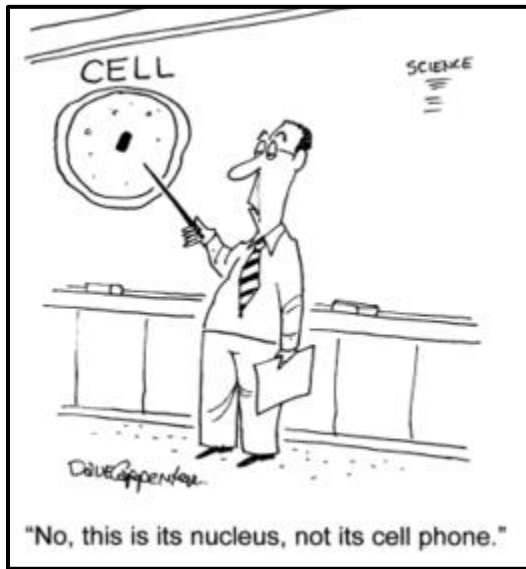


Chapter 1 - Cells: The Basic Units of Life



What are cells? (*in your own words*)

1

There are 3 parts to the cell theory, they are the following:

- 1.
- 2.
- 3.

3

Why are cells so small?

4

How are bacteria different from archaea?

5

What is the difference between eukaryotic cells and prokaryotic cells?

6

What took so long to discover cells? What device helped to discover cells?

2

Draw a simple picture of a microscope:

Define the following terms: ***cell, cell membrane, organelle, nucleus, prokaryote, and eukaryote***

What are the benefits of being multi-cellular?

1.

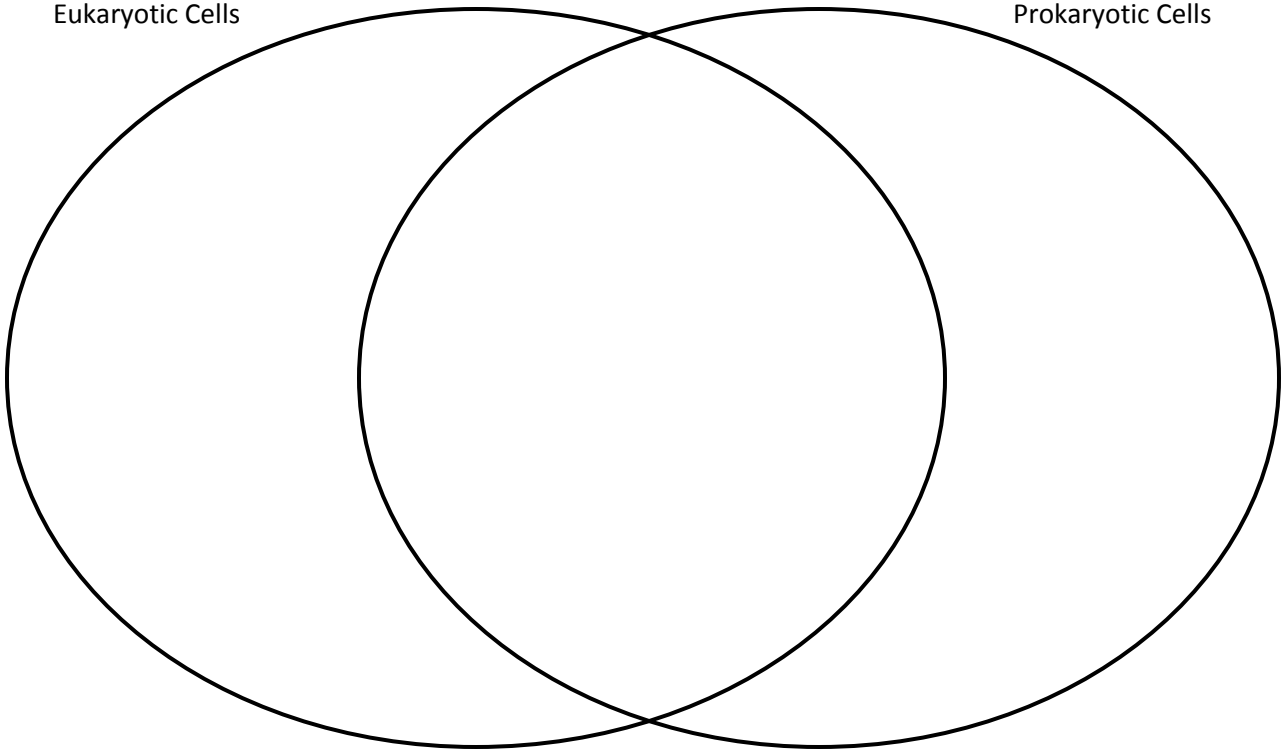
2.

3.

7

Eukaryotic Cells

Prokaryotic Cells



8

Finish this sequence:

_____ work together to form _____

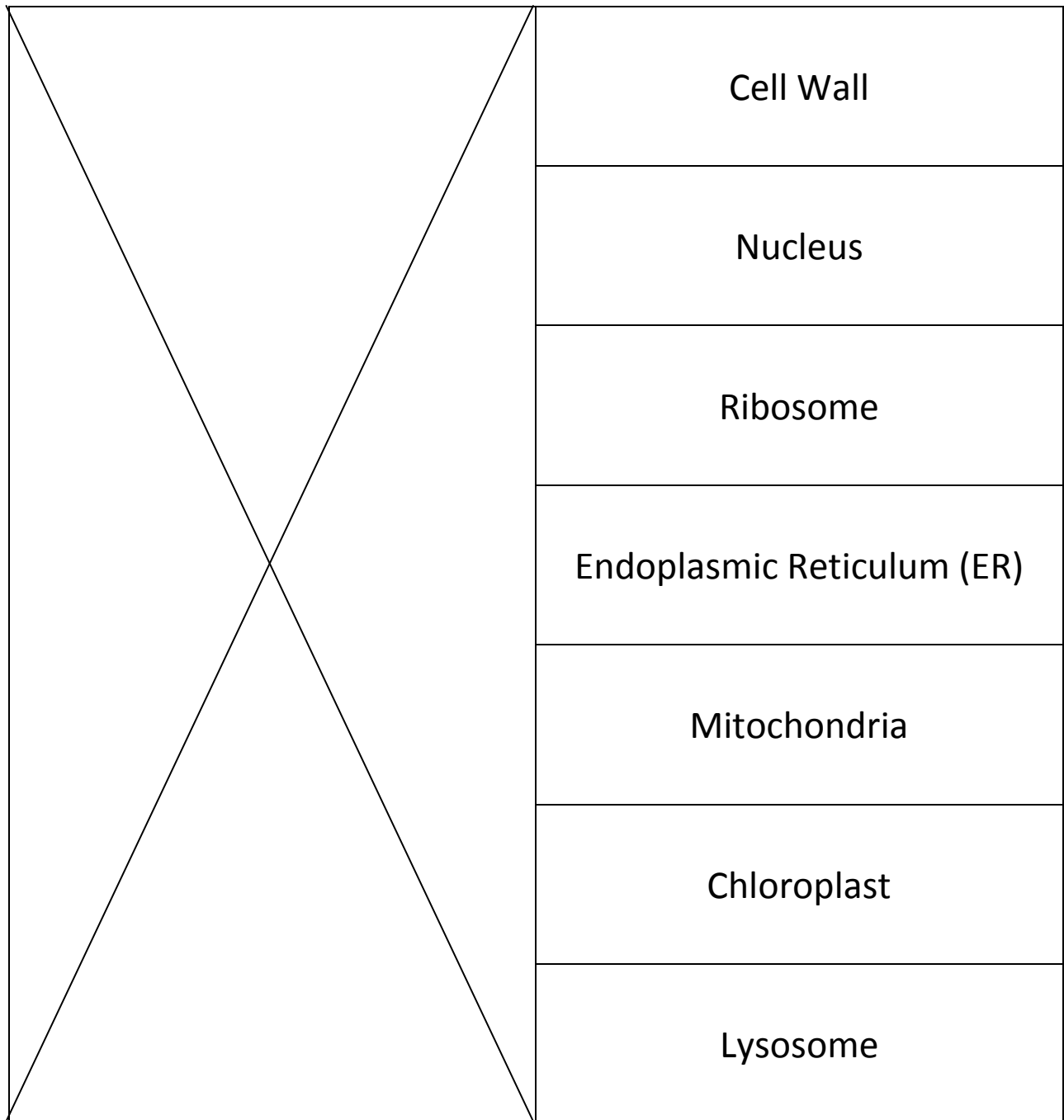
_____ work together to form _____

_____ work together to form _____

9

<i>Simile:</i>	<i>Definition:</i>
<i>Simile:</i>	<i>Definition:</i>
<i>Simile:</i>	<i>Definition:</i>
<i>Simile:</i>	<i>Definition:</i>
<i>Simile:</i>	<i>Definition:</i>
<i>Simile:</i>	<i>Definition:</i>
<i>Simile:</i>	<i>Definition:</i>

What is the difference between structure and function?



Cell Poster & Group Participation Survey

Cell Components Quiz

Cell Internet Investigation Paper

Chapter 2 - The Cell in Action

Define the following: ***diffusion, osmosis, passive transport, active transport, endocytosis, and exocytosis***

Draw an example of diffusion (*use the book as a reference or the classroom display*)

What is the difference between active and passive transport?

What is the difference between endocytosis and exocytosis?

Draw a cartoon or word picture to help you remember the difference between endocytosis and exocytosis.

Compare mitochondria and chloroplast – adding cellular respiration and photosynthesis to the pictures.

Define the following: ***cell cycle, chromosomes, homologous chromosomes, mitosis, and cytokinesis.***

Make a flipbook of the mitosis process/steps. Make sure to add notations of what is occurring in those steps.

Heredity

Define the following: heredity, recessive trait, dominant trait, gene, allele, genotype, phenotype, probability.

Who was Gregor Mendel?

What was Gregor Mendel's Research?

How has his research impacted the science and understanding of heredity?

Insert Table copy from page 60 and fill in and calculate ratios.

In simple terms, what is the difference between genotype and phenotype?

Draw a Punnett Square just like the one on page 63 of the text (without the pictures of the flowers).
Now practice the steps with some more tables.

Find Punnett Square Table graphic and insert.

Do the probability exercise with a die and with the coin/flipper if there is time. *Heredity Happening*.

How do you calculate the probability of the Punnett Square?

Do all genes work in the same manner as those used in the previous examples? (One gene – one trait) Explain.

Define meiosis, sex chromosome,

Work through the meiosis diagram and put explanations to the steps that are involved in this process

How are mitosis and meiosis different?

What are sex-linked disorders? Why are they called “sex-linked?”

Look at the pedigree diagram and go through an explanation.

Work on the create your genetic creature project.

Genes and DNA

Define: DNA, nucleotide, RNA, ribosome, mutation,

What are the four different nucleotides of DNA?

What is Chargaff's Rule? Why is this important?

What are the four different nucleotides of DNA?

What contribution did Rosalind Franklin make to the knowledge of DNA?

What did Watson & Crick add to the knowledge of DNA?

What information did they use to make their contribution?

How and when are copies of DNA made?

Build a DNA strand with the templates and glue them together in the correct pairs.

_____ build together to make _____

_____ twist together to make _____

_____ combine with protein to make _____

_____ wind together to make _____

What are the steps of making a protein?

1.

2.

3.

How many bases are read at one time? _____

4.

5.

How do proteins affect traits?

How many bases of the mRNA are read at a time in the ribosome?

Amino acids join together to form what?

What are the different types of mutations?

What are the uses of genetic engineering and identification?

Do mutations always matter? Why?

Work on the trait bracelets – pipe cleaner and pony beads