**CH 8 Notes #5**

**Carbon Cycle**

**Big Question**: How does cycling energy & matter support living things?

***Intro to ecosystems & important vocab***

**Community**: **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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**Ecosystem**: **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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Ecosystems are made of two parts: **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Biotic** = parts of the environment that are **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  *Ex: birds, grass, insects*

**Abiotic** = parts of the environment that are **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** *Ex: rocks, water, soil, air*

***Energy flow***

As plants and animals break down the bonds in
 food some of the energy held in the bonds \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ into the environment

Energy can **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** and may move **into or out** of a particular ecosystem

**KEY CONCEPT**: Matter & energy cycle through **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** and **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**\_\_\_\_parts of the ecosystem.

*\*\*\*THIS MEANS THE TOTAL AMOUNT OF MATTER DOES NOT GO UP OR DOWN, IT JUST CHANGES TYPES\*\*\**

***The Carbon Cycle***: **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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Importance: life on earth is carbon based meaning all living things are made of **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**A trip through the carbon cycle**

1. Through photosynthesis, plants & algae add O2 to the atmosphere and **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

*(turned into glucose*)

1. When animals eat plants, the glucose in the plants becomes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. During respiration, organisms \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_to the atmosphere (*made when glucose breaks down*)

*Remember: Plants & algae make their own glucose, animals get glucose from the organisms they eat!*

1. **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**: organisms that break down dead or decaying organisms

*Note: Bacteria, worms, insects, & fungi also break down plant & animal waste*

Decomposers \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ into the **atmosphere** and other chemicals into the **earth**.

**Fossil fuels**: natural fuels made from **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

***Examples: coal, natural gas, oil***

1. **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:** burning living plants or fossil fuels for energy, releasing CO2 into the atmosphere

*Examples: Burning wood, Car exhaust, Factories*

1. Carbon atoms in the atmosphere/earth can become a part of plants or algae again, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**Big Question**: How does cycling energy & matter support living things?