

CONTENT AREA: Science

GRADE LEVEL: 6th

UNIT/ ESSENTIAL QUESTION	APPROX. START TIME	TEXT/RESOURCES	TARGETED UNDERSTANDING (PURPOSE)	CONTENT STANDARD(S)	PERFORMANCE EXPECTATION/ ASSESSMENT
MACHINES When do we define an object as being a machine? What confines do we apply to identify a singular system? Can a machine have more than one system? What criteria do we use to separate a machine from a single cell organism?	9/5/16	McGraw Hill		6.MS-ETS1-1 6.MS-ETS1-5	Automatas
Skills of a Scientist	9/5/16			Introduction to lab skills and practices that will be used throughout the year.	Lab Practicum
CELLS What characteristics do all living things share? How did microscopes change our ideas about living things? How do the structures and processes of a cell allow it to survive? What do the structures in a cell do? How do materials enter and leave cells? How does a cell obtain energy?	9/30/16	McGraw Hill Prentice Hall Cells and Heredity. Teacher designed materials.	All living things are made up of cells. The structures of the cells (organelles) contribute to the cellular functions of obtaining food, water and other nutrients, disposing of wastes and providing energy for cellular processes.	6.MS-LS1-1 6.MS-LS1-2	Cell City and reflection. Cell unit test
BODY SYSTEMS What are the functions of the human body systems? How do nutrients enter, travel through and leave the body? How does the body protect itself from harmful invaders?	11/28/16	McGraw Hill Prentice Hall Human Body Systems Teacher designed materials	Body systems interact to carry out essential functions of life. Systems included are the circulatory, digestive, respiratory, excretory,	6.MS-LS1-3	Amazing Body Project Frog Dissection Body Systems Unit test

How does the body move? How does the body respond to changes in its environment?			muscular/skeletal and nervous systems.		
NESTBOXES How do you choose and safely use measuring tools, hand tools, fasteners and hand-held power tools? How do you select appropriate materials in the construction of a solution to a design task?	12/1/16	Teacher designed unit	Tools are used to shape, form and join materials into a desired design. Sketches, diagrams and scale drawings can be used to represent 3 dimensional objects	6.MS-ETS1-6 6.MS-ETS2-1 6.MS-ETS2-2 6.MS-ETS2-3	Nestbox build
Properties of Matter DENSITY MIXTURES AND PURE SUBSTANCES What is the relationship among atoms, elements and compounds? How do mixtures and compounds differ?	1/15/17	McGraw Hill STC labs. Prentice Hall Chemical Building Blocks.	All matter can be classified as mixtures or substances. Mixtures can be separated into their component substances by physical means. Density is the amount of matter in a given volume. Density can be used to compare different materials. Density can be calculated from the mass and the volume of an object.	6.MS-PS1-7 6.MS-PS1-8	Modelling atoms, compounds and mixtures Lab Practicum Design and Build a water purification Properties of matter unit test
Chemistry ENDOTHERMIC/EXOTHERMIC REACTIONS What happens to atoms and energy during a chemical reaction? How are changes in energy and matter related?	2/28/17	McGraw Hill Prentice Hall Chemical Building Blocks Teacher designed materials. MIT Lego Labs	During chemical reactions energy is either released (exothermic) or absorbed (endothermic) from the environment. All changes in matter require a transfer of energy.	6.MS-PS1-6	MIT Matter and Its Interactions Lab

<p>THE SOLAR SYSTEM What determines gravity? What keeps objects in orbit? What causes the moon's phases? What are eclipses?</p>	3/15/17	McGraw Hill Prentice Hall Astronomy Teacher designed materials.	The motion of the Earth and the moon produce natural phenomena such as eclipses and tides, night and day, the seasons and the phases of the moon.	6.MS-ESS1-1a 6.MS-ESS1-5 6.MS-PS2-4	A view from Good Harbor Beach. Solar System Unit test
<p>WAVES What is a wave? What are the properties that define different waves? How do waves travel through matter? How do waves interact with matter?</p>	5/01/17	McGraw Hill Teacher designed materials	A wave is a disturbance that transfers energy. A wave has a repeating pattern with a specific amplitude, frequency and wavelength. Waves interact with matter in a number of ways, including absorption, reflection and transmission.	6.MS-PS4-1 6.MS-PS4-2 6.MS-PS4-3	Make your own musical instrument. Wave unit test
<p>FOSSILS How do scientists study Earth's past? What are fossils? What are the kinds of fossils? What do fossils show?</p>	6/1/17	McGraw Hill Prentice Hall Inside Earth Teacher designed materials		6.MS-LS4-1 6.MS-LS4-2 6.MS-ESS1-4 6.MS-ESS2-3	O'Maley Museum of Natural History