

TP: Students will explore the functions of living things through observation

Do Now: Read the story of "Marty the Martian"
Follow the directions: be the Defense & Prosecutor

Homework
Vocab from Flexbook: Use pp. 423- 429
•**Define:** organism, eukaryotic cell, prokaryotic, organelle, nucleus, cytoplasm, plasma membrane, ribosome, virus
• **Read** pg. 423-429 recall pg. 431 #1-3 thinking critically #6

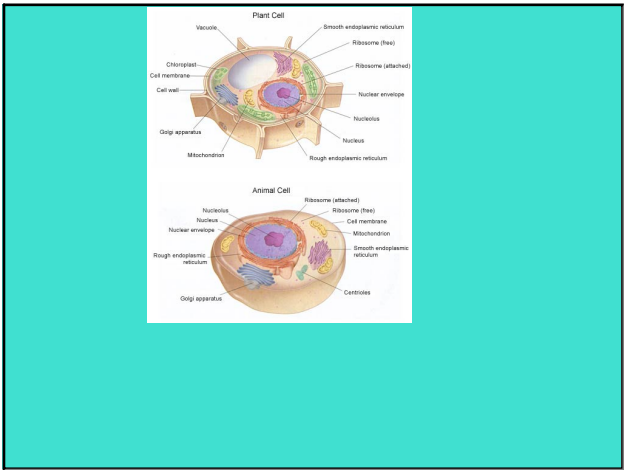
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Properties of Life

For something to be living it must have the following properties:

- Be made of cells (Cellular organization)
 - organism may be unicellular (1- celled) or
 - multi-cellular (many cells)
- Contain similar chemicals- carbohydrates, proteins, lipids, water
- Use energy (Metabolism)
- Growth & Development
- Respond to surroundings & stimuli
- Maintains Homeostasis
- Reproduce
- Heredity- pass on genetic material to offspring

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Cell Theory

- All living things are made of cells
- Cell is the basic unit of functioning
- All cells come from previously existing cells

Scientists who researched Cells:

- **Robert Hooke**- 1680's - looks at cork slices under an early microscope; names what he sees "cells"
- **Antony van Leeuwenhoek**, (1632-1723)- uses a microscope to observe pond water. Sees protozoa; made 500 microscopes, about 10 still survive
- **Schleiden**, Botanist (German); observes that all plants made of cells
- **Schwann**, Zoologist (German); discovers that all animals appear to be made of cells
- **Virchow**, Physician (German); determinethat cells come only from existing cells
- **Pasteur**, Physician, (French) - disproves spontaneous generation

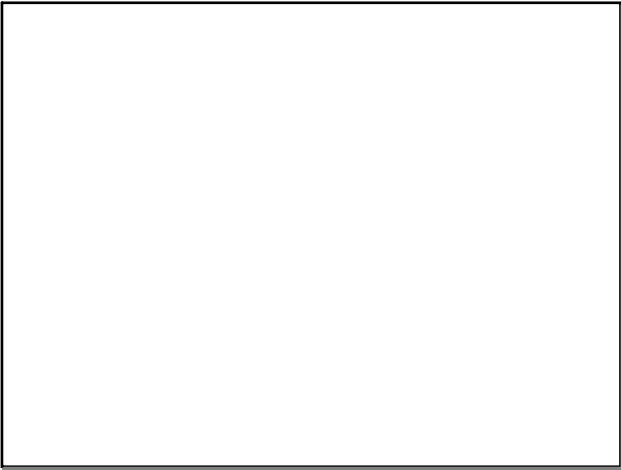
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Pasteur's Experiment to Disprove Spontaneous Generation

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Redi's Experiment- Italian doctor, 1668

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