

SCIENCE LEARNING CENTER
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Resources for TEAS Science Preparation

HUMAN BODY SCIENCE

OBJECTIVE	MSC RESOURCES	ONLINE RESOURCES	BOOKS/CDS
Describe the functions of the circulatory system.		http://www.innerbody.com/htm/body.html http://www.getbodysmart.com/ http://www.biology4kids.com/files/systems_main.html	BI 204/205 Book and CD
Describe the functions of the digestive system.		http://www.innerbody.com/htm/body.html http://www.getbodysmart.com/ http://www.biology4kids.com/files/systems_circulatory.html	BI 204/205 Book and CD
Describe the functions of the nervous system.		http://www.innerbody.com/htm/body.html http://www.getbodysmart.com/ http://www.biology4kids.com/files/systems_respiratory.html	BI 204/205 Book and CD
Describe the functions of the respiratory system.		http://www.innerbody.com/htm/body.html http://www.getbodysmart.com/ http://www.biology4kids.com/files/systems_nervous.html	BI 204/205 Book and CD

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Describe the functions of the immune system.		http://www.innerbody.com/htm/body.html	BI 204/205 Book and CD
		http://www.getbodysmart.com/	
		http://www.biology4kids.com/files/systems_immune.html	
Describe the general anatomy and physiology of the human body.		http://www.innerbody.com/htm/body.html	
		http://www.getbodysmart.com/	
		http://kfhs.spsk12.net/staff/cadorette/index_files/Page661.htm	
		Select “Population Ecology Notes”	
Explain that populations grow or decline through the combine effects of births and deaths, and through emigration and immigration.		http://www.biology.iupui.edu/biocourses/N100/2k4ch39pop.html	
		http://www.biology.iupui.edu/biocourses/N100/2k4ch39pop.html	
Identify various factors that influence birth rates and fertility rates.		http://www.biology.iupui.edu/biocourses/N100/2k4ch39pop.html	

LIFE SCIENCE

OBJECTIVE	MSC RESOURCES	ONLINE RESOURCES	BOOKS/CDS
Explain the process of natural selection and adaptation.		http://biol1114.okstate.edu/study_guides/scenarios/5-galapagos/Galapagos_frameset.htm	BI 107 Book and BI 107 CD
		http://www.actionbioscience.org/evolution/futuyma.html	
		http://www.biology4kids.com/files/studies_kingdoms.html	
Explain the biological classification system.		http://www.bio200.buffalo.edu/labs/nomenclature.html	BI 107 Book and BI 107 CD

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<p>Identify parts of a cell and its function (e.g. energy production, transportation of molecules, waste disposal, synthesis of new molecules, storage of genetic material).</p>		<p>http://www.cellsalive.com/cells/cell_model.htm http://www.biology4kids.com/files/plants_reproduction.html http://www.biology4kids.com/files/cell_wall.html http://www.biology4kids.com/files/cell_main.html http://www.biology4kids.com/files/cell_membrane.html</p>	<p>BI 107 Book and BI 107 CD</p>
<p>Explain that cells can differentiate.</p>	<p>Chemistry of Life (Biology Folder)</p>	<p>http://www.cellsalive.com/cells/cell_model.htm</p>	<p>BI 107 Book and BI 107 CD</p>
<p>Compare and contrast mitosis and meiosis.</p>		<p>http://www.cellsalive.com/cells/cell_model.htm Choose mitosis and/or meiosis from the menu on the left. http://www.biology4kids.com/files/cell2_mitosis.html http://www.biology4kids.com/files/cell2_meiosis.html</p>	<p>BI 107 Book and BI 107 CD</p>
<p>Compare and contrast photosynthesis and respiration.</p>		<p>http://sciencelearningcenter.pbworks.com/f/cell-res.pdf http://www.slideshare.net/MissWander/power-point-51-cell-energy-photosynthesis-respiration http://www.slideshare.net/Schroedermc/cellular-respiration-and-photosynthesis http://www.biology4kids.com/files/plants_main.html</p>	<p>BI 107 Book and BI 107 CD</p>

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Describe the structures and functions of nucleic acids to include DNA and RNA.	Chemistry of Life (Biology Folder)	http://www.dnatutorial.com/RNA.shtml http://www.attotron.com/pub/dnaquiz/Q1DNA.htm http://learn.genetics.utah.edu/	BI 107 Book and BI 107 CD
Explain that changes in DNA (mutations) occur spontaneously at low rates, and that only mutations in the germ cell can create variation that changes an organism's offspring.	Chemistry of Life (Biology Folder)	http://www.answers.com/topic/mutation http://www.nature.com/scitable/topicpage/genetic-mutation-441	BI 107 Book and BI 107 CD
Describe how RNA and DNA are involved in cell replication.		See section on mitosis/meiosis above. http://learn.genetics.utah.edu/ http://nobelprize.org/educational/medicine/dna/index.html	BI 107 Book and BI 107 CD
Explain that heredity information is stored in genes.		http://learn.genetics.utah.edu/	BI 107 Book and BI 107 CD
Compare and Contrast chromosomes, genes, proteins, RNA and DNA.	Chemistry of Life (Biology Folder)	http://learn.genetics.utah.edu/ http://nobelprize.org/educational/medicine/dna/index.html http://www.chem4kids.com/files/bio_proteins.html http://www.chem4kids.com/files/bio_dna.html http://www.biology4kids.com/files/cell_chromosome.html	BI 107 Book and BI 107 CD
Describe the differences between phenotypes and genotypes.		http://www.youtube.com/watch?v=ubmrhWo-Vso&feature=related	BI 107 Book and BI 107 CD

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Apply Mendel's laws of genetics and the Punnett Square.		http://www.execulink.com/~ekimmel/mendel1a.htm http://www.purchon.com/biology/mendel.htm	BI 107 Book and BI 107 CD
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EARTH AND PHYSICAL SCIENCE

OBJECTIVE	MSC RESOURCES	ONLINE RESOURCES	BOOKS/CDS
Identify the sun as the major external source of energy.		http://hyperphysics.phy-astr.gsu.edu/hbase/biology/energyc.html http://www.cosmos4kids.com/files/solsyst_sun.html	BI 107 Book and CD
Balance and identify important chemical reactions, including oxidation/reduction and acid/base reactions.	Chemistry of Life (Biology Folder)	http://www.chem4kids.com/files/react_intro.htm	CH 099A Book and CD
Identify the purpose of catalysts.		http://www.chem4kids.com/files/react_catalyst.html	CH 099A Book and CD
Recognize that enzymes are protein molecules.	Chemistry of Life (Biology Folder)	http://www.chem4kids.com/files/bio_enzymes.html	CH 099A Book and CD
Use pH scale to identify acid and base solutions.		http://lrs.ed.uiuc.edu/students/erlinger/water/background/ph.html http://www.chem4kids.com/files/react_catalyst.html	BI 107 Book and CD
Identify Chemical bonds between atoms in common molecules (e.g. Common hydrocarbons).	Chemistry of Life (Biology Folder)	http://www.chem4kids.com/files/atom_bonds.html	CH 099A Book and CD
State the chemical properties of water.	Chemistry of Life (Biology Folder)	http://www.chem4kids.com/	CH 099A Book and CD
Distinguish among kinetic energy, potential energy, and other energy contained by a field.		http://www.ftexploring.com/energy/enrg-types.htm http://www.chem4kids.com/files/react_thermo.html	CH 099A Book and CD

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Identify the measurable properties of atoms including mass and electrical charge.		http://www.chemguide.co.uk/atoms/properties/gcse.html http://www.chem4kids.com/files/atom_intro.html	CH 099A Book and CD
Identify protons, neutrons, and electrons as major components of an atom.		http://web.jjay.cuny.edu/~acarp/NSC/3-atoms.htm http://www.chem4kids.com/files/atom_intro.html	CH 099A Book and CD
Explain that chemical bonds result when electrons are shared or transferred between atoms.	Chemistry of Life (Biology Folder)	http://www.chem4kids.com/files/atom_bonds.html http://www.chem4kids.com/files/atom_isotopes.html	CH 099A Book and CD
Explain the physical and chemical patterns within the periodic table of elements.		http://chemistry.about.com/od/periodictableelements/a/periodictrends.htm http://www.chem4kids.com/files/atom_intro.html http://www.chem4kids.com/files/matter_chemphys.html	
Explain the difference of the atoms or molecules in liquids, gases and solids.		http://www.chem.purdue.edu/gchelp/liquids/character.html http://www.chem4kids.com/files/matter_states.html http://www.chem4kids.com/	
Compare and contrast evaporation, vaporization and condensation.		http://www.chem4kids.com/files/matter_evap.html http://www.chem4kids.com/ http://answers.yahoo.com/question/index?qid=20100524062340AAPwMQn	

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SCIENTIFIC REASONING

OBJECTIVES	RESOURCES
Identify questions and concepts that guide scientific investigations, including formulation and testing of hypotheses, use technology and mathematics to improve investigations and communications, formulate and revise scientific explanations (including conclusions) and models using logic and evidence, recognize and analyze alternative explanations and models, communicate and defend scientific argument, identify reasons for conducting investigations, and identify reasons for including technology and mathematics in science research.	Independent research and study including but not limited to prefaces and first chapters of introductory and/or general biology, chemistry, and physics textbooks. (a) http://www.biology4kids.com/files/studies_scimethod.html