Name: _____

DNA is a Double Helix

Scientists at this time knew DNA was made of nucleotides, but they did not know what DNA looked like.

Erwin Chargaff, 1950

A scientists named Erwin Chargaff made a really interesting observation. He found that:
The number of purine nucleotides equals the number of pyrimidine nucleotides

Maurice Wilkins and Rosalind Franklin

- Wilkins worked in a lab at King's College in London and Franklin was hired to work in the lab, as Wilkins' assistant.
- Franklin used X-ray crystallography to try and solve the DNA structure mystery. Franklin was the first to figure out the basic dimensions of the DNA strands and that phosphates were on the outside of a structure that was most likely a helix.
- She presented her findings in a lecture that James Watson attended. Watson later said he didn't pay attention during her lecture.
- Wilkins took some of his data and Franklin's data and showed them to James Watson and Francis Crick.

James Watson and Francis Crick, 1953

- Watson and Crick both worked at the Cavendish Laboratory in Cambridge, England.
- They used X-ray data from Wilkins (and Franklin) and built the first accurate model of the structure of DNA.
- In 1953, they published their findings in the journal Nature. Franklin and Wilkins published papers on their X-ray data at the same time and in the same issue.

Nobel Prize in Physiology or Medicine, 1962

Watson, Crick, and Wilkins received a Nobel Prize for their discoveries. Franklin did not. Even if they had acknowledged all she did, she could not share the Nobel Prize because she passed away in 1958 from cancer. Nobel Prizes can only be awarded to living individuals.