

● Table of Contents

Acknowledgments	vii
Dedication	viii
Foreword	ix
Preface	x
An Introduction to Adhesive Chemistry (A Content Review for Teachers)	1
Application and Setting of Adhesives	2
Pressure-Sensitive Adhesives	7
Theories of Adhesion	7
References	8
Section 1: How Did Milk Hold History Together?	9
Student Activity 1A: Shall We Drink It or Use It as Glue?	10
Instructor Notes for Student Activity 1A: Shall We Drink It or Use It as Glue?	14
Adhesives Through the Ages (Student Background 1)	16
Overhead: Decorative Furniture	18
Holding History Together (Student Background 2)	19
Section 2: What Makes A Good Glue?	21
The Language of Adhesives (Student Background 1)	22
Is Glue a Liquid or a Solid? (Student Background 2)	23
Industrial Testing of Adhesives (Student Background 3)	25
Student Activity 2A: What Makes a Good Glue?	28
Instructor Notes for Student Activity 2A: What Makes a Good Glue?	40
Section 3: What Glue Will You Choose?	45
Different Glues for Different Tasks (Student Background 1)	46
Overhead: Adhesive Families	49
An Overview of Adhesives (Student Background 2)	50
Student Activity 3A: What Is the Perfect Match?	52
Instructor Notes for Student Activity 3A: What is the Perfect Match?	55
Student Activity 3B: How A-Peeling Is This Tape?	57
Instructor Notes for Student Activity 3B: How A-Peeling Is This Tape?	61

Section 4: How Long Will it Hold Tight?	63
The Chemistry of Several Synthetic Adhesives (Student Background)	64
Overhead: Epoxy Resin Cross-Linking	66
Student Activity 4A: When Is it Cured?	67
Instructor Notes for Student Activity 4A: When Is it Cured?	70
Section 5: Experimental Design	71
How to Conduct the Research Assignment	72
Memos for Scenarios	73
Instructor Notes	75