Earth Science Syllabus 2016-2017 Mrs. Meggan Smith <u>Meggan.smith@k12.nd.us</u> 701-489-3348

Text: Earth Science, 2010, Holt McDougal

Course Description

The focus of this particular course is Earth Science, which is the study of Earth and space. It includes the major fields of geology, meteorology, astronomy, and oceanography.

This one year course explores the foundations of Earth Science in the following related topics / fields:

Investigation and Experimentation, Earth's place in The Universe, Dynamic Earth Processes, Energy in the Earth System, Biogeochemical Cycles, Structure and Composition of Earth's Atmosphere, and California Geology.

Objective: The understanding of the delicate interactions of the ocean, the earth's surface, and climate, and how these interactions reshape our world.

The information will be presented to students utilizing various modalities including, but not limited to: lectures, discussions, demonstrations, laboratory activities, group activities, videos, guest speakers, computer/internet sources, and voluntary field trips.

Essential Materials:

- One composition Notebook
- > Appropriate writing tools such as pen or pencils are needed on a daily basis
- > Colored pencils or markers may be needed at times.
- Portable flash-drive.

<u>Grade Scale</u>

100-94 A 93-88 B 87-80 C 79-74 D 73 and below F Planning Period: 10:26—11:16

COURSE OUTLINE

Science Basics

Chapter 1 - Introduction to Earth Science

Chapter 3 - Models of Earth (Latitude/Longitude, Topographic Maps, GPS Receivers)

Geology

Chapter 10 - Plate Tectonics (Seafloor Spreading, Plate Boundary Features, Plate Motions)

Chapter 6 - Rocks (Rock Cycle, Igneous, Sedimentary and Metamorphic Rocks)

Chapter 12 - Earthquakes (Seismic Waves, Causes, California Hazards)

Chapter 13 – Volcanoes (Types of Volcanoes and Magma, California Hazards)

Astronomy

Chapter 26 - Studying Space (Electromagnetic Spectrum,)

Chapter 27 - Our Solar System (Formation,

Terrestrial Planets, Gas Giant Planets)

Chapter 28 - Minor Bodies of the Solar System (Satellites, Asteroids, Meteors)

Chapter 29 - The Sun (Solar Energy, Stellar Evolution)

Chapter 30 - Stars, Galaxies and the Universe (Milky Way Galaxy, Types of Galaxies)

Oceanography

Chapter 20 - Ocean Water (Salinity and Density)

Chapter 21 - Movements of the Ocean (Currents and Upwelling)

Meteorology

Chapter 22 - Atmosphere (Composition/Structure, Movement of Energy)

Chapter 25 - Climate (Causes of Changes, Greenhouse Effect)