

Week 4 reflection paper mam

[Science](#), [Biology](#)



and number 12th February Reflection paper MAM After going through the materials that were supplied, I have learned a lot about chromosomes, nuclear organization and their locations. Chromosomes are structures that look like thread, and are located in the nucleus of plant or animal cells. They are known to physically interact with neighbouring chromosomes within the nucleus. Genes in the chromosomes move to different locations in the nuclear depending on the things that they want to accomplish. They exists as a known entity and occupies a separate space, this was discovered by Thomas and Christopher Cremer who were German brothers. Furthermore individual chromosomes occupy preferred location within the nucleus. White blood cells in human bodies like chromosome 18, hugs nucleus on the outer wall, whereas chromosome 19 remains at the center while chromosome 7 hover in between center and outer of the nucleus. DNA in chromosomes uses complex way to fold, and individual chromosomes occupies distinct locations in the nucleus and some of them prefer the periphery of the nuclear, while others like coming closer to the center. Chromosome that lies closer to one another can influence the functionality of the cells.

Chromatin is very complex and consists of DNA and Proteins. If laid in a straight line, nuclear DNA in bodies of human beings would be enough to stretch from sun to earth and vice versa 100 times. Research has also shown that chromosome arrangement is not stationary; it changes during disease and development. When a gene is needed, relevant DNA loops away from other chromosomes, and becomes fully activated. Sometimes transcription factors in gene on chromosome can help to activate nearby chromosome.

Furthermore, these Chromosomes are arranged in different cells, differently and the arrangement changes at the time of development. Its locations plays central role in cancer and knowing the location of chromosomes in the nucleus gives an opportunity for the detection of the cancer (Misteli 66-73). Blood transfusion has been found to be very important procedure during medical conditions, and also, tissue transplant can be done successfully from animal to animal and from one part of the body to another.

Work cited

Misteli, Tom. " The Inner Life of the Genome." Scientific American (2011): 66-73. Print.