Student #1

I was at the back of IST, in the forest, when I started taking measurements of the trees and snapping pictures. The time was somewhere between 2 and 3 PM when we found ourselves there, and the heat was intense—about 86°F. The air was thick, and it felt like the kind of heat that clung to you, wrapping around you with every step. We spent a good amount of time down there, measuring the trees and observing their features.

The main measurements we were focused on were the circumference and height of the trees. These seemed to be the key indicators of their size and age, so it was important to get them as accurately as possible. It was interesting to note how most of the trees in that area had roughly the same circumference, with a few exceptions. The larger trees—those big, old giants—stood out with significantly thicker trunks, their size almost imposing against the rest of the forest.

What caught my attention even more, though, was the bark of some of the trees, especially the cedar trees. The way their bark seemed to peel off in layers was almost surreal. It looked like it was shedding itself. As I thought about it, I realized this peeling was no accident—there was a reason for it. And that reason, I learned, had to do with a condition known as Hypoxylon canker.

"Hypoxylon canker and boring insects are two common causes of peeling bark. Hypoxylon canker is a rather common fungus that causes bark to fall off and collect around the base of the tree. While Hypoxylon itself is not treatable, it generally affects already weakened trees, serving as a secondary pathogen." (*Tree Bark, 1983*)

Learning about this made me even more curious about the trees around me. I couldn't help but wonder why cedar trees, which are known for this bark shedding, are often found in the same groves as oak trees. I had noticed that they tend to grow together in the forest about 50% of the time, though this is not always the case. There must be something that links these two types of trees, something that makes them compatible in the same ecosystem. I began to think that the way oak trees and cedar trees grow, how they take in water from the ground and distribute it through their systems, might be connected to how these groves form. But, after some thought, I realized that this wasn't quite the full explanation. There had to be more to it.

"As the growing tree expands by adding a new layer of sapwood, its protective outer bark becomes too tight, causing it to crack and split. These cracks create distinct bark patterns, and those patterns can be so unique that some trees can even be identified by them."

Reading this gave me a deeper understanding of the trees I was surrounded by. It wasn't just about the bark peeling off or the way the trees looked; it was about how each tree, in its way, had its own story—its physical processes that shaped its outward appearance. The bark cracking as the tree grows was a process I had never fully appreciated before, but it gave me a new perspective on the life cycle of these trees.

As I continued my exploration, it became clear that there were so many more layers to the forest than I initially realized. It wasn't just a collection of trees standing side by side; each one was a participant in an intricate web of life, from the fungus that caused peeling bark to the way water made its way through the soil to the roots. The forest wasn't just a setting—it was an ongoing process, full of secrets waiting to be uncovered.

One of the things that Impact/Effect Bark cracking/peeling is Fungus. For Example, Take Cedar trees. Their bark Peels right off. Now, the way Fungus affect the tree is by getting inside the bark. But that's where the peeling comes in. As the Fungus molds itself to the bark, the tree recognizes this and peels off it. And with that it saves itself. But, it now exposes its inner core and is even more prone to diseases. So after it sheds that, It will just have to hope with its life.