Functions performed during cell cycle

- The most basic function of the cell cycle into applicate accurately the vast amount of DNA in the chromosomes and then segregate the copies precisely into two genetically identical daughter cells
 Discrete cell-cycle events occur against a background of continuous growth
- In addition to duplicating their genome, most cells also duplicate their other organelles and ٠ macromolecules, otherwise they would get smaller with each division
 - The vast majority of cells also double their mass and duplicate all their cytoplasmic organelles
 - Total protein content of a typical cell increases more or less continuously throughout the cycle
 - RNA synthesis continues at a steady rate, except during M phase, when the chromosomes are apparently too condensed to allow transcription
- Purpose of cell cycle passing on the genetic information to the next generation of cells

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Phases and Major Events of Cell Cycle

Interphase

- Period between nuclear divisions

- Comprises of three phases to te sale.co.uk DNA ipthe Nucleus and the sale of the cycle
- Chromosomes are in their extended form
- Cell grows (increases) in size
 - Total protein content of a typical cell increases more or less continuously throughout the cycle
 - RNA synthesis occurs (transcription occurs)
 - Centrosome is duplicated (centrosome is duplicated in S phase) •

M phase (Mitosis phase)

- After S phase, chromosome segregation and cell division occur in M phase
 It requires much less time (less time for the phase phase phase)
 Period When nuclear and cell division occurs
- - Nucleus and then the cell divide into two
- Initiation of mitosis requires
 - Phosphorylation of proteins that control
 - Chromosome condensation
 - Nuclear envelope breakdown
 - Spindle assembly