Preamble to Fifth Grade Science

NC Standard Course of Study Performance Standards					
Key Areas of Focus for Science					
Unit 1	**Unit 2**	**Unit 3**	**Unit 4**	**Unit 5**	**Unit 6**
Living Organisms	**Evolution and Genetics**	**Ecosystems**	**Forces and Motion**	**Weather**	**Matter and Energy**
Pacing of Units: 1-Person, 2-Person Team, 3-Person Team					
5.L.1 5.L.1.1 5.L.1.2	5.L.3 5.L.3.1 5.L.3.2	5.L.2 5.L.2.1 5.L.2.2 5L.2.3	5.P.1 5.P.1.1 5.P.1.2 5.P.1.3 5.P.1.4	5.E.1 5.E.1.1 5.E.1.2 5.E.1.3 5.P.2.1	5.P.2 5.P.2.2 5.P.2.3 5.P.3 5.P.3.1 5.P.3.2

NC Essential Standards for Science

Life Science (L)

Structure and Functions of Living Organisms

5.L.1 Understand how structures and systems of organisms (to include the human body) perform functions necessary for life.

1.1 Explain why some organisms are capable of surviving as a single cell while others require many cells that are specialized to survive.

1.2 Compare the major systems of the human body (digestive, respiratory, circulatory, muscular, skeletal, and cardiovascular) in terms of their functions necessary for life.

Ecosystems

5.L.2 Understand the interdependence of plants and animals with their ecosystem.

2.1 Compare the characteristics of several common ecosystems, including estuaries and salt marshes, oceans, lakes and ponds, forests, and grasslands.

2.2 Classify the organisms within an ecosystem according to the function they serve: producers, consumers, or decomposers (biotic factors).

2.3 Infer the effects that may result from the interconnected relationship of plants and animals to their ecosystem.

Evolution and Genetics

5.L.3 Understand why organisms differ from or are similar to their parents based on the characteristics of the organism.

3.1 Explain why organisms differ from or are similar to their parents based on the characteristics of the organism.

3.2 Give examples of likenesses that are inherited and some that are not.

Earth Science (E)

Weather

5.E.1 Understand weather patterns and phenomena, making connections to the weather in a particular place and time.

1.1 Compare daily and seasonal changes in weather conditions (including wind speed and direction, precipitation, and temperature) and patterns.
1.2 Predict upcoming weather events from weather data collected through observation and measurements.
1.3 Explain how global patterns such as the jet stream and water currents influence local weather in measurable terms such as temperature, wind direction and speed, and precipitation.

Physical Science (P)

Forces and Motion

5.P.1 Understand force, motion and the relationship between them.

1.1Explain how factors such as gravity, friction, and change in mass affect the motion of objects.
1.2 Infer the motion of objects in terms of how far they travel in a certain amount of time and the direction in which they travel.
1.3 Illustrate the motion of an object using a graph to show a change in position over a period of time.
1.4 Predict the effect of a given force or a change in mass on the motion of an object.

Matter: Properties and Change

5.P.2 Understand the interactions of matter and energy and the changes that occur.

2.1 Explain how the sun's energy impacts the processes of the water cycle (including evaporation, transpiration, condensation, precipitation and runoff).
2.2 Compare the weight of an object to the sum of the weight of its parts before and after an interaction.
2.3 Summarize properties of original materials, and the new material(s) formed, to demonstrate that a change has occurred.

Energy: Conservation and Transfer

5.P.3 Explain how the properties of some materials change as a result of heating and cooling.

3.1 Explain the effects of the transfer of heat (either by direct contact or at a distance) that occurs between objects at different temperatures. (conduction, convection or radiation)
3.2 Explain how heating and cooling affect some materials and how this relates to their purpose and practical applications.