

Unit 5 Binomial Distributions and Statistical Inference

Lesson 1 *Binomial Situations* 276

INVESTIGATIONS

- 1 Constructing Binomial Distributions Using Simulation 277
- 2 The Binomial Probability Formula 282

MORE 290

PUMP 298

Lesson 2 *Characteristics of Binomial Distributions* 300

INVESTIGATIONS

- 1 The Shapes of Binomial Distributions 301
- 2 Simple Formulas for the Mean and the Standard Deviation 307

MORE 311

PUMP 316

Lesson 3 *Chance Variation in a Binomial Situation* 318

INVESTIGATIONS

- 1 Using the Normal Distribution to Approximate Binomial Probabilities 319
- 2 A Test of Significance 323

MORE 326

PUMP 330

Lesson 4 *Experiments: Proving Cause and Effect* 332

INVESTIGATIONS

- 1 Characteristics of Experiments 333
- 2 Do Two Treatments Give Different Results? 338

MORE 344

PUMP 352

Lesson 5 *Looking Back* 354