How is carbon recycled?

1. Earth is open energetically (constant input of energy from sun.)
2. However, it is closed in terms of matter: atoms cannot be created nor destroyed.
3. Carbon and oxygen atoms have been cycled throughout Earth’s history.
4. The carbon cycle is the movement of carbon from the atmosphere into organisms and the environment and back into the atmosphere.
5. For example, plants remove carbon dioxide from air and put it into glucose.
6. The carbon atoms may then move into proteins in plant tissue. The plant releases carbon dioxide into the atmosphere through plant respiration.
7. When the plant dies, the proteins are broken down, and carbon moves into atmosphere to start cycle again.
8. The carbon atoms may then get eaten by a grasshopper, where it moves into the grasshopper tissue to create carbohydrates, fats, and proteins. The grasshopper can release carbon dioxide into the atmosphere through animal respiration.
9. The carbon gets broken down when the grasshopper dies, and moves back into atmosphere.
10. The grasshopper gets eaten by other organisms, which die, and return carbon to soil and atmosphere, and so on.
11. Sometimes, carbon atoms do not get broken down. Instead, they get converted to fossil fuels.
12. These molecules then turn to carbon dioxide when people burn fossil fuels in combustion.
13. Carbon dioxide can get dissolved in water and is stored as bicarbonate.
14. Carbon is never constantly in motion. Sometimes it stays in huge tanks called reservoirs, or carbon sinks.
15. Examples include atmosphere, rock, soil, living things, and ocean water.