

CONTENTS

<i>List of Figures</i>	x
<i>List of Tables</i>	xii
<i>Preface</i>	xiv
<i>Acknowledgements</i>	xviii
1 Introduction: Biology Didactics <i>Michael J. Reiss and Kostas Kampourakis</i>	1
2 Cognitive Biases or Cognitive Bridges? Intuitive Reasoning in Biology <i>Evelyn Margaret Evans and Karl S. Rosengren</i>	9
3 Biology and Young Children <i>Marida Ergazaki</i>	22
4 Molecular Biology <i>Ravit Golan Duncan and Dirk Jan Boerwinkel</i>	35
5 Cell Biology <i>William F McComas</i>	48
6 Human Biology <i>Orit Ben Zvi Assaraf and Zohar Snapir</i>	62

viii Contents

7	Health and Disease <i>Jenny Byrne and Marcus Grace</i>	74
8	Reproduction and Sex Education <i>Michael J. Reiss</i>	87
9	Development <i>Kostas Kampourakis and Panagiotis K. Stasinakis</i>	99
10	Genetics <i>Niklas Gericke and Charbel N. El-Hani</i>	111
11	Plant Biology <i>Dawn L. Sanders and Dan Jenkins</i>	124
12	Energy, Photosynthesis, and Respiration <i>Ute Harms and Uwe Bertsch</i>	139
13	Ecology <i>Konstantinos Korfiatis</i>	153
14	Evolution <i>Ross H. Nehm</i>	164
15	Microbiology <i>Katherine Carson, Vaille Dawson and Grady Venville</i>	178
16	Biotechnology <i>Marcus Hammann</i>	192
17	Using Authentic Texts to Promote Disciplinary Literacy in Biology <i>Moriah Ariely and Anat Yarden</i>	204
18	Nature of Scientific Knowledge and Scientific Inquiry in Biology Teaching <i>Norman G. Lederman</i>	216
19	Explanation in Biology Education <i>Kostas Kampourakis and Kai Niebert</i>	236

20	Argumentation in Biology Education	249
	<i>María Pilar Jiménez-Aleixandre and Maria Evagorou</i>	
21	Worldviews in Biology Education	263
	<i>Michael J. Reiss</i>	
22	Concluding Remarks	275
	<i>Kostas Kampourakis and Michael J. Reiss</i>	
	<i>List of Contributors</i>	281
	<i>Index</i>	290