



Streams of gas swirl around Jupiter, the largest planet in our solar system.

New stars are being born in the Carina Nebula.



## Dying Stars

Most stars live for millions or billions of years. How long a star lives depends on how big it is. The largest and hottest stars have the shortest lives. Our sun is about halfway through its life.

A star's size also affects how it dies. Eventually stars use up all their fuel. Some stars just fizzle. Some really big stars cave in on themselves. Scientists call these explosions supernovas.

The largest stars can create black holes. Black holes are small, dense objects. No one knows exactly what happens inside black holes. Their gravity is super strong. Not even light can escape them.

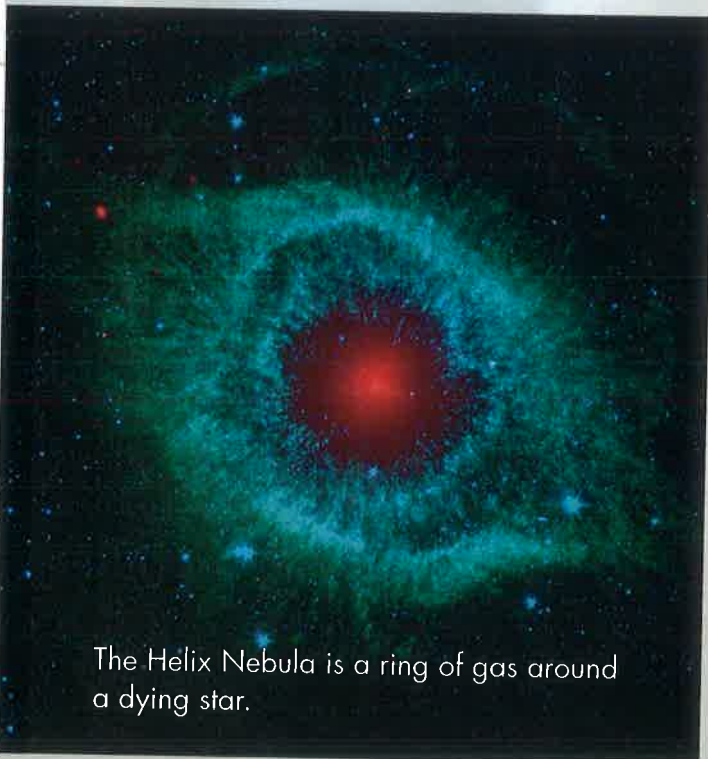
## Galaxies Ahead

A group of millions of stars is called a **galaxy**. Our solar system is in the Milky Way galaxy.

Hubble has shown us some other amazing galaxies. One is shaped like a tadpole. Another looks like the eye of a cat.

From the window of *Columbia*, the sky looked alive with stars. One night, I gazed at two small galaxies near the Milky Way. I had to look quickly. My view was about to change. Another sunrise was on its way.

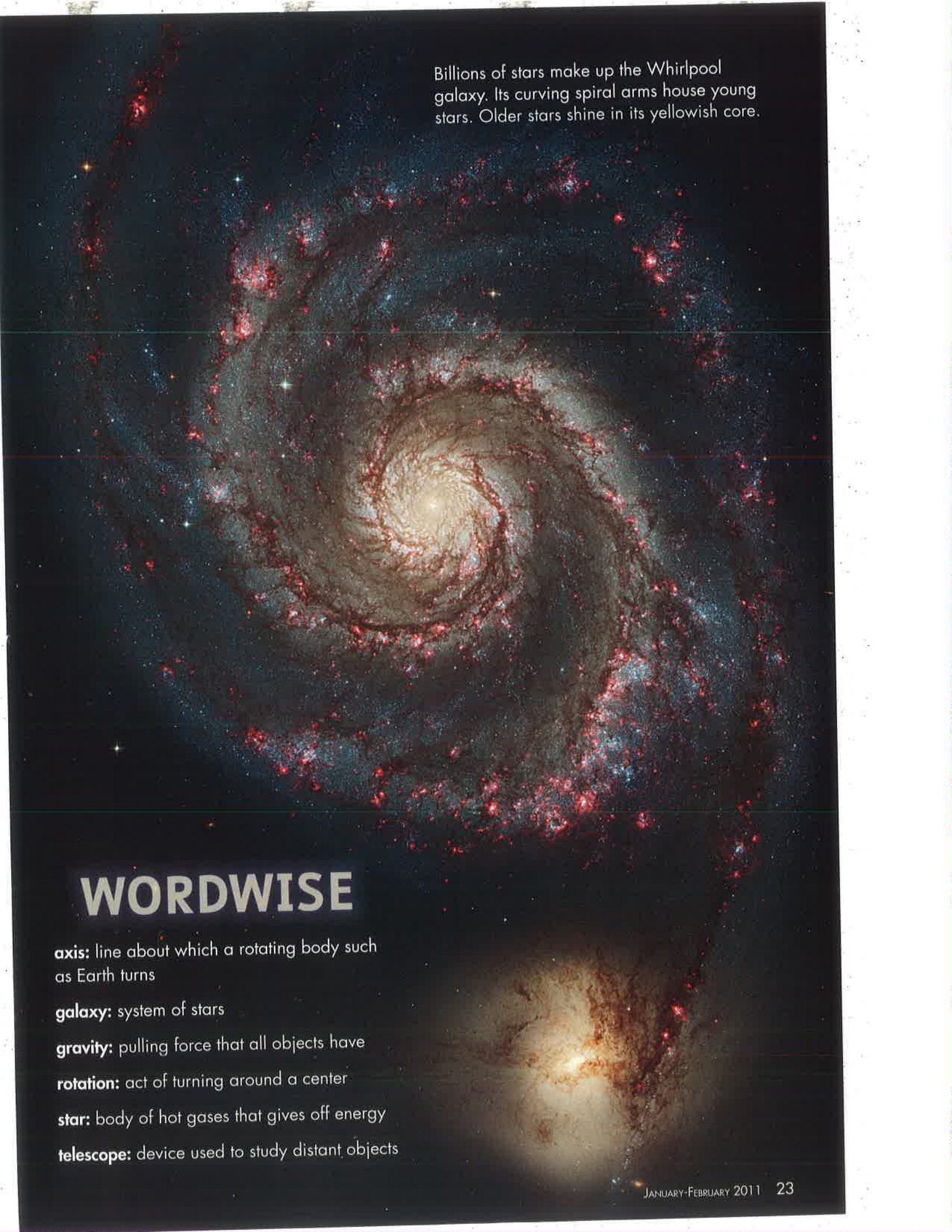
I had seen many sights in space. Still, as amazing as stars, nebulae, and galaxies are, there's no place like home, our planet Earth.



The Helix Nebula is a ring of gas around a dying star.



An exploding giant star formed the Crab Nebula.



Billions of stars make up the Whirlpool galaxy. Its curving spiral arms house young stars. Older stars shine in its yellowish core.

## WORDWISE

**axis:** line about which a rotating body such as Earth turns

**galaxy:** system of stars

**gravity:** pulling force that all objects have

**rotation:** act of turning around a center

**star:** body of hot gases that gives off energy

**telescope:** device used to study distant objects

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Cover: A polar bear shakes its body to remove excess water.

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