

**HELSON'S SCHOOL
SERIES. THE CHEMISTRY
OF COMMON THINGS**

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649426201

Helson's School Series. The Chemistry of Common Things by Stevenson Macadam

Except for use in any review, the reproduction or utilisation of this work in whole or in part in any form by any electronic, mechanical or other means, now known or hereafter invented, including xerography, photocopying and recording, or in any information storage or retrieval system, is forbidden without the permission of the publisher, Trieste Publishing Pty Ltd, PO Box 1576 Collingwood, Victoria 3066 Australia.

All rights reserved.

Edited by Trieste Publishing Pty Ltd.
Cover @ 2017

This book is sold subject to the condition that it shall not, by way of trade or otherwise, be lent, re-sold, hired out, or otherwise circulated without the publisher's prior consent in any form or binding or cover other than that in which it is published and without a similar condition including this condition being imposed on the subsequent purchaser.

www.triestepublishing.com

STEVENSON MACADAM

**HELSON'S SCHOOL
SERIES. THE CHEMISTRY
OF COMMON THINGS**

THE CHEMISTRY OF COMMON THINGS.



THE

CHEMISTRY OF COMMON THINGS.

BY

STEVENSON MACADAM, Ph.D., F.R.S.E., F.C.S.,
LECTURER ON CHEMISTRY IN THE MEDICAL SCHOOL, SURGEONS' HALL,
AND TO THE SCHOOL OF ARTS, EDINBURGH, ETC.



LONDON:

T. NELSON AND SONS, PATERNOSTER ROW;
EDINBURGH; AND NEW YORK.

MCCCLXVI.

193. 9. 17.

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that this is crucial for ensuring transparency and accountability in the organization's operations.

2. The second part outlines the various methods and tools used to collect and analyze data. This includes both traditional manual methods and modern digital technologies, highlighting the benefits of automation and data-driven decision-making.

3. The third part focuses on the challenges and risks associated with data management, such as data security, privacy concerns, and the potential for data misuse. It provides strategies to mitigate these risks and ensure the integrity of the information.

4. The final part discusses the future of data management, including emerging trends like artificial intelligence, cloud computing, and big data. It suggests ways in which these technologies can be leveraged to improve efficiency and gain valuable insights from the data.

Preface.

THIS little treatise on the Chemistry of Common Things is intended to be read by the more advanced pupils in schools and educational institutions, as also by others who desire to obtain a general and popular knowledge of the chemical relations of the world around us.

The teacher may illustrate the subject of reading by a few experiments and the exhibition of some specimens of rocks and minerals. The woodcuts which are introduced into the work will serve as a guide in the illustrations, and to some extent will supply the place of actual experiments.

100

100

Contents.

Chap.	INTRODUCTION.	Page
I.	THE CHEMISTRY OF THE WORLD AROUND US,	9
PART I.		
THE ATMOSPHERE, AND ITS RELATIONS TO PLANTS AND ANIMALS.		
II.	CONSTITUENTS OF THE ATMOSPHERE,	16
	Oxygen,	20
	Nitrogen,	23
	Carbonic Acid,	25
	Water Vapour,	30
	Hydrogen,	35
	Ammonia and Nitric Acid,	40
	Ozone,	44
	Concluding Remarks on the Atmosphere,	45
III.	THE PLANT, AND WHAT IT FEEDS ON,	47
IV.	THE PLANT, AND WHAT IT YIELDS US—	
	1. The Starch Group,	52
	Starch,	53
	Gum,	56
	Sugar,	56
	Lignin, or Woody Fibre,	60
	Concluding Remarks on the Starch Group,	61
	Vegetable Oils, &c.,	63
V.	THE PLANT, AND WHAT IT YIELDS US—	
	2. The Albumen Group,	68
	Albumen,	68
	Glutin, or Vegetable Fibrin,	69
	Legumin, or Vegetable Casein,	69
	Concluding Remarks on the Albumen Group,	70

	Page
VI. THE ANIMAL, AND WHAT IT FEEDS ON, ...	73
The Heat-producing Constituents of Food, ...	74
Circulation through the Animal System, ...	76
Aeration of the Blood—Respiration, ...	78
Effects of Exercise, Temperature, and Clothing, ...	81
Excess of Food, and Formation of Fat, ...	83
Scarcity of Food and Starvation, ...	85
VII. THE ANIMAL, AND WHAT IT FEEDS ON,	87
The Flesh-forming Constituents of Food, ...	87
Albumen, Fibrin, and Casein, ...	88
Wear and Tear of the Animal System, ...	91
Classification of Food—Proportion of the Constituents, ...	95
Grass and Flesh, ...	99
Milk, ...	101
Influence of Baking and Cooking, ...	108
Digestion of Food, ...	107
PART II.	
THE EARTH OR SOIL IN ITS RELATIONS TO PLANTS AND ANIMALS.	
VIII. IMPORTANCE OF SALINE FOOD, ...	117
Disintegration of the Soil by Air and Water, ...	119
Formation of Rock and Soil, ...	123
Influence of Earthquakes and Volcanoes, ...	125
Concluding Remarks on the Formation of Rock, ...	128
IX. THE SALINE FOOD OF PLANTS AND ANIMALS, ...	131
Common Salt, ...	136
Soda and Potash, ...	140
Bone and Bone Earth, ...	142
Lime and Chalk, ...	149
Iron, ...	151
Clay, &c., ...	153
PART III.	
X. THE DECAY OF PLANTS AND ANIMALS, ...	156
PART IV.	
XI. THE CIRCULATION OF MATTER, ...	164
CONCLUSION, ...	177
INDEX, ...	179