

**NOTES ON THE TEACHING OF
ELEMENTARY CHEMISTRY, WITH
A SEQUENCE OF EXPERIMENTS
ON AIR AND COMBUSTION**

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Notes on the teaching of elementary chemistry, with a sequence of experiments on air and combustion by J. B. Russell

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J. B. RUSSELL

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A SEQUENCE OF EXPERIMENTS
ON AIR AND COMBUSTION**

Educ.
Teach.
R.

NOTES ON THE TEACHING OF ELEMENTARY CHEMISTRY

*WITH A SEQUENCE OF EXPERIMENTS
ON AIR AND COMBUSTION*

TEACHER'S EDITION

BY J. B. RUSSELL, B.Sc. (LOND.)

FORMERLY SENIOR SCIENCE MASTER, GRAMMAR SCHOOL, BURNLEY

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PREFACE

THIS book is intended primarily for the use of teachers of chemistry in day schools of all grades; but it is hoped that it will also prove useful in certain preparatory evening classes. The Introduction deals with some points of difficulty in the teaching of Elementary Chemistry; this is followed by a sequence of experiments to illustrate the method of teaching proposed.

The pupil's book, *Notes on Elementary Chemistry*, Vol. I., is published separately. It contains,—

Part I.—A Sequence of Preliminary Experiments.

Part II.—A Sequence of Experiments dealing with the Chemistry of Air, together with supplementary matter.

Part II. is incorporated in the present volume. In the preparation of this book an effort has been made to solve some of the difficulties which have for a long time been the subject of

discussion by science teachers. A filing arrangement (as exemplified on p. viii) is used instead of ordinary binding. The teacher is thus enabled to distribute to his class the separate pages or sections *at a time when he thinks it expedient that his pupils should possess a printed record of experiments, discussions, or supplementary matter.* The difficulty that a text-book forestalls the practical work is thus overcome. When the pupil has written his own record (and not until then) he is allowed to file the section of the book which deals with the work done. Thus a permanent record is gradually put together, which will ultimately serve as a book of reference for the work of the whole course.

References to the sources of experiments are, where possible, given in the text, and attention is called to the Appendices.

I should like to express my indebtedness to Mr. F. W. Westaway for welcome advice and encouragement during the compilation of the book; and to Dr. Lowry and Mr. T. P. Nunn for help in correcting the proofs.

J. B. R.

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NOTES.—(1) This table of contents does not appear in the pupil's book, and the introduction and appendices are omitted.

(2) For convenience of publication the separate sections A—T are filed and issued in book form. It is recommended that at the first meeting of the class the sections should be removed from the files, one at a time, and collected in piles.

These sections should then remain in the custody of the science master until the time fixed for their distribution.