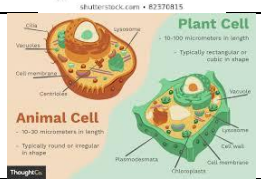
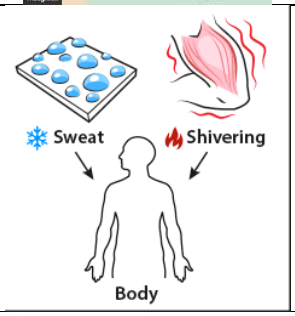
Biology Vocabulary

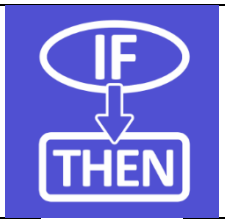
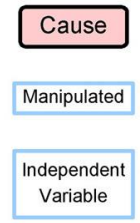
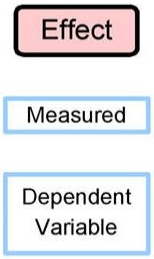
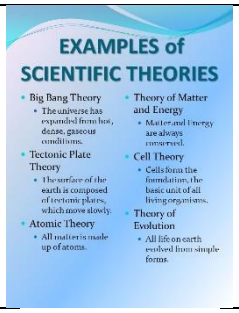
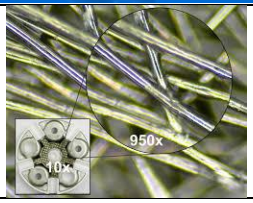
Chapter 1: The Science of Life

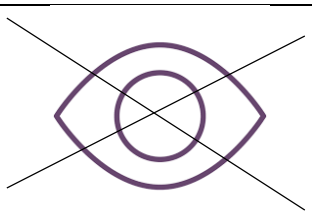
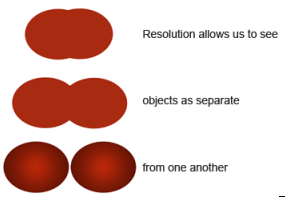
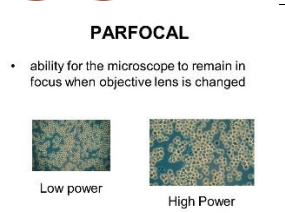
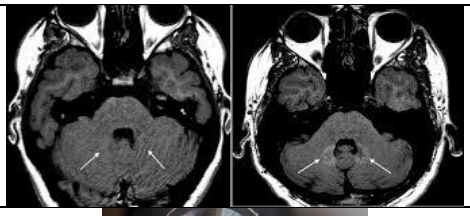
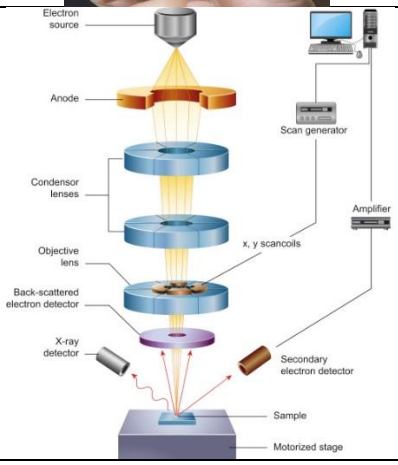
Essential Questions:

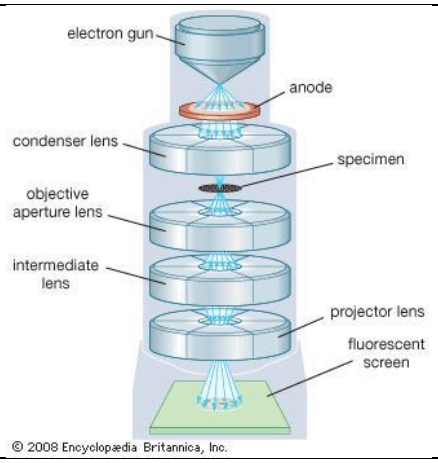
1. How are specimens characterized as living or non-living?
2. How does the scientific method serve as a guide to problem solving and scientific discovery?
3. How are the four types of microscopes used in biology?

Vocabulary

Word	Definition in your own terms	Example/Picture/What it's Like
Biology	Bio = Life Ology = Study of **Biology = The Study of Life**	
Stimuli	A thing or event that causes a specific reaction.	
Cell	Basic biological unit of all living things	
Homeostasis	Homeo = keep the same Stasis = equilibrium **Homeostasis** = maintaining a stable internal environment in response to external changes	
Observation	Gaining information by using your five senses	
Experiment	A scientific procedure used to test a hypothesis, make a discovery, or demonstrate a fact	
Conclusion	A judgement that supports or refutes based on reasoning and data	
Control	The group in an experiment that does not get tested and is used as a comparison for checking results of an experiment	

Hypothesis	An educated predication	
Independent variable	The variable that is changed by the experimenter; "I change it"	
Dependent variable	The variable that is measured as a result of the independent variable being changed	
Theory	An explanation that is accepted based on facts	
Fact	Objective and verifiable observation	
Law	Statement that describes something you see that is ALWAYS true	
Magnification	Increasing concentration or size of a substance or thing	

Microscopic	Too small to see with the naked eye	
Objective	The lens of a microscope nearest to the object under the microscope	
Resolution	The shortest distance between two points on a specimen that can be distinguished as separate things	
Parfocal	All focal points on the same plane	
Contrast	Difference in light intensity between image and background	
Lens	Transparent viewing device used to converge or diverge transmitted light to and from images	
SEM scanning electron microscope	**SEM**: Dead only 3D images Surface images in great detail 1,500,000X and even greater, possibly 50,000,000X Not used in school	

TEM transmission electron microscope	**TEM**: Dead only 2D images Inside view with great detail Up to 200,000X magnification Do not use in schools	
Stereomicroscope	**Stereo:** Alive or Dead specimens 3D images Surface images Up to 40x magnification, but in school we use 10x or 30x	
Light:	**Light**: Alive or Dead specimens Primarily 2D images Allows you to see inside a cell Up to 2000x magnification, but in school we use 10/40/400