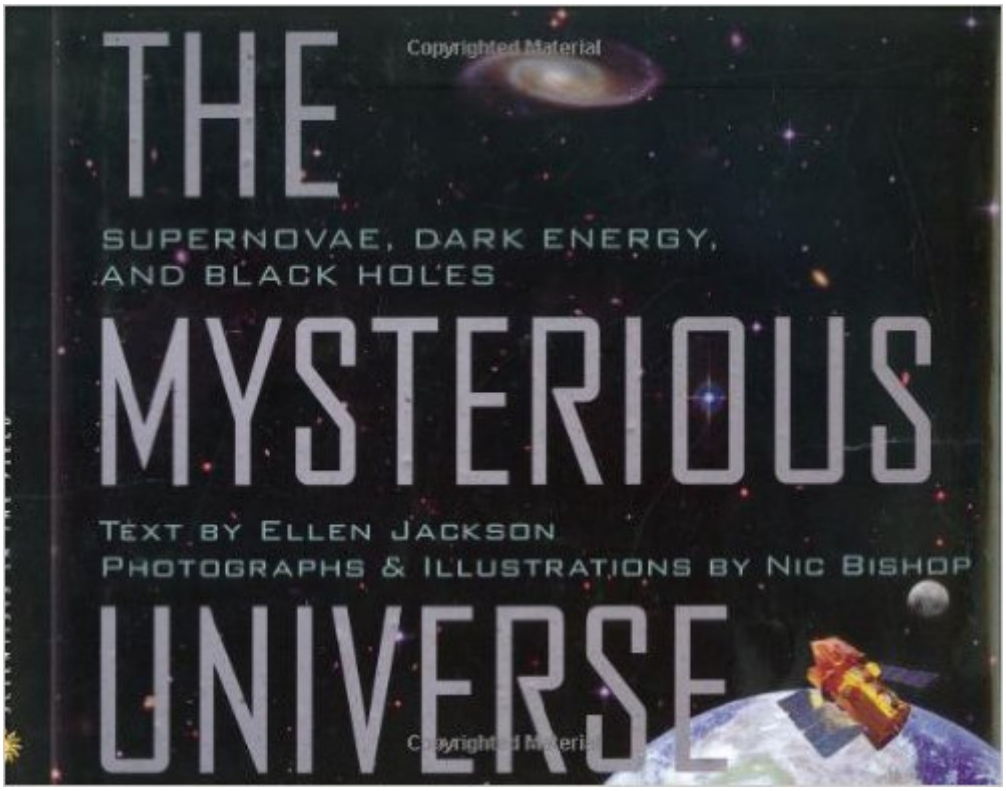
Mysterious Universe: Supernovae, Dark Energy, And Black Holes (Scientists In The Field Series)



Synopsis

The universe is rapidly expanding. Of that much scientists are certain. But how fast? And with what implications regarding the fate of the universe?Ellen Jackson and Nic Bishop follow Dr. Alex Fillippenko and his High-Z Supernova Search Team to Mauna Kea volcano in Hawaii, where they will study space phenomena and look for supernovae, dying stars that explode with the power of billions of hydrogen bombs. Dr. Fillippenko looks for black holes--areas in space with such a strong gravitational pull that no matter or energy can escape from them--with his robotic telescope. And they study the effects of dark energy, the mysterious force that scientists believe is pushing the universe apart, causing its constant and accelerating expansion.

Book Information

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Age Range: 10 - 12 years

Grade Level: 5 - 7

Customer Reviews

"'If it weren't for supernovae, we wouldn't exist,' says Alex [Filippenko]. 'The carbon in our cells, the oxygen that we breathe, the calcium in our bones -- all were cooked up in the stars and expelled in to space by these explosions.'"The heat and pressure in stars fuse simple atoms, tiny particles of matter that make up everything we see, into other, more complex atoms. Without supernovae, these larger atoms, such as carbon and iron, would stay locked inside the stars forever. But when supernovae explode, they scatter these atoms throughout space."Eventually the atoms created in

supernovae swirl together like water in a whirlpool to form stars and planets, such as Earth. Carbon and other atoms come together to make up our bodies and the bodies of the plants and animals we see around us. Without supernovae, there would be no flowers or forests, no hummingbirds or humans."Supernovae are also helping scientists understand a mystery that lurks in space. The discovery of a new substance called dark energy has stunned the scientific world. Until the 1990s, no one knew this strange energy existed. In fact, if you had asked a scientist about dark energy twenty years ago, you would have been told to stop watching so many science fiction movies. In contrast, today astronomers think it’s very real."This stuff is all so amazing! When I consider how little of the information in this book I knew --- when you consider how little of this information anyone knew until recent years -- you come to understand why it is so essential that dated science books be constantly removed from libraries and classrooms in order to make room for such exceptionally engaging, up-to-date, and stunningly beautiful, informational books as THE MYSTERIOUS UNIVERSE.

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