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| **Concept** | **Example Activity** | **Geospatial Analysis** |
| Interdependent relationships in ecosystems | Butterflies and their expansion with growth milkweed | Change over time |
| Earth and Human Activity: Natural resources: How humans depend on Earth’s resources | Minerals and mining resources (MRData.gov) | Density |
| Earth and Human Activity: Natural resources: How humans depend on Earth’s resources | Energy production resources by state (coal, oil, wind, water) | Finding what’s inside |
| Earth’s materials and systems; History of planet Earth | Rock types/geology | Where things are/What’s nearby |
| Earth’s materials and systems; Plate tectonics/large scale system interactions; Natural hazards | Seismic sensor inquiry | What’s nearby |
| Earth’s materials and systems; Plate tectonics/large scale system interactions; natural hazards | Volcanoes versus plate lines or types of volcanoes | What’s nearby/Density |
| Plate tectonics/large scale system interactions | Mountain building/Types (folded, uplift, erosional etc) | Where things are |
| Role of water in Earth’s surface processes | River based landforms | What’s nearby |
| Earth’s systems: Weather and climate | Ocean currents/wind | Where things are |
| Earth’s materials and systems; Plate tectonics/large scale system interactions | Sea mounts depth/direction (usually occur in line as plates travel over hot spots) | Where things are |
| Earth’s systems: Weather and climate; matter and energy | Weather Highest/Lowest temps; pressure highs and lows | Density |
| Earth’s systems: Weather and climate; conservation of energy and energy transfer | Sea surface temperature effect on land temperature (anomalies) | Change over time |
| Earth’s systems: Weather and climate | El Niño/La Niña (sea surface temperature anomaly compared to global rainfall anomaly) | What’s nearby |
| Earth’s systems: Weather and climate | Origins of tropical storms (move from season to season) | Density |
| Earth’s systems: Weather and climate | Reservoirs -% of water from snow melt or rainfall (glaciers) | What’s nearby |
| Earth’s systems: Ecosystem dynamics, functioning and resilience | Dead Zones at mouths of rivers (oxygen levels, land use) | What’s nearby/Where things are |
| Ecosystem dynamics, functioning and resilience; Human impacts on Earth systems | Tropical deforestation (Amazon, Congo, Islands Indonesia) | What’s inside/Change over time |
| Interdependent relationships in ecosystems | Animal diversity (how do predator to prey numbers relate to each other) | What’s within |
| Earth and Human Activity: Natural resources: How humans depend on Earth’s resources | Density of cities compared to rainfall (U.S./worldwide) | Density |
| Earth’s systems: Weather and climate; conservation of energy and energy transfer | Sunlight hours to latitude | What’s inside |