**Cassville High School**

**Course Competency (ELO’s)**

Course Name: **Geology II**

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| **Semester** | **ELO** | **Mastery**  **Level** |
| **1** | **Demonstrate knowledge of safe laboratory behavior and skills.** | **80%** |
| **1** | **Relate the Earth’s internal processes to crustal plate movement.** | **70%** |
| **1** | **Describe the effects of the movement of crustal plates (i.e., earthquakes, sea-floor spreading, mountain building, volcanic eruptions) at a given location on the planet** | **70%** |
| **1** | **Evaluate volcanic risk for various locations.** | **70%** |
| **1** | **Evaluate earthquake risk for various locations.** | **70%** |
| **1** | **Compare different mountain building processes and the resulting mountains.** | **70%** |
| **1** | **Use evidence from relative and real dating techniques (e.g., correlation of trace fossils, landforms, and rock sequences; evidence of climate changes; presence of intrusions and faults; magnetic orientation; relative age of drill samples) to infer geologic history** | **70%** |
| **1** | **Evaluate the design of an experiment and make suggestions for reasonable improvements** | **70%** |

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| **Semester** | **ELO** | **Mastery**  **Level** |
| 2 | **Recognize the limited availability of some energy resources (i.e., solar radiation, wind, fossil fuels) and major mineral deposits in the United States (e.g., lead, petroleum, coal, copper, zinc, iron, gravel, aluminum) and the factors that affect their availability** | 70% |
| 2 | **Identify and evaluate advantages/disadvantages of using various sources of energy (e.g., wind, solar, geothermal, hydroelectric, biomass, fossil fuel, electromagnetic radiation) for human activity** | 70% |
| 2 | **Predict local and/or global effects of environmental changes when given a scenario describing how the composition of the geosphere, hydrosphere, or atmosphere is altered by natural phenomena or human activities** | 70% |
| 2 | **Predict and explain how natural or human caused changes (biological, chemical and/or physical) in one ecosystem may affect other ecosystems due to natural mechanisms (e.g., global wind patterns, water cycle, ocean currents)** | 70% |
| 2 | **Relate the composition of gases and temperature of the layers of the atmosphere (i.e., troposphere, stratosphere, ionosphere) to cloud formation and transmission of radiation (e.g., ultraviolet, infrared)** | 70% |
| 2 | **Predict the weather (patterns of change in the atmosphere) at a designated location using weather maps (including map legends) and/or weather data (e.g., temperature, barometric pressure, cloud cover and type, wind speed and direction, precipitation)** | 70% |
| 2 | **Explain how global wind and ocean currents are produced on the Earth’s surface (e.g., effects of unequal heating of the Earth’s land masses, oceans, and air by the Sun due to latitude and surface material type; effects of gravitational forces acting on layers of air of different densities due to temperature differences; effects of the rotation of the Earth; effects of surface topography)** | 70% |
| 2 | **Describe climate changes resulting from natural and human activities.** | 70% |