Looking for neat information to spice up your lectures? Writing or reviewing a paper and wanting to check some facts quickly? This convenient, almost-pocket-size book (easy to carry in your laptop case) is for you. For an editor, it is a godsend, and in fact I put it to good use shortly after I received a review copy (e.g. concentration of gold in continental crust; the abundance and mass of naturally occurring nuclides). In their preface, the authors, Paul Henderson (University College London) and Gideon Henderson (Oxford University) state, “We very much hope that users of this book will find their need for a one-stop and straightforward data source satisfied – a need we felt and which prompted us to produce the book.”

The book mostly provides tables of data, but it also contains a few diagrams and a small color section including, among other plates, a series of paleocontinental maps from the Cambrian to the present. The wealth of information is grouped into 11 chapters and is well indexed: The Solar System, Solid Earth, Geophysics, Aqueous Earth, Gaseous Earth, Biological Earth, Earth History, Chemistry and Isotopes, Crystallography and Mineralogy, Resources, and Hazards. Each chapter starts with a detailed table of contents (though it would probably have been more useful to put all the detailed tables of contents immediately after the chapter list at the beginning of the book.)

As every source of information is acknowledged, this book can act as a good starting point to gather information. Here is a tiny sample of the kinds of information you can find: major earthquakes between 1900 and 2007; stable isotope ranges in natural materials; significant landslides between 1919 and 2000; lunar stratigraphy; meteorite classification and numbers; freshwater resources and use, by country; ocean chemistry: element concentrations, residence times, and speciation (a table the authors are particularly proud of because it brings together a lot of data).

Another potential application of this book is to act as a trigger to get students involved in a topic: for example, surveying table 8.14, “Abundance and mass of naturally occurring nuclides,” which lists the naturally occurring isotopes of each element, their percentage, and their mass, one might wonder why it is that Sc has no isotopes whereas the neighboring elements, Ca and Ti, have six and five isotopes, respectively.

In this age of Google search and Wikipedia, the question has to be asked: is there a need for such a book? As a test, I typed in a few keywords in Google to see if I could retrieve the information quickly (gold composition of continental crust, ten largest lakes, moon bulk chemical composition). Even though I was able to find a lot of information on the Web and fared well for simple geographic information (largest lakes), I could not find tables with the richness of information provided in the handbook.

In summary, a mine of information at a bargain price!

Pierrette Tremblay
Managing Editor, Elements