Contents

Acknowledgments	ix
About the Author	xi
Introduction	1
Chapter 1: Engaging Students Through Project-Based Learning	7
What Is Project-Based Learning?	7
A Sample PBL Project	11
Components of PBL Assignments	20
Rationale for a PBL Instructional Approach	21
Project-Based Learning and Differentiated Instruction	23
A Plant Growth PBL Project for Grade 3	23
Chapter 2: Project-Based Learning in the Classroom	29
PBL Versus a Traditional Project Assignment	29
Research on the Efficacy of PBL	33
The Role of Instructional Technology in PBL	36
Challenges for Teachers in Project-Based Learning	38
Schoolwide PBL Instructional Approaches	41
Conclusions	43

Chapter 3: Designing Project-Based Learning Projects	45
Planning for PBL Essentials	45
Preplanning Questions for Designing a PBL Experience	58
Instructional Steps or Phases in the PBL Experience	64
Creation, Development, and Initial Evaluation of Presentation and Prototype Artifacts	69
A Schedule for a PBL Project	73
Conclusions	76
Chapter 4: Instructional Technology in Project-Based Learning Classrooms	77
Teaching in the 21st-Century Digital World	78
Instructional Technology for PBL	81
Simulations and Games for PBL	85
Technology-Based Instructional Options for PBL Instruction	94
Technology for Publication of PBL Projects	116
A Sample Technology-Based PBL Project	120
Conclusions	120
Chapter 5: Instructional Strategies in Project-Based Learning	127
Student-Directed Inquiry Skills in PBL	130
Sample Class Time Line for the Civil War Memorial Garden Project	135
Student Creativity Within PBL Projects	139
Teacher-Directed Strategies in PBL	143
Cooperative Learning Strategies Within PBL	146
Scaffolded Instruction Within PBL	152
Classroom Control: Preplanned Activities or Teaching on the Fly?	154
Conclusions	156

Chapter 6: Assessment Options for Project-Based Learning	157
Content Coverage Versus Learning in a Standards-Based Era	159
Rubrics Within PBL Projects	161
Reflective Self-Evaluation in PBL	167
Reflective Peer Evaluations	172
Portfolio Assessment	176
Grading PBL Work	177
Conclusions	181
Appendix: The Relationship Between PBL and State Curricular Standards	183
References	187
Index	193