



My Summer Vacation Benchmarks

SC.8.N.1.6

Understand that scientific investigations involve the collection of relevant empirical evidence, the use of logical reasoning, and the application of imagination in devising hypotheses, predictions, explanations and models to make sense of the collected evidence.



My Summer Vacation Vocabulary

Eutrophication: excessive nutrients in a lake or other body of water, usually caused by runoff of nutrients (animal waste, fertilizers, sewage) from the land, which causes a dense growth of plant (algae) life reducing sunlight required by seagrass for photosynthesis; the decomposition of the plants depletes the supply of oxygen, leading to the death of animal life.

Nutrients: any substance (including phosphates from fertilizers, sewage and animal waste) that can be taken in by a green plant and used in organic synthesis.

Algae: primitive chlorophyll-containing mainly aquatic eukaryotic organisms lacking true stems and roots and leaves.

Photosynthesis: synthesis of compounds with the aid of radiant energy (especially in plants).

Pathogen: any disease-producing agent (especially a virus, bacterium or other microorganism).

Agent: a substance that exerts some force or effect.

Pilot study: a small-scale experiment or set of observations undertaken to decide how and whether to launch a full-scale project.

Metabolite: any substance involved in metabolism (either as a product of metabolism or as necessary for metabolism).

Agar: any culture medium that uses agar as the gelling agent; a colloidal extract of algae, used especially in culture media and as a gelling agent in foods.

Culture: the growing of microorganisms in a nutrient medium (such as gelatin or agar).

Inhibit: to decrease, limit, or block the action or function of an enzyme or organ.

Formulated: to come up with an idea, plan, explanation, theory, hypothesis, or principle after a mental effort.

Data: a collection of facts from which conclusions may be drawn.

Lagoon: a shallow body of water separated from a larger body of water by barrier islands or reefs.



My Summer Vacation Guiding Questions

1. What did the narrator observe when he got to his favorite fishing spot?
2. Why is this important?
3. How does eutrophication affect seagrass?
4. What was removed from the seagrass for testing?
5. Why were pieces of the pathogens placed on the samples in the culture trays?
6. In the pilot study, all of the seagrass samples appeared to inhibit growth of the pathogen. Why was testing a lot more seagrass required?
7. What was the “really big question?”
8. Why is the Indian River Lagoon important?