



Scientific ocean drilling collects fundamental data on the plate tectonic cycle. This schematic depicts the three main phases in the life of an oceanic plate: (left) formation at the mid-ocean ridge, (middle) aging as it moves away from the mid-ocean ridge, and (right) destruction at a subduction zone. The oceanic plate is dark gray, the continental lithosphere is brown, and an upwelling mantle plume is orange. The white arrows show plate motion, white circular arrows depict hydrothermal circulation, and white stars are large earthquakes. *Illustration by Geo Prose, inspired by Figure 1 in Cramer et al. (2019), <https://doi.org/10.1016/j.tecto.2018.03.016>*