

What is the Structure of DNA?

Name: _____

Date: _____

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- Before a home is built, an architect creates a plan called a _____.
- Many workers come _____ to read the blueprint and pull all the components of the home in place.
- Without electricity, plumbing, insulation, heating, cooling, and more, the home would not _____ as a family would expect it to.
- _____ is the architect for our bodies.
- He makes the plan and brings all the parts together to function as He _____.

The DNA Puzzle

- The discovery of _____ was a long process that began many years ago and involved the work of many scientists.
- When research began of what was inside a _____, microscopes were not as powerful as they are today.
- To learn more about the cell and how it worked, scientists conducted a variety of _____.
- Some of these investigations suggested that there was something inside the cells passing on _____ traits from parents to their offspring.
- One of the most famous experiments was conducted by _____ who studied peas, trying to determine why some had different colored seeds, shapes, and other characteristics.
- It took many researchers to unravel the mystery of DNA because it is _____ and contained within the cells of living things.
- Where are the blueprints your body uses to build new cells kept?
- As you recall, DNA contains the _____ instructions that allow an organism to function and develop.
- In eukaryotic cells, the DNA is found within the _____ of cells.
- Watson and Crick were the first to _____ the DNA structure.
- It is the specific _____ of DNA that allows it to hold the genetic information and pass it on to a new generation.

In the Nucleus

- Imagine peering into the nucleus of a cell from your body.
- Inside you would find 46 _____, threadlike structures of DNA.
- Pull the chromosomes out of the nucleus, unwind them, and you have almost 2 m (_____) of DNA!
- Imagine looking more closely at this DNA.
- Small sections of DNA are called _____, which are the basic units of hereditary information.
- This information is passed on from parents to _____.
- These _____ are characteristics, such as height and hair color.
- Genes tell the cell when and where _____ should be formed.
- _____ are larger molecules that are the building blocks for cells.
- While DNA codes for the subunits called amino acids that make up proteins, differences in protein _____ and protein _____ in cells result in your traits.

Faith Connection

- *Do you think people in biblical times knew anything about inherited traits? Explain.*