**Review for the Task 4 Ecosystem Test on Friday 1 April**

1. Write and draw responses to theses objectives in as much detail as possible. You should try to build some of the objectives into **Mind Maps, or Concept Maps.**
2. Complete the Glossary.

**Earth systems/cycles in nature**

* Describe examples of how differences in geographical and physical conditions result in a wide variety of ecosystems.
* Describe the abiotic factors, including temperature, pH, salinity, light, water and atmospheric gases. Explain how these abiotic factors impact on the survival of organisms within the environment.
* Discuss the interaction between organisms, biological communities and the abiotic environment in which they live.
* Describe how the biotic components of an ecosystem transfer and transform energy, originating primarily from the sun, into biomass.
* Describe how the **biotic** components **interact** with **abiotic** components to facilitate biogeochemical cycling.
* Describe how producers, consumers and decomposers transfer energy in an ecosystem.
* Draw food chains and food webs to show the feeding relationships between organisms within a community. Make sure the arrow shows the direction of the flow of energy.
* Explain why the amount of energy transferred between trophic levels in food chains and food webs diminishes as the trophic level increases - only 10% of energy is passed to the next trophic level.

**Ecosystem Glossary**

Complete the tables below. For most terms you should be able to write your own definition, but if use a reference such as “Nature of Biology”.

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| Term | Definition | Example of the use of the term. |
| abiotic |  |  |
| biotic |  |  |
| organism |  |  |
| population |  |  |
| community |  |  |
| habitat |  |  |
| environment |  |  |
| ecosystem |  |  |
| energy flow |  |  |
| energy transfer |  |  |

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| --- | --- | --- |
| Term | Definition | Example of the use of the term. |
| energy transformation |  |  |
| light energy |  |  |
| chemical energy |  |  |
| photosynthesis |  |  |
| glucose |  |  |
| producers |  |  |
| consumers |  |  |
| decomposers |  |  |
| bacteria |  |  |
| fungi |  |  |
| biomass |  |  |
| chemical energy |  |  |

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| Term | Definition | Example of the use of the term. |
| trophic level |  |  |
| food chain |  |  |
| food web |  |  |
| The 10% Law of ecosystem energy transfer |  |  |
| biogeochemical cycle |  |  |
| water cycle |  |  |
| evaporation |  |  |
| transpiration |  |  |
| precipitation |  |  |
| infiltration |  |  |
| percolation |  |  |

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| Term | Definition | Example of the use of the term. |
| aquifer |  |  |
| carbon cycle |  |  |
| combustion |  |  |
| respiration |  |  |
| nitrogen cycle |  |  |
| nitrogen-fixing bacteria |  |  |
| nitrifying bacteria |  |  |
| denitrifying bacteria |  |  |
| fertilizer |  |  |