1. Living things
2. See H₂O
3. Not seen H₂O
4. Meta/front of pic
5. Interaction
6. Interdependence (relationship)
7. Connection (correlation)
8. Land, Water, Space, Atmosphere, Biosphere, Geosphere
9. (Ecology) Earth System Science
11. Whole
12. Water erodes rocks, minerals feed plants, people eat
13. Model
14. System (part of universe that’s studied separately)
15. Separately
16. Closed
17. Open
18. Earth = closed (no matter essential enter or leave)
19. #2 Pag 7
20. #3
21. #6
22. #1
23. #4
24. Atmosphere
25. O₂, N₂, CO₂
26. All the atoms that existed at that time are still present today. We breathe them in.
27. Geosphere
28. Hydrosphere
29. Solid ice/snow, liquid water, gaseous water vapor
30. Biosphere: (Single-celled protists, jellyfish, trees, people)
31. A
32. B
33. C

34. Water evaporates from the hydrosphere, forming clouds. Clouds are in the atmosphere; the rain falls. The biosphere uses the water to hydrate plants & animals. They are using minerals and nutrients from the geosphere which makes the rocks and soil.

35. Water cycle (aka hydrologic cycle)
- Water evaporates from fresh or salt water (lakes/oceans) → it condenses into clouds
- When drops are large enough, precipitation falls as snow or rain
- Rain runoff and snow/ice melting accumulates or collects in lakes, rivers, oceans, or underground
- Plants go through evapotranspiration, also
  ① evaporation
  ② condensation
  ③ precipitation
  ④ storage

37. Plants, animals, CO₂ absorbed by plants, coal, oil, dead organisms

38. CO₂ dissolves in the ocean and converted into carbon compounds.
  Phytoplankton live in oceans.
  Organic deposits turn into coal / oil.
  Living / dead organisms contain carbon.

39. CO₂ from volcanic eruptions and forest fires and burning of fossil fuels enters the atmosphere.
  Herbs break down.
  Animals exhale CO₂.
  Methane (CH₄) is produced during digestion & decomposition.
40. Coal and oil are found underground. Dead/dying organisms in the earth.

41. Solar energy
42. within the earth (core/mantle)
43. energy resulting from the pull of the moon/the sun on Earth's oceans
45. Energy can never be created or destroyed, only changed from one form to the other.
44. The physics of how heat energy is converted into other forms of energy.
46. It goes to less useful forms of energy and eventually into heat.

ES0103

1. Biosphere: Geosphere, Hydrosphere, Atmosphere
2. life, rocks, water, air
   examples vary by person
3. pick one limit justify your answer
4a. sun light heats water and grows plants (Hydrosphere, Biosphere)
4b. Geosphere, Atmosphere
   (ground, air)
   the water evaporates and causes rain to fall on the sand and plants
4b. the biosphere is burning and transferring heat energy and ash into the atmosphere. The ash also falls on the biosphere (plants), the hydrosphere (water), and the geosphere (rocks).
4b. the oil burns, causing CO2 to move into the atmosphere. It is absorbed by the hydrosphere (ocean).
4b. The geosphere was changed by humans (biosphere), carving out the canal. Water (hydrosphere) evaporated into the atmosphere and moves from one large body of water through the canal to another large body of water.
4. Wind energy from the atmosphere moves the wind turbines that are produced from materials found in the biosphere and geosphere. Metals and oil, which is used to make plastic, are found in the geosphere. Electricity is then used by humans.

4. Magma under the crust of the geosphere has heat energy that is released during an eruption into the atmosphere. CO₂ is also released. Some ash also falls onto the geosphere (surface of the mountain).

5. Materials that I use come from the renewable and non-renewable resources found in the geosphere & biosphere. Writing on paper with a plastic pen uses oil to make plastic, trees to make the paper, and the ink is made from a mixture of living and nonliving materials.

6. Places where the population is high are in less plagues places. You don't see a lot of people living in deserts, mountains, or really cold regions. More materials are used from all spheres since there are more people.

ES0.05 Left = precipitation as snow Middler = precip. as rain in geosphere Right = precip. as rain in hydrosphere

ES0.01 1) the areas along the equator have year round plant growth.
2) during the winter ... it's too cold to grow plants
3) the movement of carbon from one form to the next, from the atmosphere to the biosphere

ES0.02: Geosphere: the rocks and land
Hydrosphere: the water @ and below the surface
Biosphere: living organisms
Atmosphere: the air above the surface