

Chart of Biological Concepts

Biology Today: An Issues Approach, third edition

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	Primary focus	Secondary focus
EVOLUTION: PATTERNS OF CHANGE		
The dynamic Earth	Chapter 5	Chapters 11, 18, 19
Forces of evolutionary change	Chapter 5	Chapters 7, 8, 9, 11, 16, 17, 18, 19
Patterns of evolution	Chapter 5	Chapters 6, 7, 8, 11, 13, 15, 16, 18
Extinction	Chapter 18	
Conservation biology	Chapter 18	
Population genetics	Chapter 7	Chapter 18
EVOLUTION: PRODUCTS OF CHANGE		
Origin and characteristics of life	Chapter 19	Chapter 1
Specialization and adaptation	Chapter 5	Chs. 1, 6, 7, 8, 9, 10, 11, 12, 13, 15, 16, 17, 18
Species and speciation	Chapter 5	Chapters 7, 18
Phylogenetic classification	Chapter 6	Chapters 4, 7, 11, 17
Biodiversity	Chapters 18, 6	
Biogeography	Chapter 18	Chapter 5
INTERACTION AND INTERDEPENDENCE		
Environmental factors	Chapters 5, 18	Chapters 7, 8, 9, 10, 11, 13
Population ecology	Chapters 5, 9	Chapters 7, 8, 16, 17, 18
Community structure	Chapters 11, 18	Chapter 10
Ecosystems	Chapters 18, 19	Chapter 11
Biosphere	Chapters 18, 9	Chapter 11
GENETIC CONTINUITY AND REPRODUCTION		
The gene	Chapters 2, 3, 4	Chapter 1
DNA, the genetic material	Chapter 2	Chapters 1, 3, 4, 11, 12
Gene action	Chapters 3, 12	Chapters 2, 4, 7, 8, 11
Patterns of inheritance	Chapters 2, 3	Chapters 5, 7, 12
Reproduction	Chapters 9, 8	Chapters 2, 3, 5, 16, 17
Molecular genetics	Chapters 2, 3, 4	Chapter 11, 12, 14
Genetics and biotechnology	Chapters 3, 4, 11	
GROWTH, DEVELOPMENT, AND DIFFERENTIATION		
Patterns of growth	Chapter 9, 12	Chapters 14, 15
Patterns of development	Chapter 12	Chapters 6, 7, 16, 17
Differentiation	Chapter 12	Chapters 3, 5, 6, 7, 8, 10, 11, 13, 14
Form and function	Chapter 5	Chapters 10, 11, 13, 14
ENERGY, MATTER, AND ORGANIZATION		
Molecular structure	Chapters 2, 3, 10	Chapters 14, 19
Hierarchy of organization	Chapter 5	Chs. 4, 6, 7, 10, 11, 12, 13, 15, 16, 18, 19
Matter	Chapter 10, 19	Chapters 2, 11, 14, 15, 16
Energy & metabolism	Chapters 10, 11	Chapters 13, 19
MAINTENANCE OF A DYNAMIC EQUILIBRIUM		
Detection of environmental stimuli	Chapter 13, 15	Chapters 12, 14
Movement	Chapter 13	Chapter 5, 6, 8
Homeostasis	Chapter 15	Chapters 1, 7, 10, 12, 13, 14, 16
Health and disease	Chs. 10, 12, 13, 14, 15, 16, 17	Chapters 2, 3, 7, 8, 9
Behavior	Chapter 8	Chapters 9, 13, 14, 15, 16
THE NATURE OF SCIENCE IN GENERAL		
The process of scientific discovery	Chapters 1, 2, 5, 16	all others
Structure of theories and paradigms	Chapters 1, 2, 5, 8, 15, 19	