WESTLAKE
IB WORLD SCHOOL

Fulton County Schools
Where Students Come First

Hello and welcome to IB Biology HL/SL Year 1! I am looking forward to working with you in the upcoming school year.

The purpose of the summer assignment is to help you review key concepts and refresh the biology content you learned in 9th or 10th grade. This will allow us to begin the course ready to move forward, as there is a significant amount of material to cover during the year and limited time for review.

This assignment will be entered into the gradebook through Canvas once we return to school. Please do not wait until the end of the summer to begin working on your summer assignment. Completing the work gradually will make it more manageable and less overwhelming. The goal is for this assignment to be helpful, not stressful.

Some of the material may be new to you; however, it is important that you attempt and complete all questions.

The assignment is due on your first day of class, based on your A/B Day schedule.

Class Supplies- plastic pocket folder, lined paper, notecards, highlighters, ruler, calculator.

If you have any questions or concerns, please feel free to email me.

Enjoy your summer,
Mr. Smith
Westlake High School
smithm9@fultonschools.org
"Without Struggle, There is no Progress" - Frederick Douglass

Summer Assignment: Ecosystems Everywhere

Purpose

IB Biology is about understanding how living things interact with each other and their environment. Before we begin our study of ecosystems, spend time observing nature around you and thinking like a biologist.

Part 1: Ecosystem Observation: Visit a local ecosystem.

Examples:

- Backyard
- Neighborhood Park
- Pond or lake
- Nature trail
- School grounds
- Community garden

Spend at least 20 minutes observing.
Record:

1. Five living organisms you observe.
2. Three non-living (abiotic) factors.
3. One interaction between organisms.
4. One interaction between an organism and its environment.

Take 3-5 photos if possible.

Part 2: Curiosity Questions (2-3 sentences per question)

Write responses to the following:

1. Which organism interested you the most and why?
2. What do you think would happen if one organism disappeared from this ecosystem?
3. What is one question about nature or the environment that you hope to answer this year in IB Biology?

Part 3: Watch and Reflect

- Pick one organism from this video and create a reflection focusing on the following:

A. Knowledge & Understanding

1. Define the term **ecosystem**. How does it differ from a **community** and a **population**?
2. Identify three **biotic factors** and three **abiotic factors** discussed in the video.
3. What role do **producers**, **consumers**, and **decomposers** play within an ecosystem?
4. Explain how **energy flow** differs from **nutrient cycling** within an ecosystem.

5. What is the importance of **biodiversity** in maintaining ecosystem stability?

B. **Application**

6. Construct a simple **food chain** based on organisms mentioned in the video.
7. Expand your food chain into a **food web** and explain why food webs are more realistic representations of ecosystems.
8. Identify a potential **ecological niche** for one organism featured in the video.
9. Describe one example of a **biotic interaction** observed in the video (e.g., predation, competition, mutualism, parasitism).
10. Predict how a change in one **abiotic factor** could affect the organisms shown.

Part 4: Create an Ecosystem Snapshot

Put everything onto one page (digital or paper):

- Ecosystem name/location
- Photos or sketches
- Organism observations
- Abiotic factors
- Reflection paragraph
- One question you still have

Feel free to use Canva to complete this final task!

Have fun and see you all in August!
-Mr. Smith