CONTENTS

Correlation Grid vi Preface vii Geography I.D. xii Prologue Lab xiii

Laboratory Exercises

I The Energ	v-Atmosp	here Sy	vstem
I IIIO MIIOIO	14 110111000		7

- 1 Latitude and Longitude 1
- 2 The Geographic Grid and Time 7
- 3 Directions and Compass Readings 15
- 4 Map Projections, Map Reading, and Interpretation 23
- 5 Earth-Sun Relationships and Daylength 37
- 6 Insolation and Seasons 43
- 7 Temperature Concepts 53
- 8 Temperature Patterns 61
- 9 Temperature Maps 67
- 10 Earth's Atmosphere: Temperature and Pressure Profiles 75
- 11 Earth's Atmosphere: Pressure and Wind Patterns 83

II The Water, Weather, and Climate Systems

- 12 Atmospheric Humidity 97
- 13 Stability and Adiabatic Processes 107
- 14 Weather Maps 117
- 15 Midlatitude Cyclones and Hurricanes 125
- 16 Water Balance and Water Resources 137
- 17 Global Climate Systems 145
- 18 Climate Change 163

III The Earth-Atmosphere Interface

- 19 Plate Tectonics: Global Patterns 175
- 20 Plate Tectonics: Faulting and Volcanism 185
- 21 The Rock Cycle and Rock Identification 203
- 22 Recurrence Intervals for Natural Events 215
- 23 Contours and Topographic Maps 225
- 24 Topographic Analysis: Fluvial Geomorphology 241
- 25 Topographic Analysis: Glacial Geomorphology 261
- 26 Topographic Analysis: Coastal and Arid Geomorphologyand Sea-Level Rise 277
- 27 Topographic Analysis: Karst Landscapes 297

IV Soils, Ecosystems, and Biomes

- 28 Soils 307
- 29 Biomes: Analyzing Global Terrestrial Ecosystems 323
- 30 An Introduction to Geographic Information Systems 337