

SCOPE AND SEQUENCE- EARTH SCIENCE

Unit 1 - atoms, chemical bonds and reactions

- Atoms, elements and compounds
- Periodic table structure **HS-PS1-1**
- Chemical reactions and bonding **HS-PS1-2,4,5,6,7**
- Properties of water **HS-ESS2-5, HS-PS1-3**

Unit 2- Earth's structure, plate tectonics and the effects

- Structure of earth's layers, including density (lab in nasco kit) **HS-ESS2-3**
- Plate tectonics and age of earth's crust **HS-ESS2-1, HS-ESS1-5**
- Earthquakes and volcanoes
- If time, include forces **HS-PS2-?**

Unit 3- Earth's changing surface, rocks/carbon cycling, GTS

- Weathering, erosion and deposition **HS-ESS2-2**
- Rocks and minerals (relate somehow to carbon cycling) **HS-ESS2-6**
- Dating and fossils **HS-ESS1-6**
- Geologic time **HS-ESS2-7**

Unit 4- Human Impacts **HS-ESS3-6, HS-ESS2-2** (look at standards to be more specific)

- Resources- renew and non **HS-ESS3-1**
- Climate change **HS-ESS2-4, HS-ESS3-5**
- Teach acids and bases here? It didn't fit in unit 1. Acid rain, ocean, plastic ocean **HS-ESS3-6**
- Land use
- Easter Island
- Include solutions **HS-ESS3-4**

Unit 5- Intro to Astronomy and EMS

- Electromagnetic spectrum **HS-PS4-1,3,4,5** and light **HS-ESS1-2**
- Photons, sun and radiation (add this material) **HS-ESS1-1**
 - Could include more about waves here
- Doppler effect
- Earth, moon and sun system **HS-ESS1-4**
- Seasons and moon phases

Unit 6- Solar System **HS-ESS1-6**

- Include big bang, theory of formation of solar system

Unit 7- Stellar Life Cycle **HS-ESS1-3**

- This is very short and easy for the end of the year
- Include characteristics of stars and spectroscopy