**DNA and Proteins**

**Chromosome:**



How many chromosomes are found in:

**Humans:**

**Cows:**

**Fruit flies:**

**Corn:**

**Butterfly:**

**Chicken:**

**Bat:**

**Myrmecia pilosula** (ant)**:**

**Ophigolussum Reticulatum** (fern)**:**

Each of your body cells has the same amount of **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** information (\_\_\_ chromosomes). If all cells have the same information, what makes a liver cell different from your nose cells?

 Specific genes are read in a cell to make specific **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**. These **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** will tell the cell what to do to **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_e** for a particular **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**. This means **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** are needed to make your **\_\_\_\_\_\_\_\_\_\_\_\_** work are only found in **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** cells, and cells that are used for **seeing** have proteins that are only found in your **eyes**.

**Your body uses proteins for a large variety of tasks:**

Proteins used to speed up chemical reactions are called **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**.

Proteins used to send messages in the body are called **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.**

One of the proteins used to form the connective framework of your muscles and bones is called **\_\_\_\_\_\_\_\_\_\_\_\_**.

The protein that is the main structural part of hair, nails, teeth and skin is called **\_\_\_\_\_\_\_.**

The protein used to carry oxygen to and from the lungs is called **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.**

 It is estimated that the human body has the ability to generate at least **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** different proteins.

**How Proteins are Produced**

What are proteins made of? **\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_** are small, specific chemical structures that can stick together in many different ways. **\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_** can organize themselves into the wide variety of proteins that are necessary for life.

**Flow Chart**

 The ribosomes read the **\_\_\_\_\_\_\_\_\_\_\_** strands \_\_\_\_\_\_ letters at a time. The **\_\_\_\_\_\_\_** letter code has a total of **\_\_\_\_** different possibilities. Each code represents one of the **\_\_\_\_** necessary amino acids used in the body. The ribosome will pick up one amino acid at a time and slowly stick them together by following the code on the RNA.

Homework: p.135 Check Your Understanding & Protein Coding Sheet