

CHAPTER 10 Testing for Differences 189

CHAPTER CHECKLIST 189

INFERENCEAL STATISTICS 190

Alternative and Null Hypotheses 191

Degrees of Freedom 191

Four Analytical Steps 192

CHI-SQUARE 193

One-Dimensional Chi-Square 193

Contingency Analysis 194

Limitations of Chi-Square 196

THE *t*-TEST 196

Common Forms of t-Test 197

Two-Tailed t-Test 198

One-Tailed t-Test 199

Limitations of the t-Test 199

ANALYSIS OF VARIANCE 199

ANOVA Basics 200

One-Way ANOVA 202

Two-Way ANOVA 203

Factorial ANOVA 205

Limitations of ANOVA 206

ASKING FOR STATISTICAL HELP 206

SUMMARY 207

KEY TERMS 207

BOXED FEATURES

DESIGN CHECK: Interpreting Chi-Squares 196

DESIGN CHECK: Interpreting t-Tests 198

AN ETHICAL ISSUE: Are Two Categories Fully Representative? 200

TRY THIS! Should Differences Be Significant or Practical? 204

DESIGN CHECK: Interpreting F 205