Does every organism on Earth use the same building blocks for DNA? Yes or No (circle one)

Code of Life = DNA contains the code for each _________________ an organism needs to survive.

Every cell in an organism’s body contains a ________________________________ of chromosomes.

What determines the type of protein an organism makes?

What is a sequence of 3 base pairs called?

Each codon “codes for” a particular _________________________________.

Amino acids are the monomers of what?

What is a gene?

What is the purpose of the proteins that genes code for?

What does each somatic cell in an organism contain?

Define the term “somatic cell”:

Define the term “sex cell”:

***Which types of organisms do you think have more chromosomes than others?

Fill in the chart below:

<table>
<thead>
<tr>
<th>Organism</th>
<th># of Pairs of Chromosomes</th>
<th>Total # of Chromosomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dog</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Potato</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Do all organisms have the exact same number of chromosomes? Yes or No (circle one)

Organisms get 1 set of chromosomes from each parent:

- Maternal Chromosomes =

- Paternal Chromosomes =
There are 2 types of chromosomes:
- Autosomes =
- Sex Chromosomes =

All somatic cells contain ____________ pair of each type of chromosome

1 Maternal Chromosome + 1 Paternal Chromosome = _______________________

Because one chromosome comes from the mother and one from the father, traits are passed on to offspring

Draw/ Illustrate a pair of homologous chromosomes BEFORE replication: and AFTER replication:

How many genes are on a single chromosome?

Organisms that are closely related may have what?
- Give an example below:

Organisms that are not closely related may what?
- Give an example below:

Not only does DNA function as the code of life for protein synthesis, but DNA also does what?

- Define the term “DNA Replication” by stating the purpose:

**DNA Replication**
- DNA is carried out by what?
- What are the 2 steps of DNA replication?
  1.
  2.

What is the result of DNA replication?