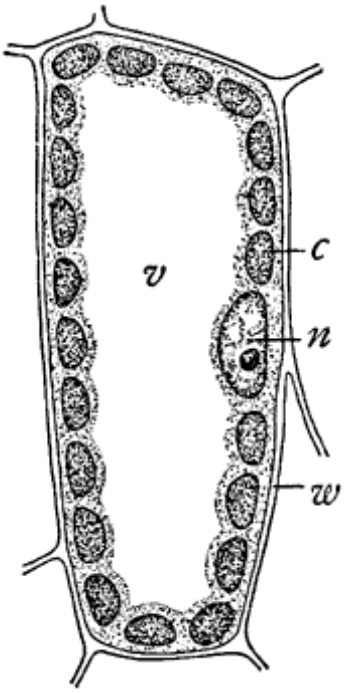
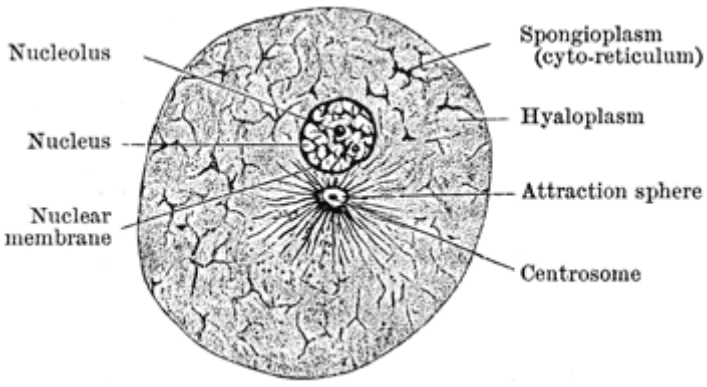
Name _____

Structure of the Cell

C_2 Workbook





Source: Clipart ETC, Florida Center for Instructional Technology (FCIT) at USF

To complete this set of assignments and move on to the next set of assignments, you must:

- Select and complete *five (5)* assignments.

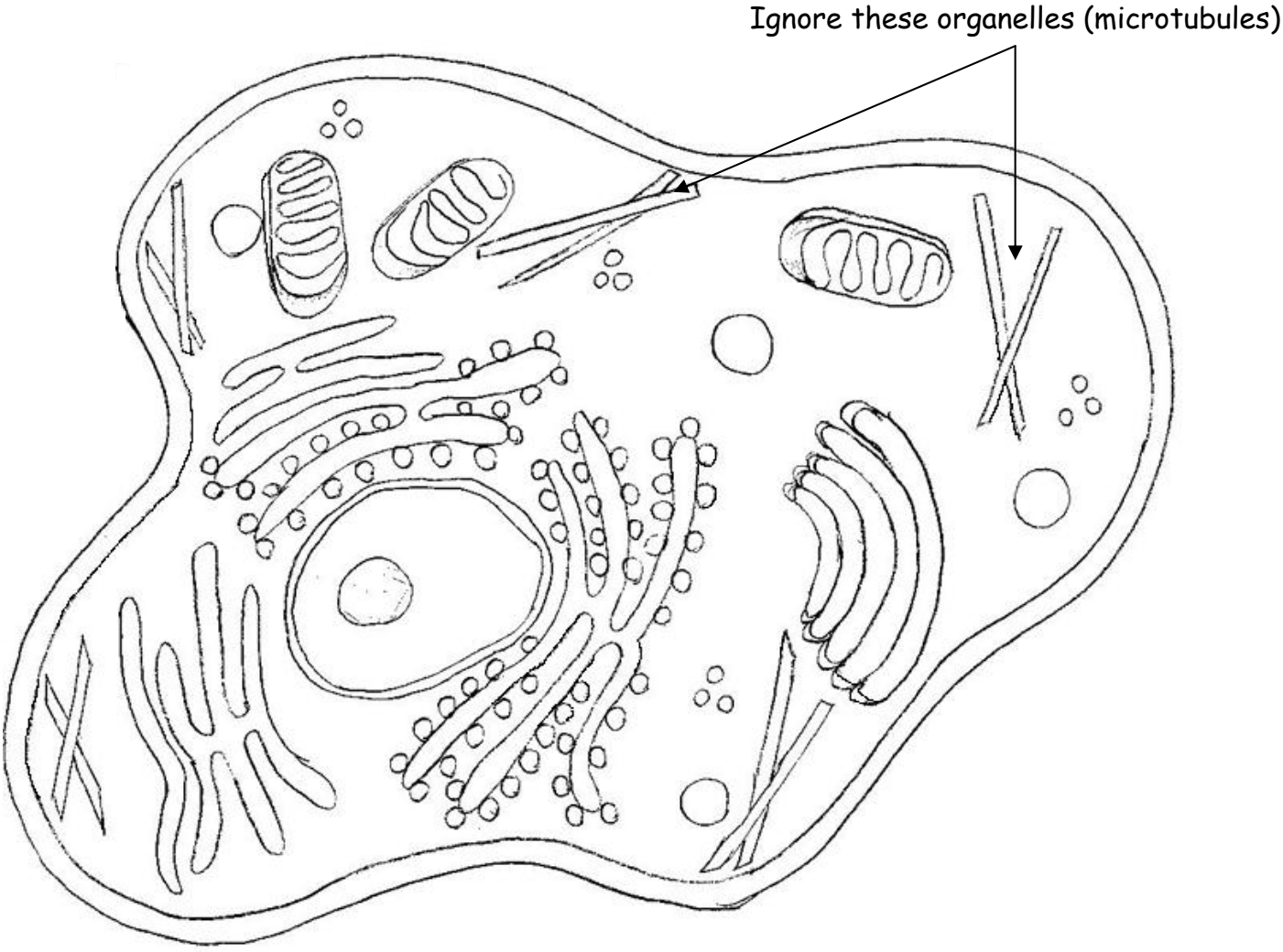
Assignment	Completed
Complete the *Coloring the Animal Cell.*	
Complete the *Coloring the Plant Cell.*	
Complete the *Comparing Plant and Animal Cells Venn Diagram*	
Complete *If I Was…*	
Complete *Help Wanted*	
Complete *Cell Matching Quiz*	
Complete *Cell Trading Cards*	
Complete *How We Learned About the Cell*	

- Successfully complete the quiz with a minimum score of 6 out of 8.

Coloring the Animal Cell

Directions: Choose a color for each of the parts below and fill in the square with the color of your choice. Color the cell part to match.

Organelle	Color	Organelle	Color
Cell Membrane		Ribosome	
Cytoplasm		Smooth ER	
Rough ER		Golgi Apparatus (Body)	
Mitochondria		Nucleolus	
Lysosome			



Coloring the Plant Cell

Directions: Choose a color for each of the parts below and fill in the square with the color of your choice. Color the cell part to match.

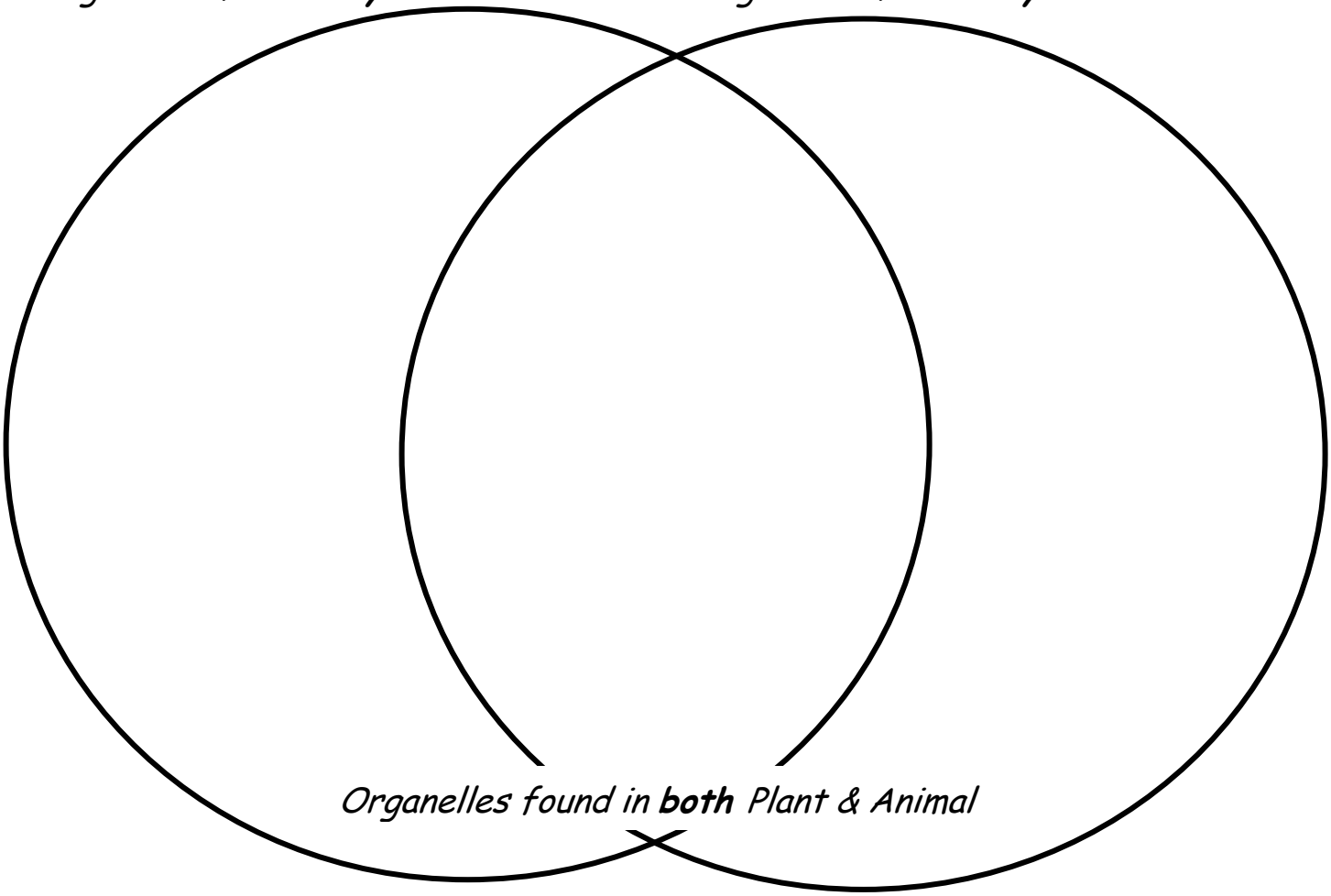
Organelle	Color	Organelle	Color
Cell Membrane		Ribosome	
Cytoplasm		Smooth ER	
Rough ER		Cell wall	
Mitochondria		Nucleolus	
Central Vacuole		Golgi Apparatus (Body)	
Chloroplasts			

Comparing Plant and Animal Cells Venn Diagram

Directions: Fill in the Venn Diagram to compare and contrast ***PLANT CELLS*** to ***ANIMAL CELLS***. Use your vocabulary words to identify the organelles.

*Organelles found **only** in Plant Cells*

*Organelles found **only** in Animal Cells*



*Organelles found in **both** Plant & Animal*

It is the cells which create and maintain in us, during the span of our lives, our will to live and survive, to search and experiment, and to struggle.

- Albert Claude

If I Was a ...?

1. Choose an organelle from the cell. Pretend you are this organelle for the remaining questions.	
2. What's your job?	
3. How many others of you are there in your cell?	
4. Do you have any coworkers whose job and appearance is different from you?	
5. When food gets taken into the cell, what do you do?	

Help Wanted!

Different parts of cells do different jobs. Read the advertisements and help each of the cell organelles listed below to find the right job.

Cell Membrane	Nucleus	Mitochondria
Lysosome	Ribosome	Chloroplast

Help Wanted!	*Help Wanted!*	*Help Wanted!*
Solar Power Plant Operator Need motivated person to run and maintain the solar power plant. The solar power plant is essential in providing power to the city using the energy of the sun.	***Security Director*** Controls what comes into and out of the city. Prevents terrorists and other people that will do damage to the city from entering the city.	***Cafeteria Manager*** Makes and arranges for the distribution of food needed by the work centers of the city.
Electric Plant Manager Need motivated person to run the city electric department. Makes sure that the city gets the energy it needs to function.	***Waste Treatment Plant Manager*** Need experienced person to run the Waste Treatment Plant. Responsible for collecting and disposing of all wastes produced in the cell.	***Chief Executive Officer*** Runs the functions of the city. Makes sure all parts of the city function properly.

Write the name of the plant structure next to the job for which it is best qualified.

Solar Power Plant Operator		Security Director	
Cafeteria Manager		Electric Plant Manager	
Waste Treatment Plant Manager		Chief Executive Officer	

Cell Matching Quiz

Directions: Place the letter that correct identifies the organelle in the space to the left.

_____ 1. Area that stores and packages chemicals.

_____ 2. Bubble-like storage vessel.

_____ 3. Control center of the cell.

_____ 4. Stores chlorophyll; used in photosynthesis.

_____ 5. Releases energy from nutrients.

_____ 6. Internal transport system with ribosomes attached.

_____ 7. Jelly-like materials between the nucleus and cell membrane.

_____ 8. Membrane surrounding nucleus and organelles.

_____ 9. Internal transport system without ribosomes attached.

_____ 10. Located within nucleus.

_____ 11. Stiff outer covering of a plant cell.

_____ 12. Site of protein synthesis.

a. Cell membrane

b. Cytoplasm

c. Smooth ER

d. Rough ER

e. Golgi body

f. Nucleus

g. Nucleolus

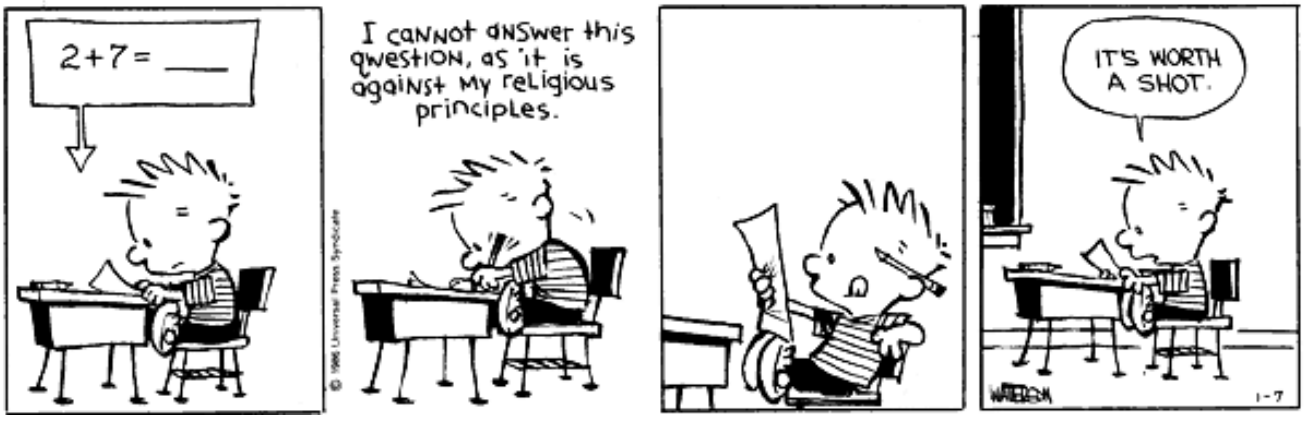
h. Cell wall

i. Chloroplast

j. Vacuoles

k. Mitochondria

l. Ribosome



Cell Organelle Trading Cards

(modified from an activity from *Science Explorer: Earth Science*)

You have probably seen various kinds of trading cards. Some of these feature sports figures and include information about the player, statistics relating to his or her skill as an athlete, and a picture. Similar cards exist for action figures.

Problem

How can you create a set of trading cards for the organelles in an animal or plant cell?

Materials

- ✯ 3x5 index cards
- ✯ Colored pencils
- ✯ Books about cells
- ✯ Notess

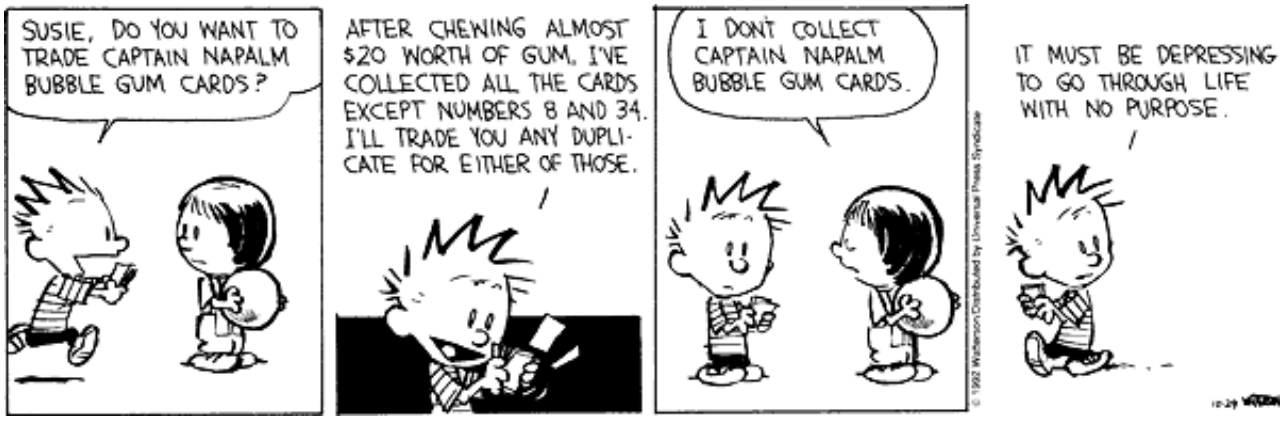
Procedure

1. Study the information you have about cell organelles and think of a way they can be used to create trading cards (one card for each organelle).

3. Gather information for your cards. One goal should be to include enough information that someone could figure out what the object is without knowing its name.

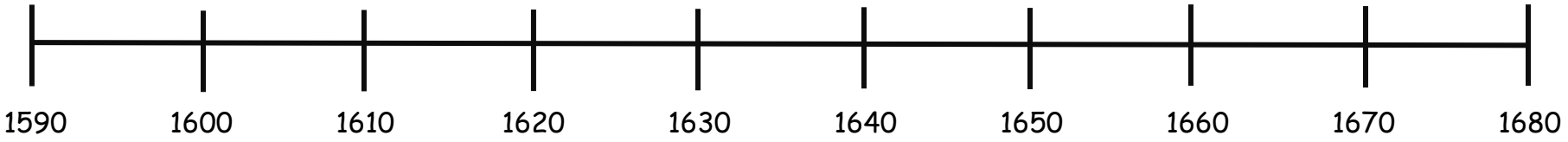
4. Make a design for your cards.

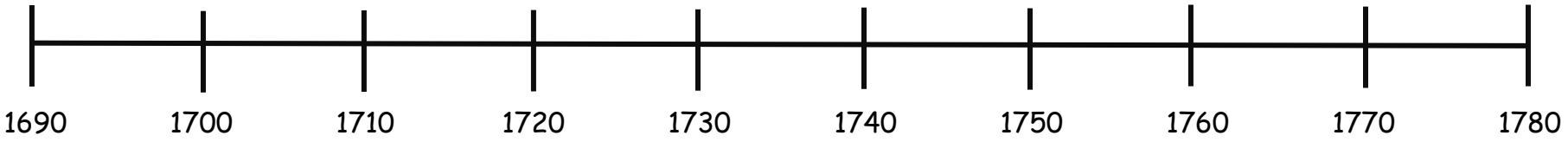
5. Complete your cards.

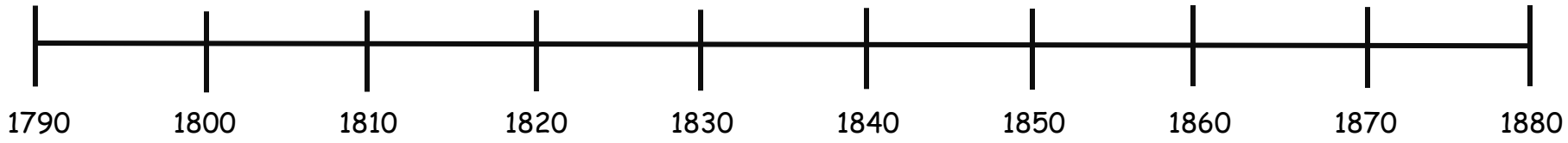


How We Learned About the Cell

Your assignment is to complete the timeline. Refer to pages 12 – 13 in the *Kids Discover Cell* magazine. Identify the person/persons/group that helped us learn about the cell. After you have completed the timeline, explain how what we have learned about the cell helps us today.



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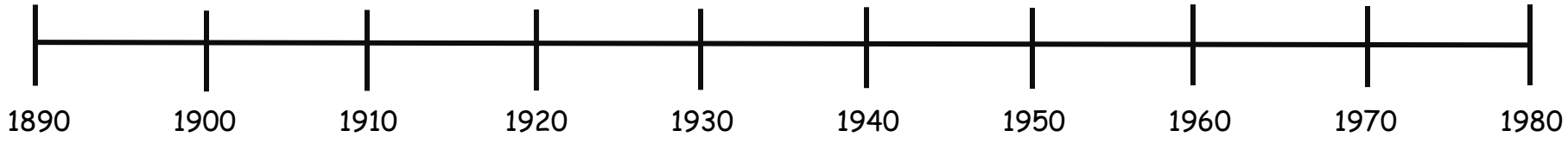
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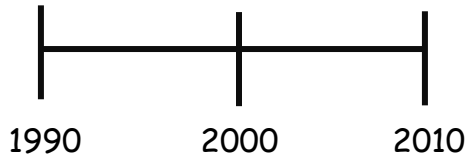
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2010