Exploring our own galaxy, we learn much about the life cycles of stars. Stars form in clusters and slowly drift apart over their lifetimes. How long they live and how they die depend on how heavy they are. Large, blue stars live fast and die young in violent explosions. Smaller, yellow stars—like our Sun—burn slowly for billions of years.

Stars are under constant pressure. Gravity pulls the mass inward to crush the star, while heat and energy from the core push outward.

Image above: The center of our Milky Way Galaxy as seen by the Chandra X-ray Observatory, 900 light years across.

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