

Inhaltsverzeichnis

Einführung	8	2 Animals	49
Phonetische Umschrift	10	3 The human body	53
Abkürzungsverzeichnis	10	III. Thematic vocabulary	57
I. In the biology classroom	11	1 The human body	58
1 Basic biology classroom phrases	12	1.1 Cells, tissue and organs	58
1.1 Tasks and "Operatoren"	12	1.2 Covering and movement	61
1.2 Comparisons	13	1.3 Sensory organs	63
1.3 Form and function	14	1.4 Nervous system	68
1.4 Terminology	14	1.5 Endocrine system	70
2 Biological key words	15	1.6 Sexuality, human reproduction and life cycle ...	71
2.1 Areas of study	15	1.7 Food and diet	75
2.2 Life	16	1.8 Digestion, absorption and use of food	76
2.3 Organisational levels	16	1.9 Blood circulatory system	78
2.4 Classification	16	1.10 Lymphatic system	80
2.5 Life forms	17	1.11 Respiratory system	80
3 The scientific method	17	1.12 Excretion and the kidneys ..	83
4 Experiments and methods ..	19	1.13 Immune system	85
4.1 In the lab	19	1.14 Health and disease	90
4.2 The microscope	24	2 Plant families	90
4.3 Lab equipment	27	2.1 Basic vocabulary: reproduction of plants in general	90
4.4 In the field	30	2.2 Reproduction of green algae, bryophyta, and pteridophyta	91
4.5 Models	31	2.3 Common features of gymnosperms and angiosperms	97
4.6 Writing utensils	34	2.4 Gymnosperms	98
4.7 Writing up	34	2.5 Angiosperm plant families: reproduction	101
5 Graphs and Figures	37	2.6 Fertilisation and development of embryo	107
5.1 Illustrations	37	2.7 Angiosperm plant families: recognizing angiosperms	109
5.2 Statistics and Numbers	38	2.8 Monocots	115
5.3 Graphs and Charts	41	2.9 Dicotyledons	118
6 Working with films and computers	45	2.10 Deciduous tree families	122
6.1 Films	45		
6.2 Computers	46		
II. Basic vocabulary	47		
1 Plants	48		

3 Metabolism	124	7 Evolution	280
3.1 Physical principles of biological energy transformation	124	7.1 Population genetics	280
3.2 Role of ATP	128	7.2 Adaptation	281
3.3 Enzymes	129	7.3 Species	283
3.4 Regulation of enzyme activities	137	7.4 Homology, analogy and rudiments	283
3.5 Industrial and commercial uses of enzymes	139	7.5 Genealogy	285
3.6 Aerobic pathways of glucose metabolism	140	7.6 Early Earth	286
3.7 Anaerobic pathways of glucose metabolism	144	7.7 Human evolution	291
3.8 Photosynthesis	145	8 Ethology	295
4 Cell biology – Cytology	158	8.1 Topics and methods of ethology	295
4.1 Eukaryotic cells	158	8.2 Instinct	297
4.2 Prokaryotic cells	161	8.3 Learning	298
4.3 Organelles	162	8.4 Behavioural ethology	303
4.4 Chemical content of a cell ...	164	8.5 Ethology of human behaviour .	311
4.5 Biomembrane	173	9 Neurobiology	315
4.6 Analysis of cells	176	9.1 Stimulation and conduction .	315
5 Genetics	179	9.2 Connecting neurons	320
5.1 Mendelian and Classical Genetics	179	9.3 Sensory organs of the nervous system	322
5.2 Cytogenetics	188	9.4 Nervous system	326
5.3 Human genetics	196	10 Ecology	329
5.4 Population genetics	203	10.1 Abiotic factors affecting all populations	331
5.5 Molecular genetics	204	10.2 Population ecology	337
5.6 Developmental genetics	221	10.3 Population dynamics	343
5.7 Immunogenetics	230	10.4 Feeding relationships	346
5.8 Methods of DNA analysis and more applied genetics ..	242	10.5 Environmental cycles	347
6 Biotechnology	255	10.6 Terrestrial ecosystems	353
6.1 Keywords	255	10.7 Ecosystem forest	353
6.2 Gene transfer	258	10.8 Meadow ecosystem	363
6.3 Techniques used to generate recombinant DNA .	261	10.9 Man-made ecosystems	366
6.4 More applications of genetic engineering techniques	269	10.10 Examples of aquatic ecosystems	369
6.5 Genetic engineering: hopes and fears	278	10.11 Lake ecosystem	372
		10.12 River and stream ecosystem	381
		10.13 Wetland ecosystems	391
		10.14 Endangered marine ecosystems	394
		10.15 Perils threatening our environment	395

11	Reproduction, growth and development	410
11.1	Asexual reproduction	410
11.2	Sexual reproduction	413
Appendix		
	Englisches Stichwortregister	421
	Deutsches Stichwortregister	462
	Übersicht über die Infoboxen	504
Illustrations		505