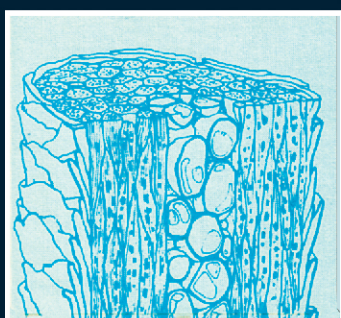
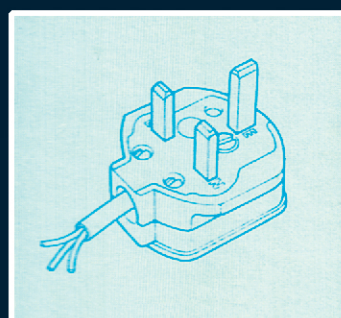
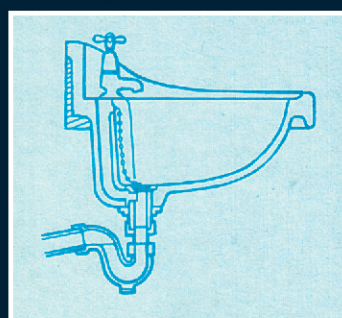
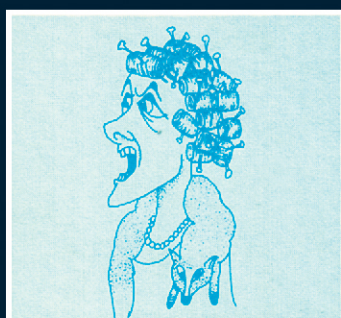
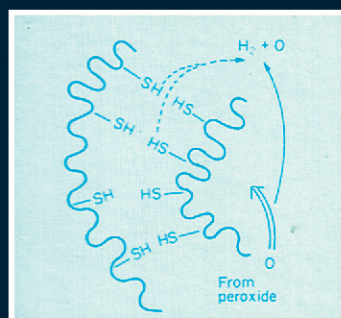
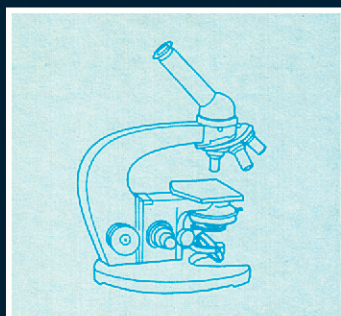
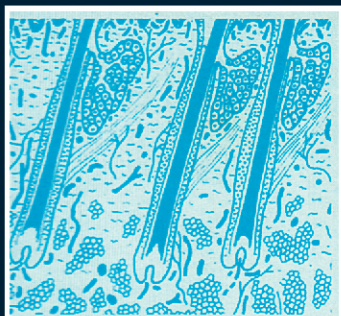


Science for Hairdressing Students

Third Edition

C.M.Lee & J.K.Inglis



Pergamon Press

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Science for Hairdressing Students

THIRD EDITION

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Preface

THIS is a virtual rewrite of the book in order to conform recent examination demands and the more integrated approach to teaching applied science.

In the “chemistry and physics areas” as applied to cosmetology, the approach has been to pose questions that need answering. The apprentice is encouraged to ask questions in all areas of her or his work and to expect an answer of sorts. The writer of this section of the book is only too keenly aware that he may not have asked all the questions that need to be asked. Both teachers and students are invited to write directly to him at the College in Oxford with any constructive suggestions for improvement. The extended laboratory exercises are designed in such a way as to demand minimal expenditure on equipment. Students are normally reluctant to carry out experiments “just for the sake of it”, so all these practical exercises are hopefully linked to practical hairdressing problems.

The modern hairdresser is aware that in caring for the hair of a customer she is dealing with part of a whole person and that she needs to understand how this person’s body functions. She understands that the condition of the customer’s hair depends on the health of body and mind and that she herself may have a role to play in this.

The manicurist who massages the customer’s hands and cares for her nails must know something of the bone structure beneath her fingers.

The beautician knows that lines on her customer’s face may spring from poor posture or aching feet and she must be in a position to give specific help and advice to remedy the matter.

The hairdresser and beautician also know that they have a duty and a responsibility to the community to keep a high standard of hygiene and efficiency in their premises and their work.

The section of this book which deals with the working of the human body and with community health is designed to help them to do all this.

Finally, to make “learning” easier most scientific terms are defined in the glossary and linked to a page number in the book. You could almost pass the science examinations by reading the glossary and answering the test questions! This book is suitable for students studying for:

City and Guilds of London Institute Craft Course (Basic 760-1)

City and Guilds of London Institute Craft Course (Advanced 760-2)

Qualifying Examinations of Hairdressing Council
American State Review Boards (Cosmetology)

JKI and CML

Acknowledgements

THE FIRST obligation the authors have in this third edition is to acknowledge the continuing support of students and colleges that use this book. No book would be written if there were no readers. The apprentice hairdresser, professional hairdresser and teacher are all acknowledged.

Particular thanks are due to Lynsbeth Axe, Section Leader of Hairdressing at the Oxford College. Mrs. Axe was kind enough to read through the hairdressing "techniques" to ensure that they were not too old fashioned or "way out".

The greatest part of the manuscript has been typed by my wife, Ulrike, in her free time. For this we are more than grateful.

There are some illustrations adapted from other publications. There are some photographs supplied by commercial or private agents. Where acknowledge-

ments are due they are shown beneath the relevant illustration. We thank those agencies that gave permission for us to use or adapt their material.

The authors also wish to thank the Principal and the Hairdressing staff of the Oxford College of Further Education for their cooperation. They are also grateful to Professor G. Weddell and Mr. C. L. Gummer for generous valuable help and for the scanning electron micrographs of hair; to Mr. S. J. Garrod, Chief Environmental Health Officer, Oxford, for advice and encouragement; to Mrs. Rosemary Smith for information and suggestions; and to Dr. H. R. Vickers and Mr. E. Tugwell for the photograph of scalp ringworm. The illustrations of a head louse and nit are reproduced from *Health Personal and Communal* by John Gibson, by kind permission of Messrs. Faber and Faber Limited.

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Introduction

THIS book is organised in such a manner as to make it a self-teaching text. All the information is broken up into small study topics with a glossary-index to guide the reader around the book. Only the laboratory work requires somebody to look over your shoulder, mainly to ensure all is safe and correct.

At the end of the book is a huge selection of self testing, through “multi-guess” tests”! The answers are given so that the reader can learn by making mistakes.

This is how the book is organised.

An Introductory Read

- 0.1. Visiting the Salon
- 0.2. How do we Know what is true?
 - 0.2.1 Can we cure baldness?
 - 0.2.2 Can we go grey overnight?
 - 0.2.3 Does hair grow quicker or better if we cut it?
 - 0.2.4 Does singeing the hair do much good?
 - 0.2.5 How can you know which skin and hair preparations are any good?
 - 0.2.6 What use is a high frequency treatment?
 - 0.2.7 What about the vibro machine?
 - 0.2.8 What about the various “heat treatments”?
- 0.3 Why should I bother reading any further?

Study Topics

- 1.0 Hair shampooing — Water
 - 1.1 How to shampoo
 - 1.2 Why do we use water?
 - 1.3 What is water?
 - 1.4 Does water soak into the hair?
 - 1.5 Does water “wet” the hair?

- 1.6 How does the “wetting” agent work?
- 1.7 Does water get rid of grease on hair?
- 1.8 Why does some water not lather very well with soaps?
- 1.9 What are the disadvantages of hard water in the salon?
- 1.10 How do we soften hard water?
- 1.11 Where does water come from?
- 1.12 How does the water reach the salon?
- 1.13 How is the water piped around the building
- 1.14 How is the water heated before use in the salon?
- 1.15 What about basins, traps, taps and drains?

- 2.0 Hair shampooing — Detergents
 - 2.1 What are shampoos?
 - 2.2 What are detergents?
 - 2.3 What is a soap detergent?
 - 2.4 What is a soapless detergent?
 - 2.5 How do soap and soapless detergents compare?
 - 2.6 How does a shampoo work?
 - 2.7 Besides detergents what else is there in a shampoo?
 - 2.8 What should we look for in a good shampoo?
 - 2.9 What types of shampoo are available?

3.0 Hair Colouring

- 3.1 How to apply a temporary hair colour
- 3.2 What are temporary hair colours?
- 3.3 What are the uses of temporary colours?
- 3.4 What is the strand test?
- 3.5 How to apply a semi-permanent colour
- 3.6 What are semi-permanent hair colours?

- 3.7 What are the uses of semi-permanent colours?
 - 3.8 What is a patch test (sensitivity test)?
 - 3.9 How to apply a permanent hair colour
 - 3.10 What is a permanent hair dye?
 - 3.11 How do permanent hair dyes work?
 - 3.12 How can we speed up permanent hair dye processes?
 - 3.13 What is a steamer?
 - 3.14 What is an accelerator?
- 4.0 Hair Lightening
- 4.1 How to apply a hair lightener ("bleaching")
 - 4.2 What is a hair lightener or "bleach"?
 - 4.3 How do hair lighteners ("bleaches") work?
 - 4.4 What is hydrogen peroxide?
 - 4.5 How do we describe the strength of hydrogen peroxide?
 - 4.6 How does percentage solution relate to volume strength?
 - 4.7 How do we dilute stock solutions of hydrogen peroxide?
 - 4.8 How do we store hydrogen peroxide?
 - 4.9 What is a catalyst?
 - 4.10 What do the ammonium compounds do in "bleaching"?
 - 4.11 How can we measure the strength of ammonia solution?
 - 4.12 What does it mean when we say ammonia is 0.88?
 - 4.13 What sort of thing can go wrong during "bleaching"?
 - 4.14 What is the purpose of after-bleach treatments?
 - 4.15 Why does bleached hair sometimes turn a brassy yellow?
- 5.0 Hair Waving
- 5.1 How to permanent wave the hair.
 - 5.2 How to apply cold-wave perm lotion.
 - 5.3 How to "neutralise" the perm.
 - 5.4 What is cold wave perm lotion?
 - 5.5 What is a perm "neutraliser"?
 - 5.6 How does the perm lotion work?
 - 5.7 How does the "neutraliser" work?
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- 5.9 What are the straightening reagents?
 - 5.10 How can we temporarily de-kink curly hair?
 - 5.11 How to heat-wave the hair?
 - 5.12 What are heat-wave lotions?
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- 6.0 Hair Setting
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 - 9.4 What chemical changes take place in salon work?
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 - 10.7 What does overloading the circuit mean?
 - 10.8 How can we overload a circuit?
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 - 10.10 What is a circuit breaker?
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