

# THE INTERNET *and* PROBLEM-BASED LEARNING

DEVELOPING SOLUTIONS THROUGH THE WEB

**Eight Complete Real-World Units**

- Jumpstart critical-thinking skills
- Meet technology goals & standards

**Ages 11-18**

William J. Stepien • Peter R. Senn • William C. Stepien

# Contents

<b>Preface</b>	iv
<b>Introduction</b>	1
<b>Part I: Using the Internet for Problem Solving</b>	4
Chapter 1: Using the Internet in the Classroom	5
Chapter 2: Computer Competencies and the Internet	10
Chapter 3: The Nature of Problem-Based Learning	14
Chapter 4: Overview of Problem-Based Learning Units	21
Chapter 5: Coaching Students through Each Problem	32
<b>Part II: Problem-Based Learning Units</b>	40
PBL Unit 1: Stop the Frankenfood Monster! <i>(Focus: Genetically modified foods)</i>	41
PBL Unit 2: What Will You and Charles Do? <i>(Focus: Fugitive slaves and the Underground Railroad)</i>	57
PBL Unit 3: Poetry about Everyday People <i>(Focus: Remembering William Carlos Williams)</i>	73
PBL Unit 4: Idolatry in Your Work? <i>(Focus: Geometry and cultural mores)</i>	89
PBL Unit 5: The Dream Machine <i>(Focus: Consumer information and computers)</i>	105
PBL Unit 6: Sink It to the Bottom <i>(Focus: Environmental impact of an oil storage tank)</i>	121
PBL Unit 7: What Should Be Done about Galileo? <i>(Focus: Heresy and scientific thought)</i>	137
PBL Unit 8: Legends of Rock & Roll <i>(Focus: Writing and editing skills)</i>	153
<b>Part III: Appendices</b>	168
Appendix I: What is the Internet?	169
Appendix II: How Search Engines Work	175
Appendix III: Creating Problem-Based Learning Units	179
Appendix IV: Responsible Use of the Internet	186
<b>Glossary of Internet Terms</b>	194
<b>Bibliography</b>	199