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	Biology
Stimuli	A thing or event that causes a specific reaction.	
Cell	Basic biological unit of all living things	Autorization e Partielle Partiel
Homeostasis	Homeo = keep the same Stasis = equilibrium Homeostasis = maintaining a stable internal environment in response to external changes	Sweat Shivering Body
Observation	Gaining information by using your five senses	Image: Signal state Image: Signal state VISION HEARING Image: Signal state Taste Image: Signal state Image: Signal state Image:
Experiment	A scientific procedure used to test a hypothesis, make a discovery, or demonstrate a fact	Experiments
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	EXPERIMENTAL GROUP CONTROL GROUP

Hypothesis	An educated predication	
		THEN
Independent variable	The variable that is changed by the experimenter; "I change it"	Cause Manipulated
		Variable
Dependent variable	The variable that is measured as a result of the independent variable being changed	Effect Measured
		Dependent Variable
Theory	An explanation that is accepted based on facts	<section-header> Examples of sciences of scie</section-header>
Fact	Objective and verifiable observation	Verifiable
Law	Statement that describes something you see that is ALWAYS true	Give me some examples of scientific laws! • Newton's Three Laws of Motion • The Laws of Thermadynamics • Beyle's law of gazes • The law of contenvation of mass and energy • Hoske's law of clasticity • Galileo's law of free fall • Kepler's three laws of planetary motion • Newton's law of gravitation
Magnification	Increasing concentration or size of a substance or thing	950×

Microscopic	Too small to see with the naked	
	еуе	
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	Resolution allows us to see objects as separate from one another
Parfocal	All focal points on the same plane	PARFOCAL • ability for the microscope to remain in focus when objective lens is changed Low power Low power High Power
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	Electron source Anode Ienses Condensor Ienses Back-scattered electron detector X-ray detector X-ray Condary Electron Secondary electron detector

TEM transmission electron microscope	TEM: Dead only 2D images Inside view with great detail Up to 200,000X magnification Do not use in schools	electron gun anode condenser lens objective aperture lens intermediate lens © 2008 Encyclopædia Britannica, Inc.
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	