**E6 Communities are continually undergoing change**

E6.1 Illustrate how community change may involve succession over time which leads to changes in the mixture of species.

Read text p.203-206

*Check out the animation of the types of succession:*

<http://www.geowords.org/ensci/imagesbook/04_03_succession.swf>

*Also check out the presentation with details of succession with pictures:*

<http://jpkc.hpu.edu.cn/essi/ppt/chapter06.swf>

* Succession is the gradual process by which the species composition of a community changes.
* Eg. Mosses – Grasses – Shrubs – Trees.
* **Primary succession** is where organisms establish themselves in a new environment where a community has not been before (volcanic island, sand dune, etc)
* **Secondary succession** is where changes occur to an environment that has been damaged (fire, logging, etc).
* Secondary succession usually occurs a lot quicker than primary succession as there is usually a greater number of resources in the area.
* As a community matures there is generally more biomass.
* Mature = more species (usually)
* Mature ecosystems tend to be more efficient at recycling nutrients.
1. Communities change over time in the mix of species. Describe possible ways that each of the following might modify the environment for other species.
2. Lichen
3. Spinifex
4. Larger shrubs
5. Large gum trees
6. Insects
7. Mammals
8. What is the difference between primary and secondary succession and why can secondary succession occur more quickly?
9. Write a brief description outlining the sort of changes that could be expected to occur over a 10 yr period after a bushfire in an Australian Woodland (eg Adelaide Hills). Are there any advantages to bushfires?

E6.2 Explain why biodiversity is essential for the perpetuation of communities

* The term ‘biodiversity’ is used to describe the variety of life forms that are found in the biosphere. Variety of genes. Variety of ecosystems. Variety of species, etc.
* There are several reasons why it is important to maintain genetic and species diversity for the growth and productivity of communities. The array of relationships (predator, prey, symbiosis, etc) are necessary for a healthy ecosystem for the distribution and recycling of energy. If the range of organisms in a community was lost then the health of the ecosystem would be lost (as the vital relationships would not occur).
* Earth needs: genetic diversity, species diversity and ecosystem diversity.

Complete the focus questions on p208 of the large text book. See me if you don’t have this book.