LONGMAN

## BIOLOGY

# 11.1





## Contents

How to use the handbook	page 5
The cell General; techniques; cytoplasm, organelles; nucleus; membranes, cell walls; biochemistry; carbohydrates; lipids; proteins; nucleic acids; vitamins; biochemical tests, metabolism; enzymes; respiration; ATP, ADP; fermentation; nuclear division; mitosis; meiosis	8
Principles of classification	40
The variety of life  Monera; Protista; Fungi; Plantae; Algae; Bryophyta;  Pteridophyta; Spermatophyta; Angiospermae;  Coelenterata; Platyhelminthes; Nematoda; Annelida;  Arthropoda; Mollusca; Echinodermata; Chordata; Pisces;  Amphibia; Reptilia; Aves; Mammalia	42
Organs and tissues Roots; leaves; stems, tissues; xylem and phloem; vessels; plant tissues; animal epithelia; connective tissue; bone; cartilage, blood; blood cells	81
Nutrition General; photosynthesis; Calvin cycle; animal; alimentary canal; teeth; digestive enzymes; types of feeding; parasitism	92
Gas exchange Respiration; gills; tracheal system; lungs; air volumes	112
Transport Osmosis; diffusion; stomata; plant pathways; translocation; circulatory systems; heart; heart valves; respiratory pigment; blood vessels; lymph; blood groups	118
Homeostasis Endocrine system; skin; hair, hibernauch, come egulation; excretion; kidney	130
Movement & response  Plant growth substances; tropisms; plant movements; photoperiodism; muscle types; muscle filaments; skeleton; joints; muscles, flight; feathers; nervous system; nerve impulse; reflex arc; brain; ear; eye; vision; behaviour	138
Growth & development  Metamorphosis; embryology; organogeny; germination; growth; secondary growth	165
Reproduction  General; vegetative propagation; sexual reproduction; plants; spores, sporangia; flowers; plant ovaries; flower parts; inflorescence; pollination; fruit; fruit dispersal; mammalian gonads; spermatozoa; oogenesis; ovulation; copulation; placenta; oestrus cycle; sex hormones.	173

## 4 · CONTENTS

General; law of segregation; law of independent assortment; sex chromosomes; crossing over; alleles; genetic code; genetic material; mutation; polyploidy	196
Evolution  Darwinism; evidence for speciation; mechanism of evolution	208
Ecology Ecosystems; organisms and environment; succession; soil; cycles; food webs; plankton; associations; man and the environment; pollution; disease and immunity	217
General words in biology	235
Appendixes: One: Vitamins Two: Nutrients Three: International System of Units (SI)	238 240 243
Index	244