

P.S. 035 Manhattan High School

Course Code: SES21QQB3

Syllabus for: Earth Science 1

Teacher Name: Mrs. Dubizh

Year and Term: 2017-2018

Learning Standards: S3-Earth and Space Science Concepts

S4- Scientific Connections and Understanding

S5- Scientific Thinking

S6- Scientific Tools and Technologies

S7- Scientific Communication

S8- Scientific Investigation

Course Description:

Earth Science is the study of the physical Earth, its atmosphere and the universe. Earth Science has many interesting and practical applications. Some scientists use their knowledge of the Earth to locate and develop energy and mineral resources. Some use their knowledge about Earth processes such as volcanoes, earthquakes, and hurricanes to prevent or minimize the effects of these dangerous events. Others study the impact of human activity on the environment, and design methods to protect the planet. This course will study three of the four basic areas of Earth Science: geology, meteorology, and oceanography.

Unit Map:

Scientific Method-1

Variables

Control group

- Create a hypothesis
- Create an experiment
- Data collection
- Data analysis

Chemistry-2

Atom

Periodic table

Elements

Minerals

Matter Reactions
Bonding
Compounds
Mixtures
Cycles of matter
Equations
Enzymes
pH
➤ The chemistry of Earth Science

Physics-4

Force
Waves
Gravity
Electricity
Magnets
Machines
➤ Earth Science examples in physics

Math-5

Graphs
Equations
Maps
Charts
Scientific notation
➤ Earth Science uses for Math

Biology-6

9 processes
ATP
DNA
➤ Biotic – Abiotic
➤ Primitive Atmosphere
➤ Using Bio. to study E.S.

Earth Science-3

Geology
Oceanography
Meteorology
Astronomy
Archeology

Creation-7

Big Bang Theory
Nebula Theory
Formation of the Planet = Rocks
➤ Igneous
➤ Sedimentary
➤ Metamorphic
Rock ID
➤ Characteristics

The Changing Earth-8

Layers of the Earth = crust
Volcanoes
Earthquakes – epi-centers- P&S Waves
Weathering
Erosion
Deposition

Mapping our Geo-history-9

Tectonic Plates –Pangea
Geo-History
➤ Time
➤ Fossils
➤ Radioactive Dating
Mapping the Landscape
➤ Key / Legend
➤ Contour lines
➤ Materials
Geothermal lines

Course Materials:

Text:

Glencoe/McGraw Hill - Earth Science, 2008

Feather, Snyder, Zike, et al.

Workbook:

Globe Fearon / Science Workshop Series:

Seymour Rosen - Geology, 2000

- The Universe, 2000

Grading Policy:

25% Classwork – Focus and be prepared to actively participate. If you are absent, try to get the class notes from another student and ask me for any handouts or worksheets that were given. You ARE responsible for material that we go over in class that you miss.

30% Quizzes/ Exams - There will be several vocabulary quizzes and unit tests and a mid-term exam covering all of the material covered through the semester. Make-up exams will be available.

20% Homework - Do your homework every night. If you don't understand something, write down your questions and ask them first thing when you come in. Make an effort to do as much as you can before you come in to class.

15% Labs – There will be 30 labs that need to be completed. Your grade will reflect the care which you take to do the lab and the quality of the written assignments.

10% Special Project(s) - Throughout the semester you will have projects that focus on creating models, maps, and diagrams. In addition, you will also have an optional “extra credit” research paper on a topic of your choice.

