of weather forecasting. Readers are treated to the history of meteorological inventions—barometers and anemometers—and detailed and fascinating biographies of scientists, from "arm flailers" in the British Royal Society, including Robert FitzRoy, vice-admiral of the Meteorological Office, who committed suicide out of public humiliation over not being able to predict the weather and private financial troubles. Then there's William Ferrel of rural Pennsylvania, who first made the discovery that global winds blew in curved patterns. String theory and other effects of the wind are touched on as well, such as rock and dune erosion and wind power. Though Streeter occasionally overindulges in his own sailing experience, his ability to make complex concepts easy to understand while still capturing the awe and mystery of nature is spot-on. —Sarah Grant


Botanists speak and write in a particular scientific language that is unfamiliar to many people who enjoy plants and want to learn more about them. Students, gardeners, and even professional botanists will find much to like in this expanded glossary, with its concise definitions and engaging drawings. Some definitions include synonyms and aetymology of the word and see also references. Used to expand the vocabulary further. Many of the deceptively simple line drawings are almost three-dimensional, as in the leafy branch demonstrating the zigzagging pattern of flexuose. Alternate spellings or forms are indicated for some terms. Other drawings are cutaways that show the interior locations of the word defined. Users of botanical keys to determine plant family or species will find this book an aid. Some keys use common words, but as identification becomes more difficult, with more "if-then" choices, the terms may need defining. Botany reference collections will find this a welcome addition for users of all levels. —Linda Searth


This completely updated edition offers 300 essays on a wide variety of topics from Acid Rain to the World Meteorological Organization. While the first edition was arranged by thematic chapters, the new edition features shorter entries arranged alphabetically. Each volume begins with a list of all of the entries arranged by scientific field for students focusing on a particular area of study and a chapter devoted to "Research and Activity Ideas" appropriate for students and teachers.

The entries are written in a clear and easily accessible style and range in length from a few paragraphs to a few pages. Updated content includes entries on the earthquake in Haiti in 2010 and the earthquake and tsunami in Japan in 2011. Each entry features a "Words to Know" box that highlights vocabulary from the entry and provides definitions. Boxed areas are also used to highlight key pieces of information. Entries conclude with a list of related entries to investigate for further information. Colorful photographs, images, charts, and maps are included throughout. In addition, the title of the current entry or section appears along the top of each page for easier navigation. Each of the five volumes concludes with a comprehensive list of books, periodicals, and websites for further information, and a general index. This set would be a welcome addition to public or middle-school libraries. —Merren Ostergard

YAGC: UXL titles are a staple in middle- and high-school reference collections, and this should find a place in most libraries serving young adults. RV

Technology


In the 1940s, computers were just big calculating machines built to solve complicated technology problems, such as successfully aiming antiaircraft guns at German warplanes. People entered data and applied results. In time, however, computers became smaller, more powerful, more diversified, and integrated with other technologies. Imagining that a close human-machine bond would lead to a bountiful utopian society, visionaries coined the relationship "cybernetics." Unfortunately, as machines rose, human social progress did not keep pace. In Rise of the Machines, professor of war studies Rich chronicles how the promise of a better world was compromised by greed, crime, politics, and war. Recounting developments of industrial automation, artificial intelligence, e-mail, personal computers, the Internet, and digital commerce, the author shows how every advance is shadowed by social disruption as people surrender more control to machines and to the wealthy who control the machines. Baby boomers will read as a history of their time; younger readers may be shocked by what they have inherited. —Rick Roche

Child Care


Considering that 50 percent of families in the U.S. are formed by a remarriage or recoupling, this optimistic and realistic book will be a good resource for many parents and stepparents. The content is geared toward those who are considering combining as well as those who are already blended and facing challenges. The book is organized into three sections. "Opportunities and Challenges" includes a useful quiz about adult attachment styles to help readers understand their own style and that of their partner. In section 2, the authors lay out the "Five Things You Must Have to Succeed," and section 3 covers "Stories and Practical Insights." In the "Do's and Don'ts" list in section 3, the authors reach beyond their own expertise and include insights from marriage-expert John Gottman and financial-expert Suze Orman. Mullineaux's own story adds a personal touch and credibility to the mix. Despite the large number of blended families there aren't a lot of titles on the topic. Blending Families: Merging Households with Kids 8–18 would be a useful addition for any public library. —Joyce McNeltly


Education expert Borba has noted a troubling trend among young people: a lack of empathy, leading to increases in aggression and bullying, higher anxiety levels, and self-centered rather than community-centered ways of thinking. Her practical solution, which she calls the "empathy advantage," helps combat these issues. Drawn from years of research and observation, Borba presents a nine-step plan intended to help children and teens develop the essential skill of empathy. Each chapter focuses on a specific aspect of empathy, and Borba presents case studies, practical steps parents and educators can take to instill the value of empathy in children, and specific strategies and activities that can be used for preschoolers, school-age children, and tweens and teens. Though Borba's suggestions are supported by research, the presentation is anecdotal and readable rather than academic, and the empathy-building activities are generally simple, fun for children, and easy to implement into daily life. Shelves' worth of books have been published over the years highlighting what characteristics children need to succeed, but Borba builds an excellent case for empathy, and parents concerned with the trend toward self-absorption and bullying among young people will find useful tips to counteract the negative messages children are hearing. —Nonette Davis