

# Fachenglisch

English for Special Purposes: Water and the Environment

Copyright © VDG-Weimar

in memoriam  
Bärbel Steinmetzger  
(1952 – 2003)

Copyright © VDG-Weimar

Impressum:

Fachenglisch – English for Special Purposes: Water and the Environment

Herausgeber  
Weiterbildendes Studium »Wasser und Umwelt«  
Bauhaus-Universität Weimar  
Coudraystraße 7  
99421 Weimar

September 2010

Druck: docupoint GmbH Magdeburg

Bezugsmöglichkeiten: Weiterbildendes Studium »Wasser und Umwelt«  
Fax: 03643/584637  
E-Mail: [info@bauing.uni-weimar.de](mailto:info@bauing.uni-weimar.de)

Redaktion und Layout: Weiterbildendes Studium »Wasser und Umwelt«

## Autorenverzeichnis

### Unit 1 - An Introduction to the Course and the Subject

Dr. S. Kirchmeyer, B. Steinmetzger (†)

### Unit 2 - Water and the Environment

Dr. S. Kirchmeyer, B. Steinmetzger (†)

### Unit 3 - Water in Industry 1: Hydroelectric Power

H. Atkinson

### Unit 4 - Water in Industry 2: Industrial Water Treatment

H. Atkinson

### Unit 5 - Domestic Water Supply

Dr. S. Kirchmeyer

### Unit 6 - Dams and Flood Control

H. Atkinson, B. Steinmetzger (†)

### Unit 7 - Solid Waste Treatment 1

B. Strohbach

### Unit 8 - Solid Waste Treatment 2

B. Strohbach

### Unit 9 - Appendix

Dr. S. Kirchmeyer, H. Atkinson, B. Strohbach, B. Steinmetzger (†)

VDG  
Copyright © VDG-Weimar

## Vorwort

Seit dem Jahre 2000 wird im Rahmen des Weiterbildenden Studiums »Wasser und Umwelt« der Sprachkurs „Fachenglisch“ durchgeführt. In dieser Zeit erfolgte eine mehrfache Überarbeitung und Ergänzung der Lehrmaterialien, um unter Nutzung der neuen Kommunikations- und Interaktionsmöglichkeiten das effektive Erlernen und Vertiefen der Englischkenntnisse im Kontext eines didaktisch geschlossenen Konzeptes für ein Sprachenstudium via Distanz (Fern- bzw. Selbststudium) zu realisieren und weitergehend zu vervollkommen.

Das vorliegende Buch wiederholt und festigt mit seinen umfangreichen Übungen zum Lesen und Schreiben bzw. Hören und Sprechen die grammatischen Strukturen und baut einen Fachwortschatz im Rahmen des Themenbereiches Wasser und Umwelt auf. Der Stoffinhalt gliedert sich in die Bereiche Water Basics: A General Introduction, Water and the Environment, Domestic Water Supply and Waste Water Treatment, Water in Industry, Flood Control and Dams, Solid Waste Treatment.

im Namen aller Autoren und Mitwirkenden,

Dr. S. Kirchmeyer (Leiterin des Sprachenzentrums)  
Univ.-Prof. Dr.-Ing. H.-P. Hack (Leiter des Weiterbildenden  
Studiums »Wasser und Umwelt«)

VDG  
Copyright © VDG-Weimar

## Table of Contents

|          |  |    |
|----------|--|----|
| <b>1</b> | <b>An Introduction to the Course and the Subject</b>                               |    |
| 1.1      | What the Course Is All about and How to Make the Most of It . . . . .              | 1  |
| 1.1.1    | Reading and Listening . . . . .  | 2  |
| 1.1.2    | Dealing with Unfamiliar Words . . . . .  | 7  |
| 1.1.3    | Using a Dictionary . . . . .   | 19 |
| 1.1.3.1  | Word-Division . . . . .  | 20 |
| 1.1.3.2  | Phonetic Script . . . . .  | 20 |
| 1.1.3.3  | Parts of Speech . . . . .  | 20 |
| 1.1.3.4  | Different Meanings of a Word . . . . .   | 21 |
| 1.1.3.5  | Varieties of English . . . . .   | 21 |
| 1.1.3.6  | Verb Patterns . . . . .  | 21 |
| 1.1.3.7  | Verbs and Prepositions . . . . .   | 22 |
| 1.1.3.8  | Adjectives and Prepositions . . . . .  | 22 |
| 1.1.3.9  | Countable and Uncountable Nouns . . . . .  | 23 |
| 1.1.3.10 | Singular and Plural . . . . .  | 24 |
| 1.1.3.11 | Irregular Plural Forms . . . . .   | 26 |
| 1.1.3.12 | Similarities between words . . . . .   | 27 |
| 1.1.4    | What to Do with New Words: Some General Advice on Learning<br>Vocabulary . . . . . | 28 |
| 1.1.4.1  | Learning Vocabulary – General Advice . . . . .                                     | 28 |
| 1.1.4.2  | Recording Vocabulary . . . . .   | 29 |
| 1.1.4.3  | Aids to Learning Vocabulary . . . . .  | 31 |
| 1.2      | Water Is ... What Is Water? Water's Chemical and Physical<br>properties . . . . .  | 33 |
| 1.2.1    | Warm-Up: What Do You Know about Water Properties? . . . . .                        | 33 |
| 1.2.2    | Skills Focus: Reading . . . . .  | 36 |
| 1.2.3    | After You Read: Checking Understanding . . . . .                                   | 40 |
| 1.2.4    | Skills Focus: Reading about and Describing Properties of Water . . . . .           | 41 |
| 1.2.5    | Grammar and Functions . . . . .  | 45 |
| 1.2.5.1  | British and American English: Spelling . . . . .                                   | 45 |
| 1.2.5.2  | British and American English: Vocabulary . . . . .                                 | 46 |
| 1.2.5.3  | British and American English: Numbers and Measurements . . . . .                   | 46 |
| 1.2.5.4  | The verb <i>do</i> . . . . .   | 49 |
| 1.3      | Answer Key with Explanations . . . . .   | 52 |
| 1.4      | Literature . . . . .   | 67 |
| <b>2</b> | <b>Water and the Environment</b>   |    |
| 2.1      | The Water Cycle . . . . .  | 69 |
| 2.1.1    | Warm-up: Shapes of water . . . . .   | 69 |
| 2.1.2    | Skills Focus: Reading about processes involved in the<br>water cycle . . . . .     | 73 |
| 2.1.3    | After you read: Checking understanding . . . . .                                   | 77 |
| 2.1.4    | Language Focus: Definitions . . . . .  | 78 |
| 2.1.4.1  | Structures and Elements of Definitions . . . . .                                   | 78 |
| 2.1.4.2  | Use of Relative Pronouns in Definitions . . . . .                                  | 79 |
| 2.1.4.3  | Verbs in Definitions . . . . .   | 81 |

---

|          |  |     |
|----------|--|-----|
| 2.1.4.4  | Skills Focus: Recognising structures and definitions in a text . . . . .   | 82  |
| 2.2      | Environmental Issues . . . . .   | 86  |
| 2.2.1    | The Greenhouse Effect . . . . .  | 86  |
| 2.2.1.1  | Before you hear the text . . . . .   | 86  |
| 2.2.1.2  | Skills Focus: Listening . . . . .  | 87  |
| 2.2.1.3  | After you have heard the text . . . . .  | 88  |
| 2.2.1.4  | Language Focus: Degrees of Future Certainty . . . . .  | 89  |
| 2.2.2    | Defending the Environment: Greenpeace . . . . .  | 90  |
| 2.2.2.1  | Warm-up: Concern about the environment . . . . .   | 91  |
| 2.2.2.2  | Skills Focus: Reading . . . . .  | 92  |
| 2.2.2.3  | After you read: Checking Understanding . . . . .   | 94  |
| 2.2.2.4  | Language Focus - Compounds . . . . .   | 96  |
| 2.2.2.5  | Language Focus - Word Formation: Prefixes and suffixes . . . . .   | 97  |
| 2.3      | Answer Key with Explanations . . . . .   | 102 |
| 2.4      | Literature . . . . .   | 117 |
| <b>3</b> | <b>Water in Industry 1: Hydroelectric Power</b>  |     |
| 3.1      | Hydroelectric Power I : Production and Use . . . . .   | 119 |
| 3.1.1    | Warm-up . . . . .  | 119 |
| 3.1.2    | Skills Focus: Reading about the Production and Use of<br>Hydroelectric Power . . . . .   | 120 |
| 3.1.3    | After you read: Checking understanding . . . . .   | 125 |
| 3.1.4    | Language Focus . . . . .   | 128 |
| 3.1.4.1  | Active and Passive Forms . . . . .   | 128 |
| 3.1.4.2  | Verb And Noun Formation (Structural Conversions) . . . . .   | 130 |
| 3.2      | Hydroelectric Power II : History, Environmental Impact<br>and Future . . . . .   | 132 |
| 3.2.1    | Warm-up . . . . .  | 132 |
| 3.2.2    | Skills Focus: Listening to an Interview about the History,<br>Environmental Impact and Future of Hydroelectric Power . . . . . | 133 |
| 3.2.3    | After you have heard the interview: Checking understanding . . . . .   | 135 |
| 3.2.4    | Language Forms . . . . .   | 137 |
| 3.2.4.1  | Connectives (Linking Words and Expressions) . . . . .  | 137 |
| 3.2.4.2  | The Language of Cause and Effect . . . . .   | 140 |
| 3.3      | Answer Key with Explanations . . . . .   | 143 |
| 3.4      | Literature . . . . .   | 155 |
| <b>4</b> | <b>Water in Industry 2: Industrial Water Treatment</b>   |     |
| 4.1      | Methods of Industrial Water Treatment . . . . .  | 157 |
| 4.1.1    | Warm-up . . . . .  | 157 |
| 4.1.2    | Skills Focus: Reading about Filtration, Aeration and Desalination . . . . .  | 158 |
| 4.1.3    | After You Read: Checking Understanding . . . . .   | 164 |
| 4.1.4    | Language Focus . . . . .   | 169 |
| 4.1.4.1  | Defining and Non-Defining Relative Clauses . . . . .   | 169 |
| 4.1.4.2  | Structural Conversions . . . . .   | 174 |
| 4.2      | Industrial Water Treatment and the Law . . . . .   | 176 |
| 4.2.1    | Warm-up . . . . .  | 176 |
| 4.2.2    | The United States Clean Water Act . . . . .  | 176 |
| 4.2.3    | After You Have Heard The Text: Checking Understanding . . . . .  | 177 |

---



---

|          |   |     |
|----------|---|-----|
| 4.2.4    | Language Focus: Comparison and Contrast                               | 180 |
| 4.3      | Answer Key with Explanations  | 187 |
| 4.4      | Literature  | 204 |
| <b>5</b> | <b>Domestic Water Supply</b>  |     |
| 5.1      | Domestic Water Supply: A Historical Perspective                       | 205 |
| 5.1.1    | Warm-up: Vocabulary   | 205 |
| 5.1.2    | Skills Focus: Reading about the History of Water Supply Systems       | 209 |
| 5.1.3    | After you read: Checking understanding                                | 211 |
| 5.1.4    | Language Focus: Narrative and suitable verb forms                     | 214 |
| 5.2      | Water Supply and Use  | 217 |
| 5.2.1    | Warm-up   | 217 |
| 5.2.2    | Skills Focus: Listening to a Text about How to Save Water in the Home | 221 |
| 5.2.3    | After you have listened to the text                                   | 222 |
| 5.2.4    | Language Focus  | 225 |
| 5.2.4.1  | Making suggestions  | 225 |
| 5.2.4.2  | If-sentences  | 227 |
| 5.2.4.3  | When and if   | 230 |
| 5.2.4.4  | Interpretation of Data  | 232 |
| 5.3      | Answer Key with Explanations  | 237 |
| 5.4      | Literature  | 259 |
| <b>6</b> | <b>Dams and Flood Control</b>   |     |
| 6.1      | Dams  | 261 |
| 6.1.1    | Before you read   | 261 |
| 6.1.2    | Reading   | 264 |
| 6.1.3    | After you read  | 265 |
| 6.1.4    | Language Focus  | 268 |
| 6.1.4.1  | Word formation  | 268 |
| 6.1.4.2  | Language functions: Classification                                    | 269 |
| 6.2      | Describing geometrical shapes, size, location                         | 275 |
| 6.2.1    | Geometrical shapes  | 275 |
| 6.2.2    | Dimensions  | 281 |
| 6.2.3    | Location  | 284 |
| 6.3      | Flood control   | 289 |
| 6.3.1    | Geography   | 289 |
| 6.3.2    | Flood Plain Management  | 291 |
| 6.3.2.1  | Before you listen to the text   | 291 |
| 6.3.2.2  | Listening   | 292 |
| 6.4      | Answer Key with Explanations  | 295 |
| 6.5      | Literature  | 313 |
| <b>7</b> | <b>Solid Waste Treatment 1</b>  |     |
| 7.1      | Solid Waste Management: Historical Background                         | 315 |
| 7.1.1    | Warm-up   | 315 |
| 7.1.2    | Skills Focus: The History of Solid Waste Management                   | 317 |
| 7.1.3    | After you have listened to the text: Checking understanding           | 318 |

---

---

|          |  |     |
|----------|--|-----|
| 7.2      | Waste management: Sources, Patterns for the Disposal of Waste            | 320 |
| 7.2.1    | Warm-up  | 320 |
| 7.2.2    | Skills Focus: Reading about Waste Management                             | 322 |
| 7.2.3    | After you read: Checking understanding                                   | 323 |
| 7.2.4    | Language Focus: Vocabulary   | 324 |
| 7.2.5    | Language Focus: Number, Amount and Proportion                            | 326 |
| 7.2.6    | Skills Focus: Interpretation of Data                                     | 327 |
| 7.2.7    | Language Focus: Presenting Data - Structure and Vocabulary Aid           | 332 |
| 7.3      | Waste Disposal Methods   | 336 |
| 7.3.1    | Warm-up  | 336 |
| 7.3.2    | Skills Focus: Reading about Waste Disposal Methods and Resource Recovery | 339 |
| 7.3.3    | After you read: Checking understanding                                   | 341 |
| 7.4      | Answer Key with Explanations   | 344 |
| 7.5      | Literature   | 360 |
| <b>8</b> | <b>Solid Waste Treatment 2</b>   |     |
| 8.1      | Recycling  | 361 |
| 8.1.1    | Before you read  | 361 |
| 8.1.2    | Skills Focus: Reading about Recycling                                    | 365 |
| 8.1.3    | After you read   | 366 |
| 8.1.4    | Language Focus: some ways of expressing views and opinions               | 368 |
| 8.1.5    | Skills Focus: Reading about recycling and the German example             | 370 |
| 8.1.6    | After you read: Checking understanding                                   | 372 |
| 8.1.7    | Grammar Focus: <i>-ing</i> -forms  | 375 |
| 8.1.7.1  | Terminology  | 375 |
| 8.1.7.2  | <i>-ing</i> -form: subject, object or complement of a sentence           | 376 |
| 8.1.7.3  | <i>-ing</i> -form as Present Continuous tense                            | 377 |
| 8.1.7.4  | Review of Present Tenses   | 377 |
| 8.1.7.5  | <i>-ing</i> -form after prepositions                                     | 381 |
| 8.2      | Hazardous Waste  | 382 |
| 8.2.1    | Before you read  | 382 |
| 8.2.2    | After you read: Checking understanding                                   | 386 |
| 8.2.3    | Grammar Focus: Participles ( <i>-ing</i> and <i>-ed</i> )                | 388 |
| 8.3      | Answer Key with Explanations   | 392 |
| 8.4      | Literature   | 407 |
| <b>A</b> | <b>Appendix</b>  | 409 |
| A.1      | Listening texts  | 409 |
| A.2      | Vocabulary revision: crossword puzzle                                    | 424 |
| A.3      | Glossary   | 427 |
| A.3.1    | Glossary 1 (English – German)  | 428 |
| A.3.2    | Glossary 2 (German – English)  | 434 |