CHAPTER /BOOK	CHAPTER NAME	MONTH
1 CELLS AND HEREDITY	CELLS	AUGUST-SEPTEMBER
2 CELLS AND HEREDITY	CELL PROCESSES AND ENERGY	SEPTEMBER
WEBQUEST	BODY SYTEMS	OCTOBER
3 CELLS AND HEREDITY	GENETICS: HEREDITY	NOVEMBER
4 CELLS AND HEREDITY	MODERN GENETICS	DECEMBER
5 CELLS AND HEREDITY	CHANGES OVER TIME	JANUARY
6 LIFE SCIENCE	BACTERIA AND VIRUSES	FEBRUARY
23 LIFE SCIENCE	ECOSYSTEMS AND BIOMES	MARCH
2 WEATHER	WEATHER FACTORS	APRIL
3 WEATHER	WEATHER PATTERNS	MAY
4	CLIMATE	MAY

	CLIMATE CHANGE	

2011-2012

LIFE/ EARTH SCIENCE SEVENTH GRADE

Above is the tentative schedule for Seventh Grade Science. Below are chapter descriptions, which include section activities, possible labs and chapter assessments. Students will also ne participating in Science Fair from October to January.

Chapter 1 Cells: The Building Blocks of Life

In this chapter students will learn what characteristics all living things share as well as the different parts and functions of the cell. Each section in this chapter has a mini-lab to introduce the topic. For reinforcement expect section reviews as homework. Some labs include Please Pass the Bread, which examines mold growth, A Magnified View of Life which looks at the difference between plant and animal cells. Students will also build a model of the cell using edible items. Expect a chapter test.

Chapter 2 Cell Processes and Energy

In this chapter students will learn how a cell carries out its necessary functions for survival. Again there are mini-labs for each section in the chapter. Students will be given section reviews to complete for homework. The chapter lab is titles Gases in Balance and examines both photosynthesis and respiration. In this chapter students will model both mitosis and DNA structure. Expect a chapter test.

Body Systems

Students will participate in a unit web-quest that has each student investigate body systems. They will investigate the function and importance of each organ.

Chapter 3 Genetics: The Science of Heredity

Students will investigate Gregor Mendel's experiments with pea plants to learn the basics of genetics. Students will then study the principles of probability and how they can help determine the outcome of offspring. Students will investigate Punnett squares. Students will do section discoveries as well as many mini-labs to reinforce the idea of probability. Students will complete the lab Make the Right Call, which will use marbles to help predict genetic crosses. Finally students will explore the process of meiosis. Expect homework worksheets, section reviews as well as a chapter assessment.

Chapter 4 Modern Genetics

Students will study human genetics and genetic disorders. Students will also investigate how advances in science have helped DNA fingerprinting and desired genetic traits in organisms. Students will complete a lab that will construct a family pedigree. Another lab titled Guilty or Innocent will help students use DNA fingerprinting to determine a case. Expect a chapter assessment.

Chapter 5 Changes Over Time

Students will investigate Charles Darwin theory of evolution. Students will also explore the fossil record and what it can reveal about history of life on earth. Students will also investigate modern evidence of evolution. Students will simulate evolution in a lab titled Nature at Work. Students will create a game board using content from the fossil record. Students will complete a lab titled Telltale Molecules which investigates the structure of protein and its relationship to evolution. Expect section assignments and a chapter test.

Chapter 6 Bacteria and Viruses

Students will investigate the six kingdoms and how to classify organisms by kingdom. Students will then learn more intently about viruses and bacteria. Students will complete a lab titled Do Disinfectants Work? In which students will measure and record the growth of bacteria. Students will also complete How Many Viruses Fit on a Pin? Lab in which they will figure how small a virus actually is. Expect section assignments and a chapter assessment.

Chapter 23 Ecosystems and Biomes

Students will explore how energy flows in ecosystems and the cycles in which the planet keeps in balance. Students will then investigate biogeography and the Earth's biomes. Students will complete a lab in which they construct models of each biome and another lab that deals with community changes in species. Expect section assignments and a chapter assessment.

Chapter 2 Weather Factors

Students will explain what happens to energy from the Sun when it reaches Earth. Students will describe how temperature is measured. Students will explain what causes wind and discuss the several types of wind. Students will identify the three main types of clouds and the types of precipitation. Student will set up a weather station and use instruments to measure weather factors over a two week period. Students will also complete a lab in which they investigate which heats faster, land or water. Expect section worksheets and a chapter test.

Chapter 3 Weather Patterns

Students will identify air masses and fronts. Students will list the main types of storms and explain how they form. Understand safety measures for storms. Students will identify the causes of flooding. Students will state the types of information on a weather map. Students will complete a long-term project where they will predict the weather and compare their findings to the professionals. Expect section worksheets as well as a chapter assessment.

Chapter 4 Climate and Climate Change

In this chapter students will explore the factors that cause climate. Students will also understand long-term climate changes and global changes in the atmosphere. Students will complete section discovers as well as chapter labs. Students should expect section assignments and chapter assessment.