



For my final art project, I chose to paint the path of a comet not just because comets are scientifically fascinating, but because they have become a personal symbol for how I think about life's journey. A comet spends most of its existence traveling through silence and darkness, often for hundreds or thousands of years, only to appear briefly in the sky, blaze with light, and then disappear again until the next cycle. When it returns, the world will have changed; there will be new people, new histories, and new lives, and yet the comet itself will follow the same path it always has. That idea moved me. It reminded me that we also have brief moments of brightness in a life that is much longer and larger than we often realize. My painting became a way to express that comparison: we may come and go, but the universe continues its rhythm, steady and unchanged.

I wanted to bring this idea to life visually, so I set out to paint a single comet streaking across a sea of stars, with a planetary horizon at the bottom of the canvas. The planet anchors the viewer

in a familiar perspective, while the comet pulls the eye upward into the vastness of space. I wanted the viewer to feel as though they were watching something ancient pass by, something that has traveled for ages and will continue long after us. The simplicity of the scene is intentional. I did not want extra elements to distract from the sense of motion and inevitability that defines a comet's path.

The painting process itself was straightforward but meaningful. I bought plain canvases and used acrylic paints, because acrylics dry quickly and let me layer textures without waiting too long between steps. First, I coated the entire canvas in a deep black background. This blank darkness was important because it created the emptiness of space, the environment in which everything else would exist. Then, I dipped a toothbrush in white paint and sprinkled it across the canvas to create the stars. This technique gave me the random scattering and variation that you see in real starfields. Some stars came out small and faint while others were larger and brighter, which made the sky feel alive rather than artificially arranged. After the starfield dried, I added the curved outline of the planet at the bottom using greys and whites, blending them with a dry brush to suggest cloud formations and atmospheric haze. Only after all of that was fully dry did I paint the comet. I used a thin brush to draw its bright head and trailing tail, making it the single smooth, deliberate stroke in an otherwise chaotic sky.

Although the painting is artistic rather than scientific, I wanted its elements to reflect real astronomical ideas. In astronomy, a comet originates from the Kuiper Belt or the Oort Cloud, regions far beyond the planets where icy bodies orbit the Sun. When a comet's orbit brings it closer to the Sun, the solar wind and radiation cause its tail to form, always pointing away from the Sun, regardless of where the comet is heading. I used this fact in shaping the direction of my comet's tail. Its long tapering streak is not just decorative; it is a visual hint of the physics behind it. The bright, broad head of the comet represents the coma, the cloud of gas and dust that forms as it warms. The streaking tail expresses motion but also time, reminding the viewer that what they are seeing is only one moment in an incredibly long orbit.

The black background also serves a purpose. Space appears empty to us, but astronomy teaches us that even what seems like a void is full of dust, gas, radiation, and particles. By allowing some of the splattered paint to take irregular shapes instead of perfect dots, I tried to show that subtle

density, the idea that space is not truly empty but full of the ingredients that shape comets and planets alike.

The deeper connection for me, however, lies in what a comet represents emotionally. A comet is a traveler. It moves through enormous distances, invisible most of the time, and then suddenly becomes a bright presence that people stop to look at and wish upon. When it returns again, generations will have passed. The last time a specific comet appeared, someone else, perhaps someone long gone, stood somewhere on Earth and looked up at it with their own thoughts, fears, or hopes. When it appears next, another person will look up again, and the comet will not know the difference. That contrast between human life and cosmic time is what inspired me. We have short lives, but we fill them with meaning. Comets remind me that although our time is brief, our moments of brightness matter.

Ultimately, this project allowed me to blend scientific ideas with personal reflection. My painting is an interpretation of both the physical behavior of comets and the emotional symbolism they carry. I hope that when someone looks at the piece, they feel that sense of motion, distance, and continuity, that the comet has traveled far before reaching this moment and will continue far beyond it, just as we move through our own paths in the time we are given.