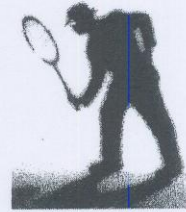


Rebecca



DNA DETECTIVES

Your Mission: Consult with your fellow scientists to determine the structure of DNA. Work as team and a Nobel Prize may be your reward!

Read your envelope and answer the questions. Ask your classmates about their scientist to complete the chart. Answer the questions at the end on your own.

Francis Crick

What were his important contributions to discovery of DNA?

- came up with the double helix structure w/
- proposed the Central Dogma + Adaptor Hypothesis

DNA was the storehouse of genetic info, RNA was the bridge that transferred this info from nucleus to cytoplasm where proteins are made

How did he work with other scientists in the field?

- worked w/ other scientists to discover DNA's shape / structure
- members of the informal "RNA fire club" - solved riddles of RNA + understand the way it

What was interesting about him?

- Got the Nobel Prize in Medicine for solving the structure of DNA

James Watson

What were his important contributions to discovery of DNA?

- The structure of DNA was discovered w/ Crick
- Wrote a book called the Double Helix
- Worked w/ other scientists such as Maurice Wilkins

How did he work with other scientists in the field?

- Worked well w/ scientists; provided data on which the structure was based on

What was interesting about him?

- went to college at 15
- Won Nobel Peace Prize

Linus Pauling

What were his important contributions to discovery of DNA?

- proposed DNA was a triple helix

How did he work with other scientists in the field?

- he couldn't work w/ other scientists because he was thought to be a Communist

What was interesting about him?

- was a Communist

Rosalind Franklin

What were her important contributions to discovery of DNA?

- her data helped confirm the 3D structure of DNA

How did she work with other scientists in the field?

- her data helped Crick + Watson + Wilkins discover the structure of DNA

What was interesting about her?

- worked on DNA, and the structure of tobacco mosaic



Maurice Wilkins

What were his important contributions to discovery of DNA?

- He studied the orientation of purines and pyrimidines

How did he work with other scientists in the field?

- He assisted in researching DNA
- Corrected Watson + Crick in their discovery of DNA's structure

What was interesting about him?

- He is Scottish; discoveries he made led to the discovery of DNA's structure

Erwin Chargaff

What were his important contributions to discovery of DNA?

- researched bacteria; was inspired by Oswald Avery who studied DNA

How did he work with other scientists in the field?

- Worked w/ Watson and Crick on their discovery

What was interesting about him?

- wasn't impressed by Watson + Crick's discoveries; felt he helped them find their discoveries

Why was the discovery of DNA so important for science?

- Gave a base of how genetic information is stored in cells
- Its structure helped to compare DNA to RNA, and how they operate in genetics (well, mostly DNA for genetics)

How did these scientists collaborate together? What does this suggest about how scientists work?

They collaborated in discovering DNA's true structure. This suggests that although they may not work together, scientists may "borrow" each others theories and ideas