



# CONTENTS

<b>Acknowledgments</b> .....	<b>i</b>
<b>Introduction</b>	
Hydroville Project Overview.....	3
Scope and Sequence.....	11
Hydroville Science Journal.....	23
Teamwork Skills .....	33
<b>I. Problem Definition</b> .....	<b>53</b>
Welcome to Hydroville .....	53
<b>Background Activities</b>	
Activity 1: Reading Household Product Labels .....	63
Activity 2: Toxicity Testing—Dose Makes the Poison .....	89
Activity 3: Pump It Up! Part I—Analyzing Pumps .....	119
Activity 4: Pump It Up! Part II—Designing a Supersoaker .....	137
Activity 5: Constructing and Analyzing Graphs—Circumference and Diameter.....	155
Activity 6: Using Paper Chromatography .....	175
Activity 7: Soil Texture.....	197
Activity 8: Soil Permeability .....	223
Activity 9: Decision Analysis .....	243
Activity 10: Siting Yoretown’s Landfill .....	261
<b>II. Data Collection</b> .....	<b>287</b>
Hydroville Update and Career Information .....	287
<b>III. Data Analysis</b> .....	<b>329</b>
Environmental Toxicologists .....	335
Mechanical Engineers .....	361
Analytical Chemists .....	379
Soil Scientists.....	433
<b>IV. Data Synthesis</b> .....	<b>463</b>
<b>V. Solution Presentation</b> .....	<b>489</b>
<b>Appendices</b>	
Appendix A: Standards (Science, Math, Social Studies, and Language Arts).....	503
Appendix B: Materials List.....	517
Appendix C: Glossary .....	527
Appendix D: Scoring Guides.....	537