

James C. Wright Free Press

A Deadly Fault in Our Stars?

by Sayra Garcia, age 12

While they might all look similar from Earth, stars actually differ in size, color, and temperature. However, all stars are born in and end the same way.

Stars are created when gravity draws together dust and gas into balls, forming nebulae. As nebulae heat up and gain energy, they begin to emit heat, shine, and illuminate the night sky.

Young stars typically stay together in clusters. Though the naked eye cannot perceive it from Earth, these clusters actually contain stars that are many different colors and sizes. Large

stars are white and hot while small stars are red and cool. Because of their size, larger stars create energy much faster and become much hotter than smaller ones. Stars that fall in the middle of this size spectrum, like the Sun, appear yellow.

Since large stars use energy quickly, they have shorter life spans than small stars do. The Sun, which has been shining for approximately five billion years, is halfway through its life span. Like the Sun, each star will ultimately fade.

[Source: *100 Things You Should Know About Space*]

Twinkle Twinkle Little Comet?

Moon and Stars Not Earth's Only Nighttime Lights

by Cinthia Diaz, age 12

The moon and stars are not the Earth's only nighttime lights. Comets, asteroids, and meteors travel through space and shine brightly, too. It is the distinct ways in which comets, asteroids, and meteors move that make them each unique.

Mixtures of dust and ice, comets resemble and are often called "dirty snowballs." Some comets circle the Sun and loop beyond even the farthest planets. Others, like Halley's comet, travel back to the Sun regularly. The Sun's hot rays melt part of a comet, causing gas and dust to stream away from it. This stream looks like a tail and is the glow that one might see on a clear night.

Meteors also illuminate the sky. Nicknamed "shooting stars," meteors are actually just streaks of light, not stars. These flying flashes of light form when pebbles move through space at such high speeds that they hit the air above the Earth. The pebbles become so hot that they burst into flames. These flames are what one might see for a few seconds in the night sky. During certain times of the year, meteor showers occur and more shooting stars can be seen than usual.

Asteroids are a third source of nighttime light. Chunks of rock that failed to form planets, asteroids typically travel in a ring around the Sun. This loop, called the "Asteroid Belt," is found between Mars and Jupiter. Millions of asteroids exist; some are the size of a car while others are as large as a mountain.

Many interesting sources of light brighten our Solar System. Next time the night sky is clear, see if you can spot comets, meteors, and asteroids!

[Source: *100 Things You Should Know About Space*]

