**Lesson 1 - Introduction to Biodiversity**

***Learning Target:*** *#1. I can explain why biodiversity is important to maintaining a healthy, viable*

*ecosystem.*

**Lesson Question: What influences diversity on Earth?**

**Terms**

* **Biodiversity** – The number and variety of species and ecosystems on Earth.
* **Species** – a group of organisms capable of reproducing with each other under natural conditions.

**Diversity**

Diversity is influenced by:

* **Individual Variability** – the differences between individuals of the same species.
  + Results from differences in inherited genetic material.
* **Variation over time and space** – species change over time and space (distance)….EVOLUTION!
  + Known as **Evolutionary Change** – physical and behavioural changes that occur in entire populations of a species
  + May form entirely new species or subspecies.
* **Genetic Diversity** – the genetic variability among organisms.
  + Usually refers to individuals within the same species.
  + But…genetic diversity obviously also occurs between individuals of different species.
* **Species Diversity** – is the variety of species in an ecosystem and the number of individuals within each species.
* **Structural Diversity**– the variability in size and shapes of individuals, communities and habitats in an ecosystem.
  + Greater structural diversity supports greater species diversity.
* **Interaction Diversity**– species within an ecosystem are dependent on each other to succeed.
  + These interactions include:
  + Food supply
  + Protection
  + Transportation
  + Reproduction
  + Hygiene
  + Digestion

**Summary**

* All species depend on other species for their own survival.
* Biodiversity refers to the variety of species within an ecosystem but is also influenced by environmental variation and variation of individuals in a species.
* Species evolve over time and space.

**Lesson Review**

Read pages 4-8 in your textbook. Answer the following questions.

1. How does biodiversity affect the health of an ecosystem?
2. Describe four ways in which one species may be dependent on another for its survival. Include an example for each.
3. Give an example for each factor that influences diversity.