What is DNA?

DNA is the universal coding for all biological life, DNA or RNA, actually. So all of our biological life includes genes and we have a multitude of different genes that are all packed away in chromosomes. A gene encodes a particular product, enzyme, protein, or some kind of product. It's derived of a combination of amino acids in a string. S o three base chromosomes will code for a particular amino acid and it's the order of these amino acids that makes up the final product. Now a gene has a couple of different components. A gene has a control region at the beginning of it, and then it has the coding region, which is broken up as exons and introns. So the coding sequence is in the exons and the introns are referred to as intervening sequences.

They separate the exons and they can contain other control mechanisms. But in short, it's the coding region of the exons that we're concerned with and the boundaries of the exons and the introns, where there may be some more information. So we have a process called transcription and translation. Transcription is where enzymes attach to the DNA. They get turned on, they open up the DNA, double helix at the promoter region, and then they compile these little amino acid, called codons, into a string of amino acids. Basically they cut out the intervening sections s o you have just a long code of RNA. That RNA is basically just the exons without the introns or the promoter region.

And then that gets transported to another part of the cell and the amino acids get attached to that RNA, and they turn into a specific final product like protein. DNA in somatic cells, which are the cells that are out of our body when our cell copies itself or replicates inside of the cell in a process called the cell cycle. Basically what happens is all of our chromosomes get copied, and then they get separated. Once they separate, they split into two separate cells. T hen after that process occurs, the DNA and the chromosomes are encapsulated in the nucleus.