



# CAT'S EYE

**WHO:** The Cat's Eye, officially known as NGC 6543, is a so-called planetary nebula, a glowing shell of gas and dust that forms when Sun-like stars die.

**WHAT:** Planetary nebulas actually have nothing to do with planets—the name was coined hundreds of years ago because these objects looked like planets through small optical telescopes. Rather, a planetary nebula is a stage of life that our Sun will experience billions of years from now (see illustration below).

**WHERE:** The Cat's Eye is found 3,000 light years from Earth in the middle of the constellation Draco, which is Latin for "dragon." Draco is found high in the northern sky.

**WHEN:** Stars like the Sun live for billions of years, but their phase as a planetary nebula lasts only a few hundred thousand years.

**HOW:** The spectacular filamentary structures in planetary nebulas come from the outer layers that have been shed by the dying star then sculpted by intense radiation from the hot central star (bright white dot in middle) that will eventually become a white dwarf.

**WHY:** It is important to understand the details of how stars disperse elements made in their interiors. These elements, such as carbon and nitrogen, could be crucial for the formation of planets and the evolution of life. [More at: http://chandra.harvard.edu](http://chandra.harvard.edu)



X-RAYS FROM NASA'S CHANDRA



OPTICAL DATA FROM NASA'S HUBBLE

Stellar Nursery

## ILLUSTRATION OF STELLAR EVOLUTION PATH

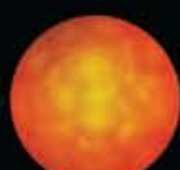
Stellar Nursery



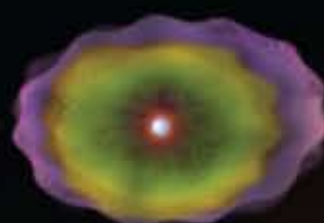
Protostar



Sun-like Star



Red Giant



Planetary Nebula

White Dwarf



CONSTELLATION DRACO