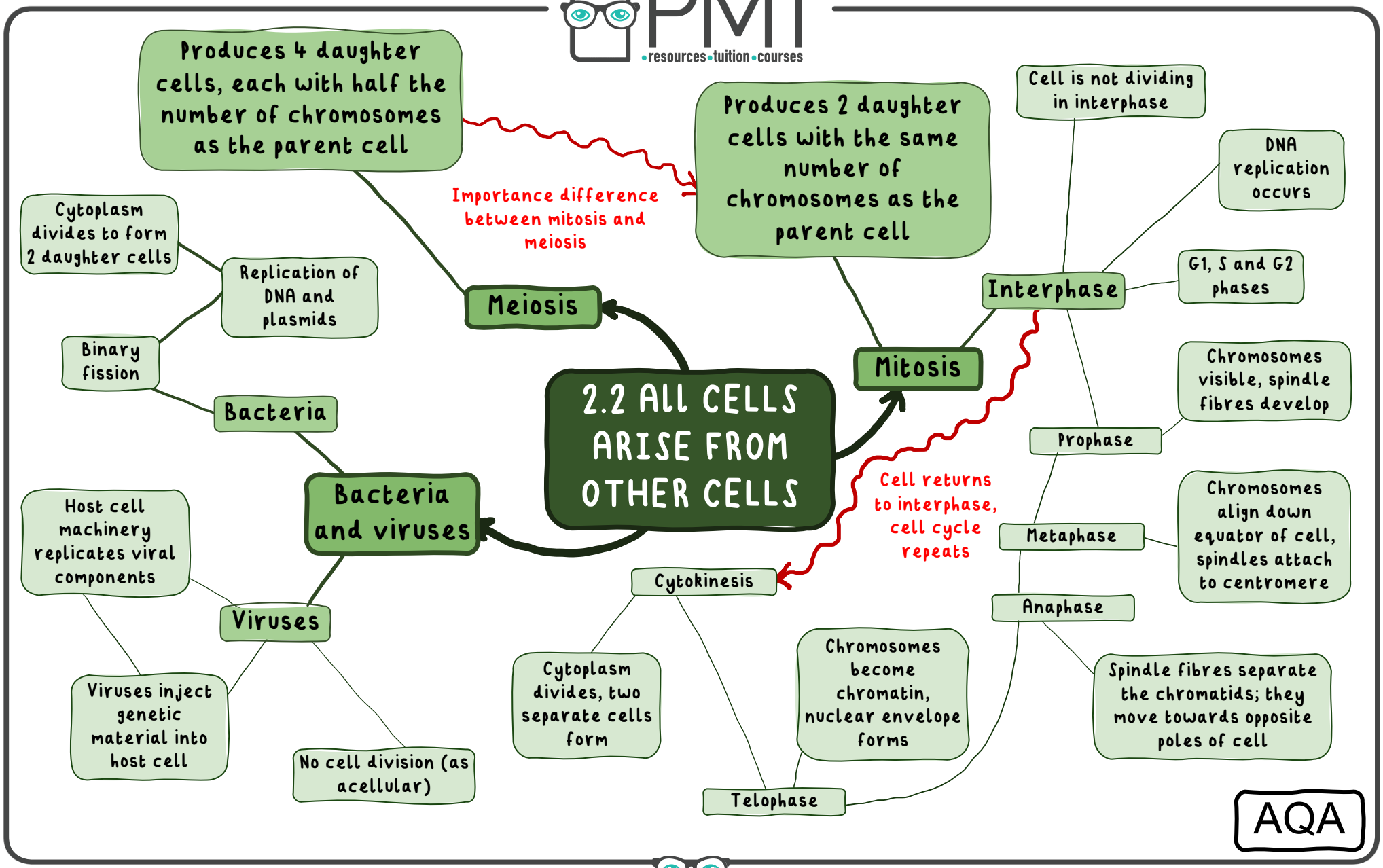
PMT
resources tuition courses
2.2 ALL CELLS ARISE FROM OTHER CELLS
Importance difference between mitosis and meiosis
Meiosis
Produces 4 daughter cells, each with half the number of chromosomes as the parent cell
Replication of DNA and plasmids
Cytoplasm divides to form 2 daughter cells
Binary fission
Bacteria
Bacteria and viruses
Viruses
Host cell machinery replicates viral components
Viruses inject genetic material into host cell
No cell division (as acellular)
Mitosis
Produces 2 daughter cells with the same number of chromosomes as the parent cell
Interphase
Cell is not dividing in interphase
DNA replication occurs
G1, S and G2 phases
Prophase
Chromosomes visible, spindle fibres develop
Metaphase
Chromosomes align down equator of cell, spindles attach to centromere
Anaphase
Spindle fibres separate the chromatids; they move towards opposite poles of cell
Telophase
Chromosomes become chromatin, nuclear envelope forms
Cytokinesis
Cytoplasm divides, two separate cells form
Cell returns to interphase, cell cycle repeats
AQA