**Thinkables:**

1. Obviously the way a cell looks is different depending on the function. Do you think a cell will have differences in organelles depending on the function of that cell? Explain your answer. What organelle(s) would muscle cells need a lot of?
2. True/False: The nucleus of a cell contains different types of DNA depending on the structure and function of the cell for that organism. Explain your answer.
3. All cells have a phospholipid bilayer as a cell membrane. Thinking about the variety of shapes and sizes of cells what can you conclude about the cell membrane?
4. Cell Structures for Specialization

Flagellum-

Cilia-

Microvilli-

Contractile vacuole-

Eyespot-

phototaxis

chemotaxis

**\*\*Now, do the matching activity in the baggies with a group of people around you.**

**Have Mrs. Cowley check off here 🡪 \_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**What is gene expression?**

Gene expression is the activation of a gene that results in a protein. Gene expression takes place differently in prokaryotes and eukaryotes **Prokaryotes**

No membrane bound organelles (nucleus) - More primitive organisms

Only one circular chromosome -Bacteria are the only organisms that are prokaryotes.

**Eukaryotes** Membrane bound organelles (specialize in function –nucleus, mitochondria, chloroplast)

Chromosomes are in pairs and not circular \*All organisms that are not bacteria: protist, fungi, plants and animals

* DNA in eukaryotes has regions of coding and noncoding DNA. The regions of DNA that code for proteins or traits are called **EXONS**, while the regions that do not code for proteins are called **INTRONS.**
* In cells there are regulatory elements that control gene expression.
* \* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* \* not all DNA codes \_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_… they are literally called “\_\_\_\_\_\_\_\_\_\_\_” codons☺
* \* not all genes are “\_\_\_\_\_\_\_\_\_\_\_” all your life.

Ex. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

It would not be \_\_\_\_\_\_\_\_\_\_\_\_\_\_for your cells make all your proteins every \_\_\_\_\_\_ of your life…

Therefore, your cells have periods when your proteins are made and when they aren’t… like turning on and off a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.