DNA

**Chromosomes are made of DNA and contain genes**

Inside the \_\_\_\_\_\_\_\_\_\_\_ of each of your body cells you have \_\_\_\_\_\_\_\_\_\_\_\_\_ pairs of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Each \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is one long coiled molecule of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Within each DNA molecule, there are shorter sections of DNA – these sections are called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. You inherit half of your genes from your\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and half from your\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. They control our \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Genes mother DNA nucleus

characteristics chromosome father

chromosomes 23 twins

Two people with identical genes are clones of each other. They are identical\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

****The structure of DNA is described as a \_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. There are cross links between the two helices formed by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Each gene has coded \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. This **genetic code** is formed by the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in a particular length of DNA. Each gene contains a different \_\_\_\_\_\_\_\_\_\_\_\_ of base \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. A gene codes for a particular combination of \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ that makes a specific (particular) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

protein double helix genetic information pairs sequence sequence base pairs base pairs amino acids

(HINT: Lots of amino acids make up 1 protein).

A T C G A G C T A

Amino Acid – Amino Acid – Amino Acid

Protein

 What does your body need proteins for?

DNA is a **polymer**. It is made up of lots of small, repeating units called **nucleotides**

**Bases always pair up!**

**Guanine (G)** always pairs with **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.**

**Adenine (A)** always pairs with **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.**

This is called complementary base pairing.

Draw a section of the DNA molecule that you made (make your chain at least 3 nucleotides long)