

# Cornwall-Lebanon School District Curriculum Overview

## Geology: Grades 10 – 12

| 20<br>length of time in weeks | Concepts & Competencies   | Common Assessments  | Academic Standards (PA Core if applicable)                              |
|-------------------------------|---|---|---|
| Unit 1<br>6                   | <p align="center"><b><u>Minerals, Rocks, &amp; the Rock Cycle</u></b></p> <p>Students will identify minerals using properties such as color, streak, hardness, and luster. Students will identify sedimentary, igneous, and metamorphic rocks based upon their unique properties. Students will describe the formational process of each rock type. Students will describe the methods by which one rock type may turn into another type.</p> | <ul style="list-style-type: none"> <li>➤ Unit 1 Quiz 1: Mineral Formation</li> <li>➤ Unit 1 Quiz 2: Mineral Terminology</li> <li>➤ Unit 1 Test 1: Mineral Identification</li> <li>➤ Unit 1 Quiz 3: Rock Type Identification</li> <li>➤ Unit 1 Test 2: Rock Cycle Unit Test</li> </ul> | <p>3.3.7.A1<br/>3.3.10.A1<br/>3.3.10.A2<br/>3.3.12.A1<br/>3.3.12.A2</p> |
| Unit 2<br>2                   | <p align="center"><b><u>Principles of Relative Dating</u></b></p> <p>Students will construct landscape sketches and use observations of rock layers to correlate rock columns. Students will interpret past environments by evidence found in rocks. Students will use relative dating techniques to determine a sequence of geologic events.</p>   | <ul style="list-style-type: none"> <li>➤ Unit 2 Quiz 1: Rock Correlation</li> <li>➤ Unit 2 Quiz 2: Relative Dating Principles</li> <li>➤ Unit 2 Test 1: Relative Dating Unit Test</li> </ul>  | <p>3.3.12.A3</p>  |
| Unit 3<br>2                   | <p align="center"><b><u>Fossils</u></b></p> <p>Students will observe a variety of fossilized organisms to make inferences about their appearance, lifestyle, and habitat. Students will describe the process of permineralization. Students will use index fossils to correlate different rock columns.</p>   | <ul style="list-style-type: none"> <li>➤ Unit 3 Quiz 1: Index Fossil Correlation</li> <li>➤ Unit 3 Test 1: Fossils Unit Test</li> <li>➤ Marking Period Exam</li> </ul>  | <p>3.3.7.A3<br/>3.3.12.A3</p>   |
| Unit 4<br>2                   | <p align="center"><b><u>Absolute Dating</u></b></p> <p>Students will use the Periodic Table to determine the number of protons, electrons, and neutrons an atom has and decide if a given atom is radioactive. Students will calculate the age of rock samples using radioactive dating techniques.</p>   | <ul style="list-style-type: none"> <li>➤ Unit 4 Quiz 1: Subatomic Particles Quiz</li> <li>➤ Unit 4 Test 1: Radiometric Dating Unit Test</li> </ul>  | <p>3.3.10.A1<br/>3.3.12.A1<br/>3.3.12.A3<br/>3.3.12.A4</p>              |
| Unit 5<br>4                   | <p align="center"><b><u>The Geologic Timescale, Extinctions, &amp; Originations</u></b></p> <p>Students will describe Earth's geologic history based on the fossil record. Students will construct a scale model of Earth's geologic history. Students will connect mass extinction events to mass origination events.</p>  | <ul style="list-style-type: none"> <li>➤ Unit 5 Quiz 1: The Geologic Timescale</li> <li>➤ Unit 5 Quiz 2: Extinction &amp; Origination</li> <li>➤ Unit 5 Test 1: Earth History Unit Test</li> </ul>  | <p>3.3.7.A3<br/>3.3.7.A6<br/>3.3.10.A7</p>                              |

## Unit 6

4

### Plate Tectonics

Students will cite evidence used to describe Earth's interior structure. Students will use evidence to support the theory of plate tectonics. Students will calculate the rate of plate motion using GPS data. Students will identify different types of plate boundaries and their associated geographic features.

- Unit 6 Quiz 1: Earth Structure
- Unit 6 Test 1: Plate Tectonics Unit Test
- Marking Period Exam #2

3.3.7.A1  
3.3.10.A1  
3.3.10.A3  
3.3.10.A4  
3.3.12.A1  
3.3.12.A7