

Specialized Cells

Cell theory states that all cells come from pre-existing cells.

1 fertilized cell → forms me!

But my cells are all *different*!

A cell specializes to form a specific function.

Chromosomes contain many many genes. A gene controls one specific thing about the organism. As the organism develops, each cells keeps some genes 'on' and turns some genes 'off'. This gives each cells a certain job to do. It becomes ***specialized*** or ***differentiated***.

The structure often relates to the function of the cell. Check out the photographs in your text - p. 59

Stem Cells = an undifferentiated cell that has the potential to become any kind of cell. When you are a 'blastula', all your cells are stem cells. (you are a ball of cells or a 'blastula' up to day 6 only).