

The Craft of Scientific Writing

Third Edition

Michael Alley

Includes 28 Illustrations

4y Springer

Contents

| | |
|--|-----|
| Foreword | vii |
| Acknowledgments | xi |
| Chapter 1 Introduction: Deciding Where to Begin | 1 |
| Establishing Your Constraints | 2 |
| Selecting Your Stylistic Tools | 9 |
| Chapter 2 Structure: Organizing Your Documents | 16 |
| Beginnings of Documents | 17 |
| Middles of Documents | 33 |
| Endings of Documents | 40 |
| Chapter 3 Structure: Providing Transition, Depth, and Emphasis | 53 |
| Transitions Between Details | 53 |
| Depth of Details | 59 |
| Emphasis of Details | 63 |
| Chapter 4 Language: Being Precise | 73 |
| Choosing the Right Word | 73 |
| Choosing the Right Level of Detail | 78 |
| Chapter 5 Language: Being Clear | 83 |
| Avoiding Needless Complexity | 83 |
| Avoiding Ambiguity | 90 |
| Chapter 6 Language: Being Forthright | 97 |
| Controlling Tone | 97 |
| Choosing Strong Nouns and Verbs | 102 |
| Chapter 7 Language: Being Familiar | 110 |
| Avoiding Unfamiliar Terms | 111 |
| Defining Unfamiliar Terms | 112 |
| Incorporating Examples and Analogies | 115 |

| | | |
|------------|---|-----|
| Chapter 8 | Language: Being Concise | 119 |
| | Eliminating Redundancies | 119 |
| | Eliminating Writing Zeroes | 120 |
| | Reducing Sentences to Simplest Forms | 122 |
| | Eliminating Bureaucratic Waste | 125 |
| Chapter 9 | Language: Being Fluid | 128 |
| | Varying Sentence Rhythms | 129 |
| | Eliminating Discontinuities | 137 |
| Chapter 10 | Illustration: Making the Right Choices | 146 |
| | Choosing Tables | 146 |
| | Choosing Figures | 148 |
| Chapter 11 | Illustration: Creating the Best Designs | 158 |
| | Being Precise | 159 |
| | Being Clear | 161 |
| | Being Fluid | 164 |
| | Being Familiar | 167 |
| Chapter 12 | Writing Correspondence | 170 |
| | Constraints of Correspondence | 171 |
| | Style of Correspondence | 173 |
| Chapter 13 | Writing Proposals | 178 |
| | Constraints of Proposals | 179 |
| | Style of Proposals | 185 |
| Chapter 14 | Writing Instructions | 195 |
| | Constraints of Instructions | 195 |
| | Style of Instructions | 197 |
| Chapter 15 | Preparing Presentations | 207 |
| | Constraints of Presentations | 209 |
| | Style of Presentations | 210 |
| Chapter 16 | Format: Dressing Documents for Success | 221 |
| | <i>Typography of Documents</i> | 111 |
| | <i>Layout of Documents</i> | 226 |
| Chapter 17 | Actually Sitting Down to Write | 228 |
| | Getting in the Mood | 233 |
| | Writing the First Draft | 236 |
| | Revising, Revising, Revising | 245 |
| | Finishing | 252 |

| | |
|--|-----------|
| Contents | xv |
| Appendix A: Avoiding the Pitfalls of Grammar and Punctuation | 257 |
| Appendix B: A Usage Guide for Scientists and Engineers | 268 |
| Glossary | 274 |
| Index | 277 |