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| What students should be able to do | What students should know and understand |
| Earth Spheres Hydrosphere Atmosphere Lithosphere Biosphere | Earth layers Lithosphere Asthenosphere Mantle Outer core  | Plate Tectonics Major tectonic plates Causes and/or effects of tectonic movements  | Cycles hydrologic cycle rock cycle atmospheric cycles (weather, climate, seasons) Causes and/or effects of cycles  |
| Systems |
| Identify essential and/or non-essential or less essential components of a given system  | ✓ | ✓ | ✓ | ✓ |
| Predict the results of a given change to a system 1. Removal of a given part(s) 2. Addition of a part(s) 3. Changes to a part(s) of a system  | ✓ | ✓ | ✓ | ✓ |
| Measurements |
|  1. Chose appropriate tools and/or units 2. Make and/or record measurements using the precision limits of the tool.  | ✓ | ✓ | ✓ | ✓ |
| Models |
|  Identify the limits of a given model | ✓ | ✓ | ✓ | ✓ |
|  Recognize the advantages of a given model | ✓ | ✓ | ✓ | ✓ |
|  Construct a model from given information | Constructed response | Constructed response | Constructed response | Constructed response |
| Using evidence |
| Recognize evidence that supports given concept | ✓ | ✓ | ✓ | ✓ |
| Recognize evidence that fails to support given concept | ✓ | ✓ | ✓ | ✓ |
| Develop a scientific investigation |
| Identify testable question or hypothesis | ✓ | ✓ | ✓ | ✓ |
| Identify steps required to complete an investigation | ✓ | ✓ | ✓ | ✓ |
| Draw conclusions from data | ✓ | ✓ | ✓ | ✓ |
| Technical Information |
| Analyze technical information | ✓ | ✓ | ✓ | ✓ |

Tools will include rulers, graduated cylinders, balances electronic and/or beam, anemometer, pH meter and/or paper, rain gauge,

Evidence or data includes quantitative and qualitative data

Given information may include text, diagrams, or data

Check marks indicate things that can be tested in a paper and pencil format.

More skills and/or more content can be added as required.