When a star like the Sun runs out of fuel, it expands and its outer layers puff off, and then the core of the star shrinks. This phase is known as a "planetary nebula," and astronomers expect our Sun will experience this in about 5 billion years. This Helix Nebula image contains infrared data from NASA's Spitzer Space Telescope (green and red), optical light from Hubble (orange and blue), ultraviolet from NASA's Galaxy Evolution Explorer (cyan), and Chandra's X-rays (appearing as white) showing the white dwarf star that formed in the center of the nebula. The image is about four light years across.

Credit: X-ray: NASA/CXC; Ultraviolet: NASA/MSFC; Optical: NASA/STScI; Infrared: NASA/JPL-Caltech/K. Su