

letters

Handbook on Research Techniques

To the Editor:

Under a grant from the Chastain Foundation, I am preparing for the International Foundation for Gifted Children a "Handbook of Research Techniques," focusing primarily upon the Social Sciences and the Humanities. Several sections of the Handbook should be useful even to experienced researchers. The primary purpose, however, will be to encourage the student considering a career involving research to learn to use library research tools effectively and to adopt early in his preparation an efficient method of gathering and organizing data.

Some sections of the Handbook will deal with information which, though available if several works are consulted, has not been comprehensively assembled in one volume. This includes the use of library reference materials, including descriptive lists of such resources, footnote and bibliographical systems used in various disciplines, and methods of taking notes.

My reason for writing however, has to do with two sections of the Handbook which will deal with information not discussed, to my knowledge, in other books on research, and upon which I would certainly appreciate any information you might be able to provide.

If readers of *THIS JOURNAL* have developed any such research methods, or know of someone who has, I should like very much to hear from you. Anyone whose techniques are described will be given credit in the Handbook. Those who contribute such information will be contacted prior to publication to make certain that any description is accurate. All persons contributing information used in the Handbook will receive a copy of the book. Beyond this, there is the knowledge of having helped make the road a bit easier for future generations of fellow researchers.

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Decimalization of Time

To the Editor:

In his letter [*J. CHEM. EDUC.*, **49**, 300 (1972)] Dr. Y. K. Purandare proposes the decimalization of time. Units identical to his were, in fact, included in the metric system when it was introduced by the French National Convention in 1793. The day, from midnight to midnight, was divided into 10 hours; there were 100 minutes in an hour and 100 seconds in a minute. The calendar was also partly decimalized, though even the most ardent revolutionary could not alter the number of days in a year. The reformers retained the division of the year into 12 months, but each consisted of 30 days made up of three "decades" of 10 days. Five complementary days (six in leap years) were added at the end.

The Republican Calendar remained in use until about 1804 but, although a few clocks and watches showing the new time were made, the decimal division of the day did not become popular and was never legally enforced.

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Determining Number of Lone Pairs

To the Editor:

Students learning to predict the shape of a molecule of the type AH_mX_n by using the Sidgwick-Powell rules often have difficulties in determining the number (l) of lone-pairs of electrons carried by the central atom (A). These difficulties can be overcome by use of the equation: $v = 2l + 2m + 8n$; where v is the total number of valence electrons, m is the number of hydrogen ligands, and n is the number of any other monatomic ligands. This equation is obtained by applying the octet rule to the ligands (X), and it shows the relationship between the Sidgwick-Powell rules based on $(l + m + n)$ and the Walsh rules based on v .

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