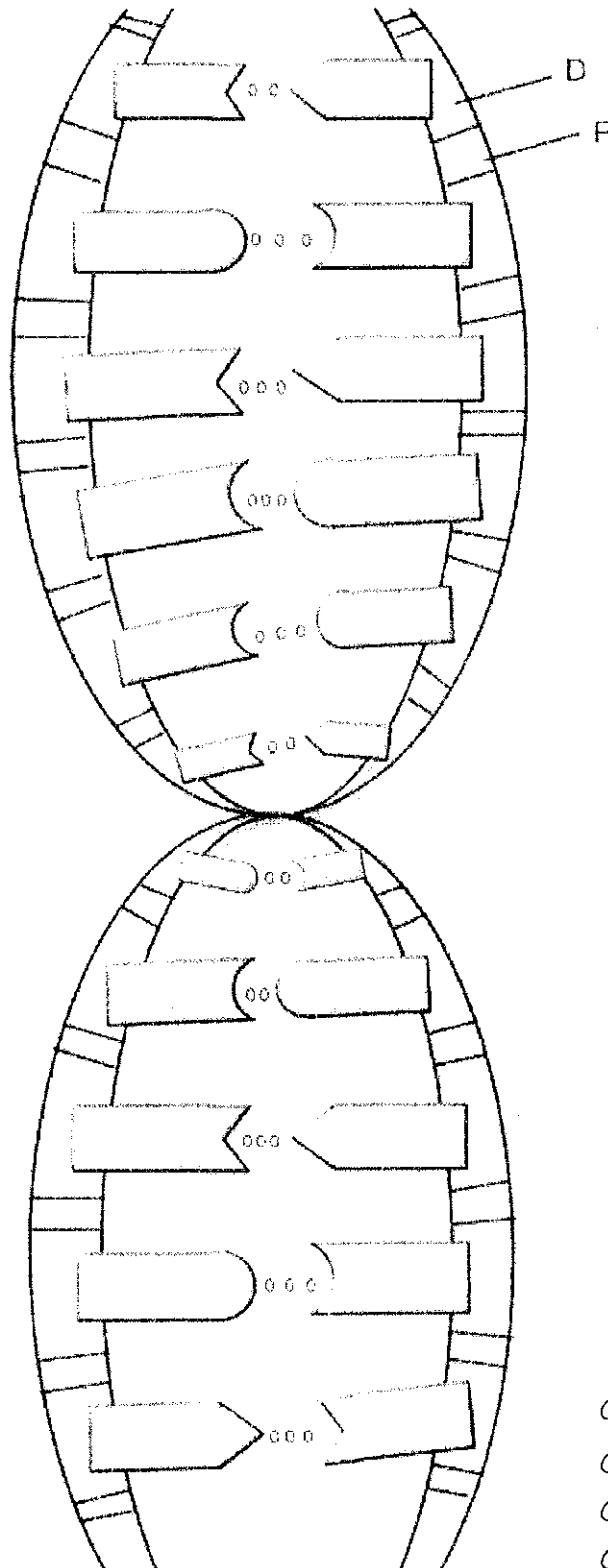


DNA -- THE DOUBLE HELIX



Color the thymines orange.

Color the adenines green.

Color the guanines purple.

Color the cytosines yellow.

The sides of the ladder are made of alternating sugar and phosphate molecules. The sugar is deoxyribose. Color all the phosphates red (labeled with a "p"). Color all the deoxyriboses blue (labeled with a "D").

1. Write out the full name for DNA. _____
2. What is a gene? _____
3. Where in the cell are chromosomes located? _____
4. What two scientists established the structure of DNA? *BONUS*
 - a. _____
 - b. _____
5. What is the shape of DNA? _____
6. What are the sides of the DNA ladder made of?
 - a. _____
 - b. _____
7. What are the "rungs" of the DNA ladder made of?
 - a. _____
 - b. _____
 - c. _____
 - d. _____
8. What sugar is found in DNA? _____
9. How do the bases bond together? A bonds with _____ G bonds with _____
10. How do some cells become brain cells and others become skin cells, when the DNA in ALL the cells is exactly the same. In other words, if the instructions are exactly the same, how does one cell become a brain cell and another a skin cell?
11. Why is DNA called the "Blueprint of Life"?

Task 1

Complete the missing work sentences using your knowledge and the missing words below.

chromosomes



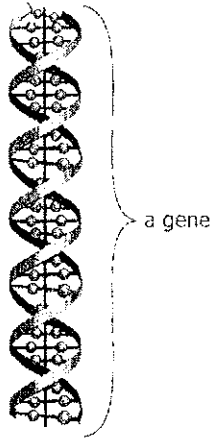
Chromosomes are found inside the _____ of a cell.

There are _____ pairs of chromosomes in every human body cell.

One of each pair of chromosomes comes from each _____.

Chromosomes are made up of long lengths of _____.

genes



A gene is a short section of a _____.

Each gene _____ for a different _____.

Genes work in _____. There are different versions of each gene, one is often _____ over the others.

DNA



DNA is short for _____.

It is a long chain _____ that is made up of a combination of _____ DNA bases.

DNA has a special structure called a _____.

Missing words

4 DNA pairs double nucleus characteristic chromosome
23 codes helix molecule parent dominant deoxyribonucleic acid

Task 2

Draw lines to match up the beginning and the end of the sentences relating to chromosomes, genes and DNA.

DNA is short for ...

... called a double helix.

Chromosomes contain many genes that ...

... deoxyribonucleic acid.

Genetic material is found...

... 4 DNA bases.

There are 23 pairs ...

... controlled by genes.

DNA is a molecule made up of a combination of ...

... of a chromosome.

We inherit our genes ...

... code for our characteristics.

Each gene is a short section ...

... long coiled chains of DNA.

Chromosomes are made up of ...

... of chromosomes in the nucleus of a body cell.

DNA has a special structure ...

... in the nucleus of each cell.

Our characteristics are ...

... from our parents.