

Friday, September 19/14
Science 10

1. Chapter 2 - Change and Stability in Ecosystems
 2. Changes in Biotic and Abiotic Factors
 3. Cuyahoga River
 4. Ban DHMO: Dihydrogen Monoxide
 5. Types of Substances
 6. Movement of Energy vs. Matter in Ecosystems
 7. Cycling of Organic Matter
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8. Carbon Cycle - Photosynthesis and Cellular Respiration

Chapter 2 - Change and Stability in Ecosystems

By changing constantly, ecosystems stay in a state of equilibrium (balance).

Large changes in abiotic or biotic factors can cause a shift in the balance of an ecosystem.

Example

Pollutants from industrial processes kill or injure organisms. In turn, food webs are affected and relationships within ecosystems change. Ecosystems can recover, but it can take years or centuries.

Video clips → Cuyahoga River

Cuyahoga River Pollution Ohio 1967

http://www.youtube.com/watch?v=_jxV6BbREfY



The Cuyahoga River Fire: "Don't Fall in the River"

<http://www.youtube.com/watch?v=nlHiaZFvcXA>



Cuyahoga River Restoration

<http://www.youtube.com/watch?v=tZA9OX2joUc>

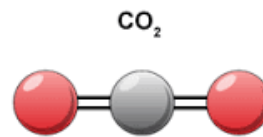
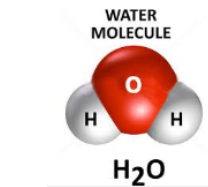
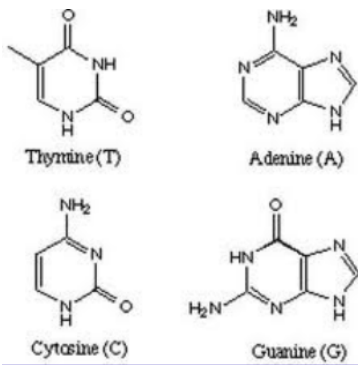


Types of Substances

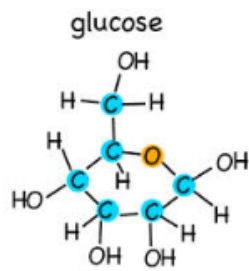
organic

- always contain atoms of carbon and hydrogen
- often contains atoms of nitrogen and oxygen

proteins } food
sugars }
fats }

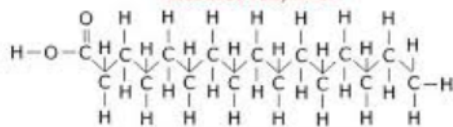


carbon dioxide molecule

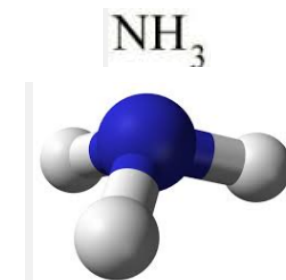
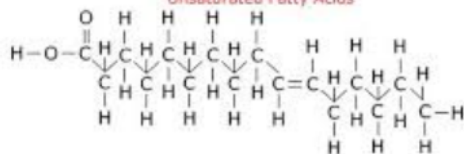


Fatty Acids

Saturated Fatty Acids



Unsaturated Fatty Acids



***Energy** flows through an ecosystem. →

***Matter** cycles through an ecosystem. ○✓

Cycling of Organic Matter

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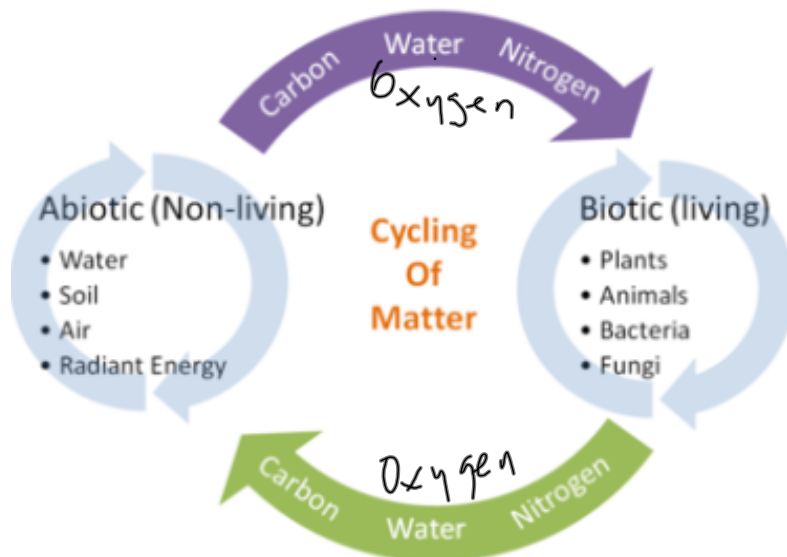
Matter is made up of **atoms** which take up space and have mass.

In nature, matter is not destroyed; it is either transformed into different types of matter or moved from one location to another in processes we call **cycles**.

DO NOT COPY

The atoms inside your body are billions of years old, having traveled through space, soil, rock, water, air, and other living organisms. In fact, it is likely that some matter inside your body was once found in a dinosaur...or its poop.

Matter must be recycled to maintain life on Earth.



Complete Handout -> "Cycling Matter"

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Attachments

Science 10 - Cycling of Matter.docx