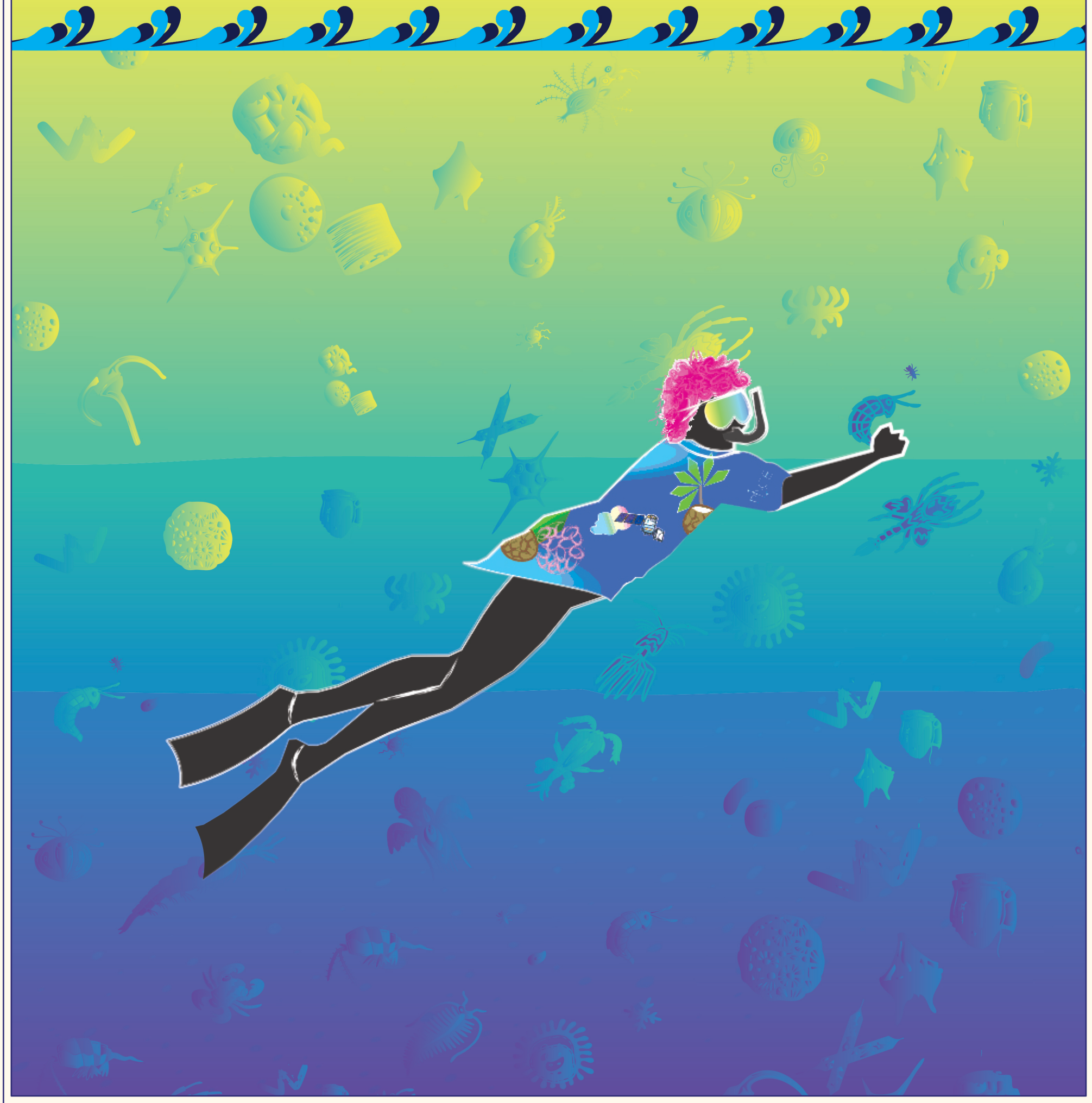




# Dive into the rainbow

Sensing plankton over all colors of the spectrum



PACE's Ocean Color Instrument captures the full spectrum of light reflected by ocean life, revealing phytoplankton communities in vivid spectral detail. These microscopic marine plants produce half of Earth's oxygen and serve as sensitive indicators of ocean health and climate variations. By analyzing the rainbow of wavelengths each species reflects and absorbs, scientists can distinguish different phytoplankton types; some being beneficial and some toxic, and track bloom patterns beneath the surface. This detailed biological data reveals the intricate connections between ocean life, fisheries, coastal economies, and global systems. Understanding phytoplankton dynamics through PACE's spectral measurements provides critical insights into how our changing planet affects marine ecosystems and their vital role in sustaining life on Earth.