**Reproduction: Intro Review - The Cell and Nucleus**

Cells are **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** living beings that can **\_\_\_\_\_\_\_\_\_\_\_\_\_\_** on their own. This means that any single cell have a variety of tasks to do to stay alive.

The parts inside the cell are called **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**. **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** can take up to 5-30% of the cell, the rest is water. Some organelles are only in plant cells, so won’t be found in animal cells.

**Organelles**

**Cell Membrane:**

**Cytoplasm:**

**Mitochondria:**

**Ribosomes:**

**Endoplasmic Reticulum:**

**Golgi body:**

**Vesicles:**

**Vacuoles:**

**Lysosome:**

**Cell Wall:**

**Chloroplasts:**

**Nucleus:**

**Nuclear Membrane:**

**Nucleolus:**

**The Nucleus**

The nucleus is the **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_** of the cell, which means it governs function of the cell. How does the nucleus tell other parts of the cell what to do?

The nucleus has an “**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_**” on what to do. The **DNA** is the instruction booklet and tells the cell what **proteins** to **make** and **when**.

DNA (**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_**) when simplified may look something like a ladder. **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** bind **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** making a “backbone” with special steps attached to the sugars. The steps of a DNA “ladder” consists of four compounds that are called **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.**

When the nucleotides are hooked into a sequence, we get a short piece of DNA. Similar to a short word (**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** for example)

 **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** and **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** are always paired and **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** and **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** are always paired.

DNA is packed up into **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**. **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** are coiled up to form X shaped **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**. Each type of animal has a different number of **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**. Humans have \_\_\_\_\_\_ base pairs of chromosomes (meaning they have **\_\_\_\_\_\_\_\_\_** chromosomes in total).

**\_\_\_\_\_\_\_\_\_\_\_\_** are located on the chromosome. \_\_\_\_\_\_\_\_\_\_\_\_ are short sections of DNA that are responsible for a specific job or trait.

**Homework**: Reading Check p.124, Pre-read Chapter 4.1 p.125-132