

Name:

Swamp Gas Assignment

1. Swamp gas is a mixture of gases that contain ___methane____.
2. How is methane produced in the Okefenokee Swamp?
Methane is produced in the Okefenokee Swamp by bacteria which decompose organic material in an anaerobic (anoxic) environment.
3. What is an anaerobic environment?
An anaerobic environment is one which does not have free oxygen available.
4. Aerobic decomposition produces ___CO₂_____ while decomposition in an anaerobic environment may produce ___methane (CH₄)_____.
5. What two things do ecosystems do?
Ecosystems cycle matter and transfer energy.
6. ___Producers_____ fix energy from the sun which flows through food chains.
7. ___Decomposers_____ cycle matter in an ecosystem.
8. Methanogenesis is the formation of methane by ___microorganisms_____ called methanogens.
9. Which kingdom contains methanogens?
Methanogens belong to the kingdom archaeobacteria
10. What is an anoxic environment?
An anoxic environment is one which does not have any free oxygen available (anaerobic)

11. What is the role of methanogens in the Okefenokee Swamp?

Methanogens play a key role in the Okefenokee Swamp by decomposing organic material and cycling matter. They are also responsible for bog formation.

12. How do methanogens help produce the floating bogs which are characteristic of the Okefenokee Swamp?

Methanogens produce gasses which get trapped under the peat. As these gasses build up, the peat becomes buoyant and rises to the surface of the water where it can accumulate.

13. What is ecological succession?

Ecological succession describes the order in which organisms populate a newly formed habitat.

14. Combustion is a chemical reaction in which a substance rapidly combines with oxygen producing light and heat.

15. What is the balanced chemical equation for the combustion of methane?

