

## Finding the Structure: pieces of the puzzle

### Background

James Watson and Francis Crick are given credit for developing the three-dimensional structural model of DNA used today. However, they were not the first to ask the question, "How is hereditary information carried from one generation to the next?" or "How does it work?"

Throughout history, our understanding of science changes as small modifications are made to what is known. Each discovery makes it possible for the next step in our understanding of scientific concepts to occur. The Watson and Crick model of DNA would not have happened without the work done by Oswald Avery, Phoebus Levene, and Friedrich Miescher.



Go to [www.dnai.org](http://www.dnai.org) > Code > Finding the Structure > problem

As you work through the *problem* section, record the specific contribution that each scientist made in the boxes provided.

Friedrich Miescher
Phoebus Levene
Oswald Avery

### Solving the DNA puzzle

Other scientists working with DNA at the same time as Watson and Crick include Erwin Chargaff, Rosalind Franklin, Linus Pauling, and Maurice Wilkins. The discoveries made by these individuals were important in solving the DNA puzzle.

1. Obtain an envelope containing 17 puzzle pieces.  
Examine the pieces and read through any information provided on them.



2. Go to [www.dnai.org](http://www.dnai.org) > Code > Finding the Structure > players

As you watch and listen to the videos and read the text, select the puzzle pieces that correctly match the scientists and contributions each made to our understanding of DNA structure.

Remove puzzle pieces that do not make connections between scientists and their contributions.



3. Before you make your final selection, work through the *pieces of the puzzle* section. ([www.dnai.org](http://www.dnai.org) > Code > Finding the Structure > pieces of the puzzle)

