**Underlying Theme – I know the affect the we as humans are having on biomes, nutrient cycles, and the environment itself and can state some ways the we can fix our effects or sustain what we have.**

Biomes and Ecosystems

1. I know the difference between abiotic and biotic factors and can identify them in a diagram.
2. I know that a biome is a large region with similar components and many ecosystems make up a biome.
3. I know the factors that affect where a biome exists.
4. I can identify biomes based on precipitation, temperature and latitude(location as seen on Biome data sheet)
5. I can read climatographs and identify the biome from them.
6. I can compare the difference between abiotic and biotic factors in an ecosystem.
7. I know the six symbiotic relationships (commensalism, mutualism, parasitism, predation, mimicry, competition)and can provide examples of each.
8. I can read and understand a predator-prey graph.

Nutrient Cycles and Energy Flow

1. I know the difference between producers, consumers and decomposers.
2. I can read and label a food chain and food web.
3. I know what a trophic level is and its relation to food chains.
4. I understand how energy flow occurs in an ecosystem.
5. I can read a carbon cycle from the data sheets and know how we as humans impact the cycle.
6. I know the formulas for photosynthesis and cellular respiration.
7. I know the difference between storage of nutrients and cycling of nutrients.
8. I can read a nitrogen cycle from the data sheets and know how we as humans impact the cycle.
9. I know the difference between nitrogen fixation, nitrification, and denitrification, with respect to where they occur and what type of bacteria does the process.
10. I can read a phosphorus cycle and know how we as humans impact the cycle.
11. I understand what geologic uplift and sedimentation are and the difference between them.

Bioaccumulation

1. I know what bioaccumulation is and its effects on larger animals.
2. I know what types of materials can bioaccumulate and how they do it.
3. I know what a ppm (parts per million) is and what it measures.
4. I know the difference between biomagnifications and bioaccumulation.
5. I can state some impacts of bioaccumulation on an environment.
6. I know examples of heavy metal bioaccumulation and its effects on different trophic levels.
7. I also know of some ways that we can help prevent bioaccumulation (biodegradation).

Naturally changing ecosystems and humans causing changes on ecosystems

1. I can state some examples of adaptive radiation and natural selection.
2. I know the difference between primary and secondary succession.
3. I know the differences that natural events have on ecosystems.
4. I can state some examples of how we as humans have negatively affected the environment and I can also state some examples of how we as humans have positively affected the environment.
5. I can compare and contrast the difference between traditional ecological knowledge and technological knowledge.
6. I know the difference between an invasive species and an introduced species.
7. I can give examples of invasive species in BC and how they have affected the ecosystem.
8. I know of many different ways that I personally can improve the environment and the effects that me not doing these things can have.

VOCABULARY

* Abiotic
* Aeration
* Adaptive Radiation
* Bioaccumulation
* Biodegradation
* Biome
* Biotic
* Climax Community
* Carbonate
* Commensalism
* Decomposers
* Denitrification
* Ecological Succession
* Ecosystem
* Food Chains
* Food Pyramids
* Food Webs
* Heavy Metals
* Keystone Species
* Lightning
* Mutualism
* Nitrification
* Natural Selection
* Nutrients
* Parasitism
* PCBs
* Pesticides
* pH
* phosphorus
* photosynthesis
* potassium
* predation
* proliferation
* symbiosis
* trophic levels