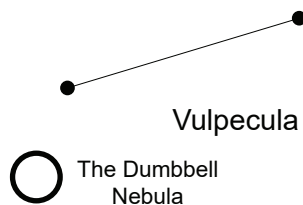


# The Dumbbell Nebula

1,360 light-years away in the constellation of Vulpecula is the Dumbbell Nebula, sometimes referred to as the Apple Core.

The Dumbbell is a planetary nebula which is a star in the final stages of its life. The original star would have been anything up to 1.3 times the mass of ours, so this is how our Sun will eventually end up in 4.5 billion years.

Discovered in 1764 by Charles Messier, it is an example of the outer edges of a star having shed away leaving the tiny Earth sized White Dwarf at the center.



The Object is mostly blue green as the star would have used up most of its hydrogen fuel, converting it to helium and expanding to a Red Giant. Eventually the helium starts to fuse into carbon and oxygen.

Once the helium is all used up, the outer shell is ejected into space like you see here. The core continues to contract to become a carbon / oxygen White Dwarf. The vast amount of radiation given off by the White Dwarf causes the expanding gas shell to glow.

The tiny white dwarf core, hidden by the white glow, is about the size of the Earth but gravity is crushing down on it so much that a teaspoons worth would weigh about 5 tons.

The remaining left over gas shell is comprised of mostly oxygen, mixed with hydrogen and helium. If you look carefully you can see some faint oxygen “wings” surrounding the gas shell.