## TABLE OF CONTENTS, Volume III

Preface and Introduction	1
Teaching With BFSU	7
Flowchart BFSU [Volume I]	12
Flowchart, Volume II	14
Flowchart Volume III	16
Learning Progression A. Nature of Matter (overview) 19	
A-19. Concepts of Chemistry II: Atoms: Unveiling Their Nature	21
A-20. Concepts of Chemistry III: How Atoms Bond	35
A-21. Concepts of Chemistry IV: Hydrogen Bonding and the Consequent Behavior Water	r of 52
A22. Concepts of Chemistry V: Acids and Bases	65
A-23. Concepts of Chemistry VI: Chemical Reactions and Energy	78
A-24. Concepts of Chemistry VII: Nuclear Chemistry and Radioactivity	95
A-25. Nuclear Energy	111
Learning Progression B. Life Sciences	123
B-23. The Life of Plants III: Inside Workings (Basics of Plant Anatomy and Physiology)	125
B-24. Anatomy and Physiology in Relation to Cells I: General Concepts	137
B-25. Anatomy and Physiology in Relation to Cells II: Principles of Metabolism	146

B-26. Anatomy and Physiology in Relation to Cells III: Nutrition	161
B-27. Anatomy and Physiology in Relation to Cells IV: Heredity, Genetics, and DNA	A 173
B-28. Anatomy and Physiology in Relation to Cells V: Reproduction	192
B-29. Anatomy and Physiology in Relation to Cells VI: How Materials Cross Membranes	206
B-30. Viruses: Their Attack and How We Repel Them	222
B-31. Concepts of Ecosystems I : Basic Structure, Function, and Kinds	237
B-32. Concepts of Ecosystems II: Population Dynamics	251
B-33. Darwin's Observations and Reasoning	455
Learning Progression C. Physical Science (overview)	267
C- 16. Light II. Mirrors and Reflections	269
C-17. Light III. Refraction, Eyes, and Optical Instruments	279
C-18. Light IV. The Electromagnetic Spectrum	293
C-19. Electricity III: Electric Current and Magnetic Fields: The Basis of Electromagnets, Solenoids, Speakers, Motors, and Generators	305
C-20. Electricity IV. Production of Electricity and its Problems	319
C-21. Electricity V. The Way it is Measured	333
C-22. Gyroscopes—How Do They Do That?	338
C-23. Elasticity: Bouncing Balls to Vibrations	345
C-24. Distinguishing Force and Energy	356
C-25. Deriving the Laws of Energy (Thermodynamics)	366

Ĺ	earning	Progression	D.	Earth ar	id S	pace Science	overview	37	7
_	cui ming	1 1051 6331011	•	Later the tar	u	pace serence	010111011	,	١

D-14. The Moon and Its Phases, and Tides	379
D-15. The Solar System and Beyond	395
D-16. Climate and Weather II: Why Winds Blow East, West, and in Circles (The Coriolis Effect)	408
D-17. Climate and Weather III: Turbulence at 60° Latitude and the Unpredictability of Weather	420
D-18. Determining Latitude and Longitude	432
D-19. Eons of Earth History	443
D-20. Darwin's Observations and Reasoning	455
D-21. Pollution—Not a Simple Matter	471
Appendices	489
Appendix 1. Student Notebooks	489
Appendic 2. Drawing Graphs	490
Appendix 2. Baloney Detection Kit	491